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**Documents of the World Administrative Radio Conference (WARC-79)  
(Geneva, 1979)**

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- This PDF includes Document No. 701-800
- The complete set of conference documents includes Document No. 1-984, Document DT No. 1-237



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 701-E  
15 November 1979  
Original : English

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PLENARY MEETING

REPORT OF THE COORDINATOR OF COMMITTEES 4, 5 AND 7  
WITH RESPECT TO THE REARRANGEMENT OF ARTICLE N1

Committees 4, 5 and 7 met in a joint meeting and discussed the possible structure of Article N1 and have agreed to the structure annexed to Document No. 702.

H.A. KIEFFER  
Coordinator of Committees 4, 5 and 7



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 702-E

15 November 1979

Original : English

## COMMITTEE 9

NOTE FROM COORDINATION OF COMMITTEES 4, 5 AND 7

TO THE CHAIRMAN OF COMMITTEE 9 WITH RESPECT

TO THE REARRANGEMENT OF ARTICLE N1

Attached is the agreed structure of Article N1. The definitions of terms as submitted to Committee 9 by Committees 4, 5 and 7 can now be arranged in accordance with this Annex and submitted to Plenary.

H.A. KIEFFER

Coordinator of Committees 4, 5 and 7

Annex : 1



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# WORLD ADMINISTRATIVE RADIO CONFERENCE

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## COMMITTEE 6

### SIXTH REPORT FROM WORKING GROUP 6A

#### Appendix 1A to the Radio Regulations

Working Group 6A has considered the proposals submitted relating to Appendix 1A. The results of the Working Group's consideration of these proposals are shown in the Annex. Proposals relating to Sections G and H of this Appendix (forms of notice) are still under consideration and will be the subject of a further report.

#### Forms of notice and column headings of the International Frequency List (Appendices 1, 1A and 9)

Working Group 6A considered a draft resolution dealing with developing new forms of notice so as to facilitate the computer processing of data supplied by administrations and the re-formatting of the International Frequency List from the point of view of presentation. The Working Group recommends to Committee 6 that it would suffice to include the present paragraph in the Minutes of Committee 6 to give to the I.F.R.B. the necessary authority to:

a) without affecting the basic data required by the Radio Regulations to be given in any notice relating to a frequency assignment, develop if necessary new forms of notice to replace those appearing in Appendices 1 and 1A so as to facilitate the computer processing of data supplied by administrations;

b) without in any way affecting the statutory contents of frequency assignments recorded in the Master International Frequency Register, re-format to the extent necessary the International Frequency List from the point of view of presentation.

Working Group 6A therefore requests Committee 6 to adopt this course of action and to request Committee 7 to make a consequential adjustment in Article N24/20 by deleting the second sentence in RR 5509/791 which reads:

"These particulars shall include the data enumerated in Appendix 9".

J.K. BJÖRNSJÖ

Chairman of Working Group 6A

Annex : 1



A N N E X

APPENDIX 1A

**Notices relating to Space Radiocommunications and  
Radio Astronomy Stations**

MOD (See Articles N11/9A, 13/9A)

**Section A. General Instructions**

1. A separate notice shall be sent to the International Frequency  
Registration Board for notifying:

- MOD
- each new frequency assignment to an Earth station for transmitting or to be received or a space station for transmitting or to be received;
  - any change in the characteristics of a frequency assignment recorded in the Master International Frequency Register (hereinafter called the *Master Register*);
  - any total deletion of a frequency assignment recorded in the Master Register.

2. When submitting notices under No. [639BA] for earth and space transmitting assignments and under No. [639BB] for space and earth receiving assignments, separate notices shall be submitted to the Board for each

MOD assignment to an earth station. In each of these cases where the basic characteristics are identical, with the exception of the frequency, a single notice may be submitted covering all basic characteristics and listing the assigned frequencies. In the case of a passive satellite system, only earth transmitting and receiving assignments shall be notified.

(MOD) 3. In the case of a satellite system employing multiple space stations with the same general characteristics, a separate notice shall be submitted for each space station ~~for transmitting or to be received?~~

for transmitting or receiving assignments :
---

- when it is aboard a geostationary satellite; or
- when it is aboard a non-geostationary satellite except when a number of satellites have the same radio frequency characteristics and orbital characteristics (excluding the ascending node position); in the latter case, one notice covering all such space stations may be submitted.

4. The following basic information shall be shown on the notice:

- a) the serial number of the notice and the date on which the notice is sent to the Board;
- b) the name of the notifying administration;
- c) sufficient data to identify the particular satellite network in which the earth or space station will operate, including in the case of a geostationary satellite, its orbital position.



## AP1A Section A General (cont.)

**d) whether the notice reflects:**

- 1) the first use of a frequency by a station;
- 2) a change in the characteristics of a frequency assignment recorded in the Master Register (indicate whether the change is a replacement, addition or deletion of existing characteristics); or
- 3) a deletion of an assignment in all of its notified characteristics;

**e)** reference to the I.F.R.B. weekly circular providing the advance publication information required in accordance with No. [639AA];

**f)** basic characteristics as outlined in Section B, C, D, E, or F as appropriate;

**g)** any other information which the administration considers to be relevant, e.g., any factors taken into account when applying Appendix [28] for determination of the co-ordination area and also any indication that the assignment concerned would be operating in accordance with No. [15] information concerning the use of the notified frequency if such use is restricted, or, in the case of notices pertaining to space stations, if the transmissions of the station are to be permanently switched off after a certain period.

**Section B. Basic Characteristics to be furnished in Notices relating to Frequencies used by Earth Stations for Transmitting**

MOD **Item 1** Assigned frequency (ies)

in MHz

MOD

Indicate the assigned frequency(ies), as defined in Article 1, in kHz up to [28,000] kHz inclusive, above [28,000] kHz to [10,500] MHz inclusive and in GHz above [10,500] MHz (see No. [857]).

**Item 2** Assigned frequency band

Indicate the bandwidth of the assigned frequency band in kHz (see No. [89]).

**Item 3** Date of bringing into use

**a)** In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) of bringing the frequency assignment into use.

**b)** Whenever the assignment is changed in any of its basic characteristics, as shown in this Section (except in the case of a change in Item 4 a)), the date to be given shall be that of the latest change (actual or foreseen, as appropriate).

AP1A Section B Earth transmitting (cont.)

**Item 4 Identity and location of the transmitting earth station**

a) Indicate the name by which the station is known or the name of the locality in which it is situated.

MOD

b) Indicate the country or geographical area in which the station is located. Symbols from the Preface to the International Frequency List shall be used.

MOD

c) Indicate the geographical co-ordinates (longitude and latitude in degrees, minutes and seconds with an accuracy of one-tenth of a minute<sup>1</sup>). Indicate also the of the transmitter site.

**Item 5 Station(s) with which communication is to be established**

Identify the associated receiving space station(s) by reference to the notification thereof or in any other appropriate manner, or, in the case of a passive satellite, the identity of the satellite and the location of the associated receiving earth station(s). In the case of a geostationary satellite, indicate also its orbital position.

ADD

**Item 6 Class of station and nature of service**

Indicate the class of station and nature of service performed, using the symbols shown in Appendix [10.]

**Item 7 Class of emission, necessary bandwidth and description of transmission**

In accordance with Article [2] and Appendix [5:]

a) indicate the class of emission;

b)<sup>1</sup> indicate the carrier frequency or frequencies of the emission(s);

c)<sup>1</sup> indicate for each carrier, the class of emission, necessary bandwidth and description of transmission.

ADD

d) if desired, indicate for the carrier having the smallest bandwidth of assignments in the system, the class of emission, necessary bandwidth and a description of the transmission.

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

## APLA Section B Earth transmitting (cont.)

**Item 8 Power characteristics of the transmission**

- MOD a) <sup>1</sup> Indicate for each carrier, the peak power (in dBW) supplied to the input of the antenna.
- MOD b) Indicate the total peak power (in dBW) and the maximum power density per Hz (dBW/Hz)<sup>2</sup> supplied to the input of the antenna averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz.
- ADD c) <sup>1</sup> Indicate for each carrier the minimum value of the peak power supplied to the input of the antenna.

**Item 9 Transmitting antenna characteristics**

- a) Indicate the isotropic gain (dB) of the antenna in the direction of maximum radiation (see No. [100].)
- b) Indicate the beamwidth in degrees between the half power points (describe in detail if not symmetrical).
- c) Either attach the measured radiation diagram of the antenna (taking as a reference the direction of maximum radiation) or indicate the reference radiation diagram to be used for co-ordination.
- d) Indicate graphically the horizon elevation angle for each azimuth around the earth station.
- e) Indicate in degrees from the horizontal plane the planned minimum operating angle of elevation of the antenna in the direction of maximum radiation.
- f) Indicate in degrees, clockwise from true north, the planned range of operating azimuthal angles for the direction of maximum radiation.
- g) <sup>1</sup> Indicate the type of polarization of the transmitted wave in the direction of maximum radiation; also indicate the sense in the case of circular polarization and the plane in the case of linear polarization. (See Nos. / N3153C / and / N3153D /).
- h) Indicate the altitude (metres) of the antenna above mean sea level.

ADD

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

ADD <sup>2</sup> The most recent version of the CCIR Report 792 should be used to the extent applicable in calculating the maximum power density per Hz.

AP1A Section B Earth transmitting (cont.)

**Item 10<sup>1</sup> Modulation characteristics**

For each carrier, according to the nature of the signal modulating the carrier and the type of modulation, indicate the following characteristics:

- a) carrier frequency modulated by a frequency-division multi-channel telephony baseband (FDM-FM) or by a signal that can be represented by a multichannel telephony baseband: indicate the lowest and highest frequencies of the baseband and the r.m.s. frequency deviation of the test tone as a function of baseband frequency;
- b) carrier frequency modulated by a television signal: indicate the standard of the television signal (including, where appropriate, the standard used for colour), the frequency deviation for the reference frequency of the pre-emphasis characteristic and the pre-emphasis characteristic itself. Also indicate, where applicable, the characteristics of the multiplexing of the video signal with the sound signal(s) or other signals;
- c) carrier phase-shift modulated by a pulse code modulation signal (PCM, PSK): indicate the bit rate and the number of phases;
- d) amplitude modulated carrier (including single sideband): indicate as precisely as possible the nature of the modulating signal and the kind of amplitude modulation used;
- e) for all other types of modulation, provide such particulars as may be useful for an interference study;
- f) for any type of modulation as applicable, indicate the characteristics of energy dispersal, such as the peak-to-peak frequency deviation (in MHz) and the sweep frequency (in kHz) of the energy dispersal wave form.

ADD

MOD Item 11 Regular hours of operation

Indicate in UTC the regular hours of operation on the frequency of each carrier.

---

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

## AP1A Section B Earth transmitting (cont.)

**Item 12 Co-ordination**

Give the name of any administration with which the use of this frequency has been successfully co-ordinated in accordance with Nos. [639AJ] and [639AN] and, if appropriate, the name of any administration with which co-ordination has been sought but not effected.

**Item 13 Agreements**

Give, if appropriate, the name of any administration with which agreement has been effected to exceed the limits prescribed in these Regulations, and the contents of such agreement.

**Item 14 Operating administration or company**

Give the name of the operating administration or company and the postal and telegraphic address of the administration to which communications should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of stations (see Article [15].)

**Section C. Basic Characteristics to be furnished in Notices relating to Frequencies to be received by Earth Stations**

MOD

**Item 1 Assigned frequency (ies)**

Indicate the assigned frequency (ies) of the emission to be received as defined in Article 1, in kHz up to [28,000] kHz inclusive, in MHz above [28,000] kHz to [10,500] MHz inclusive and in GHz above [10,500] MHz (see No. [85]).

**Item 2 Assigned frequency band**

Indicate the bandwidth of the assigned frequency band in kHz (see No. [89]).

**Item 3 Date of bringing into use**

a) In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) when reception of the assigned frequency begins.

b) Whenever the assignment is changed in any of its basic characteristics, as shown in this Section (except in the case of a change in Item 4 a)), the date to be given shall be that of the latest change (actual or foreseen, as appropriate).



APLA Section C Earth, to be received (cont.)

**Item 4 Identity and location of the receiving earth station**

a) Indicate the name by which the receiving earth station is known or the name of the locality in which it is situated.

MOD

b) Indicate the country or geographical area in which the station is located. Symbols from the Preface to the International Frequency List shall be used.

and

of the receiver site.

MOD

c) Indicate the geographical co-ordinates (longitude and latitude in degrees, minutes and seconds with an accuracy of one-tenth of a minute) of the receiver site.

1).

Indicate also the

**Item 5 Station(s) with which communication is to be established**

Identify the associated transmitting space station(s) by reference to the notification thereof or in any other appropriate manner, or, in the case of a passive satellite, the identity of the satellite and the associated transmitting earth station(s). In the case of a geostationary satellite, indicate also its orbital position.

ADD

**Item 6 Class of station and nature of service**

Indicate the class of station and nature of service performed, using the symbols shown in Appendix [10]

**Item 7 Class of emission, necessary bandwidth and description of the transmission to be received**

In accordance with Article [2] and Appendix [5:]

a) indicate the class of emission of the transmission to be received;

b) <sup>1</sup> indicate the carrier frequency or frequencies of the transmission to be received;

c) <sup>1</sup> indicate, for each carrier to be received, the class of emission, necessary bandwidth and description of the transmission.

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

APLA Section C Earth, to be received (cont.)

**Item 8 Earth station receiving antenna characteristics**

**a)** Indicate the isotropic gain (dB) of the antenna in the direction of maximum radiation (see No. [100].)

**b)** Indicate the beamwidth in degrees between the half power points (describe in detail if not symmetrical).

**c)** Either attach the measured radiation diagram of the antenna (taking as a reference the direction of maximum radiation) or indicate the reference radiation diagram to be used for co-ordination.

**d)** Indicate graphically the horizon elevation angle for each azimuth around the earth station.

**e)** Indicate in degrees from the horizontal plane the planned minimum operating angle of elevation of the antenna in the direction of maximum radiation.

**f)** Indicate in degrees, clockwise, from True North, the planned range of operating azimuthal angles for the direction of maximum radiation.

**g)** Indicate the altitude (metres) of the antenna above mean sea level.

ADD                    h)<sup>1</sup> Indicate the type of polarization of the antenna. In the case of circular polarization, indicate the sense of polarization (see / N3153C / and / N3153D /). In the case of linear polarization, indicate the plane of polarization. Indicate also if consent is given to the general use of this information in the determination of the need for coordination with other satellite networks according to Appendix 29.

MOD            Item 9 Noise temperature, link noise temperature and transmission gain

MOD                    a) Indicate the lowest total receiving system noise temperature referred to the output of the receiving antenna of the earth station in kelvins under "quiet sky conditions". This value shall be indicated for the nominal value of the angle of elevation when the associated transmitting station is aboard a geostationary satellite and, in other cases, for the minimum value of angle of elevation.

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<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

AP1 Section C Earth, to be received (cont.)

ADD           b) When simple frequency changing transponders are used on the associated space station, indicate the lowest equivalent satellite link noise temperatures under the conditions of item 9 a) for each assignment (see No. 3154/103A7).

ADD           c) Indicate the value of transmission gain associated with each equivalent satellite link noise temperature given in item 9 b). The transmission gain is evaluated from the output of the receiving antenna of the space station to the output of the receiving antenna of the earth station.

MOD   Item 10 Regular hours of reception

Indicate in UTC the regular hours of reception of the frequency of each carrier.

**Item 11 Co-ordination**

Give the name of any administration with which the use of this frequency has been successfully co-ordinated in accordance with Nos. 639AJ and 639AN and, if appropriate, the name of any administration with which co-ordination has been sought but not effected.

**Item 12 Agreements**

Give also, if appropriate, the name of any administration with which agreement has been effected to exceed the limits prescribed in these Regulations, and the contents of such agreement.

**Item 13 Operating administration or company**

Give the name of the operating administration or company and the postal and telegraphic addresses of the administration to which communications should be sent on urgent matters regarding interference and questions referring to the technical operation of stations (see Article 15).

**Section D. Basic Characteristics to be furnished in Notices relating to Frequencies used by Space Stations for Transmitting**

MOD   **Item 1 Assigned frequency (ies)**

in MHz

MOD           Indicate the assigned frequency (ies), as defined in Article 1, in kHz, up to 28,000 kHz inclusive, above 28,000 kHz to 10,500 MHz inclusive and in GHz above 10,500 MHz (see No. 857). At least one separate assignment notice should be made out for each antenna radiation beam.

NOC

AP1A Section D Space transmitting (cont.)

**Item 2 Assigned frequency band**

Indicate the bandwidth of the assigned frequency band in kHz  
(see No. [89].)

**Item 3 Date of bringing into use**

a) In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) of bringing the frequency assignment into use.

b) Whenever the assignment is changed in any of its basic characteristics as shown in this Section (except in the case of a change in Item 4), the date to be given shall be that of the latest change (actual or foreseen, as appropriate).

ADD /Item 3 bis Period of operation

/F/57A/658  
(Corr.3)7

Indicate the proposed period of operation of the space station. This period shall be limited to the period for which the satellite network is designed. During that period, replacement satellites may be used, provided that the technical characteristics of the frequency assignment remain unchanged.7

**Item 4 Identity of the space station(s)**

Indicate the identity of the space station(s).

**Item 5 Orbital information**

MOD a) In the case of a space station aboard a geostationary satellite indicate the nominal geographical longitude on the geostationary satellite orbit and the longitudinal tolerance. Indicate also in the case where a geostationary satellite is intended to communicate with an earth station:

- 1) the arc of the geostationary satellite orbit over which the space station is visible, at a minimum angle of elevation of 10° at the Earth's surface, from its associated earth stations or service areas; and
- 2) the arc of the geostationary satellite orbit within which the space station could provide the required service to its associated earth stations or service areas; and

AP1A Section D Space transmitting (cont.)

- 3) in the event that the arc defined in paragraph 2) above is less than the arc defined in paragraph 1) above, provide the reasons therefor.

*Note:* The arcs specified in 1) and 2) will be indicated by the geographical longitude of the extremes of these arcs on the geostationary satellite orbit.

- b) In the case of space station(s) aboard non-geostationary satellite(s), indicate the angle of inclination of the orbit, the period, the altitudes in kilometres of the apogee and perigee of the space station(s) and the number of satellites used.

MOD Item 6 Service area or receiving station(s)

MOD a) In the case where the associated receiving stations are earth stations, indicate the service area or areas on the Earth or the name of the locality and country or geographical area in which each receiving station is located.

ADD b) In the case where the associated receiving stations are space stations, identify each station by reference to the notification thereof or in any other appropriate manner.

**Item 7 Class of station and nature of service**

Indicate the class of station and nature of service performed, using the symbols shown in Appendix [10]

**Item 8 Class of emission, necessary bandwidth and description of transmission**

In accordance with Article [2] and Appendix [5]:

a) indicate the class of emission of the transmission;

b) <sup>1</sup> indicate the carrier frequency or frequencies of the transmission;

c) <sup>1</sup> indicate, for each carrier, the class of emission, necessary bandwidth and description of transmission.

ADD d) If desired indicate for the carrier having the smallest bandwidth of assignment in the system, the class of emission, necessary bandwidth and a description of the transmission.

---

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

APLA Section D Space transmitting (cont.)

**Item 9 Power characteristics of the transmission**

MOD a) <sup>1</sup> Indicate for each carrier the **peak power (in dBW) supplied to the input of the antenna.**

MOD b) Indicate the total peak power (in dBW) and the maximum power density per Hz (in dBW/Hz)<sup>2</sup> at the input of the antenna averaged over the worst 4 kHz band for carriers below 15 GHz or averaged over the worst 1 MHz band for carriers above 15 GHz.

ADD c) <sup>1</sup> Indicate for each carrier the minimum value of the peak power supplied to the input of the antenna.

NOC Item 10 Space station transmitting antenna characteristics

MOD For each service area or antenna radiation beam:

MOD a) in the case of a space station aboard a geostationary satellite that is intended to communicate with an earth station, indicate the <sup>maximum</sup> gain of the space station transmitting antenna ~~by means of~~ gain contours plotted on a map of the Earth's surface, preferably in a radial projection from the satellite on to a plane perpendicular to the axis from the centre of the Earth to the satellite. The isotropic gain at each contour which corresponds to a gain of 2, 4, 6, 10 and 20 dB and at 10 dB intervals thereafter as necessary, below the maximum gain, shall be indicated. Whenever possible the gain contours of the space station transmitting antenna should also be provided in the form of a numerical equation or in tabular form;

MOD b) in the case of a space station aboard a geostationary satellite in which the antenna radiation beam is directed towards another satellite, or in the case of a space station aboard a non-geostationary satellite, indicate the isotropic gain of the space station transmitting antenna in the main direction of radiation and indicate the antenna radiation pattern, taking the gain in the main direction of radiation as a reference;

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

ADD <sup>2</sup> The most recent version of CCIR Report 792 should be used to the extent applicable in calculating the maximum power density per Hz.

## AP1A Section D Space transmitting (cont.)

MOD

- [Nos.]
- c)<sup>1</sup> indicate the type of polarization of the antenna. In the case of circular polarization indicate the sense of polarization (see [N3153C] and [N3153D]). In the case of linear polarization, indicate the angle ~~PT~~ (in degrees) ~~in a plane normal to the beam axis specified as the angle measured anticlockwise from a line parallel to~~ from ~~the equatorial plane to the polarization vector of a wave as seen in the direction of maximum radiation.~~  
~~from the satellite.~~ electric
- d) for a geostationary satellite, indicate the pointing accuracy of the antenna.

ADD

- e) in the case of a space station aboard a geostationary satellite operating in a band allocated in the earth-to-space direction and in the space-to-earth direction, also indicate the gain of the space station transmitting antenna in the direction of those parts of the geostationary satellite orbit which are not obstructed by the earth by means of a diagram showing estimated antenna gain versus orbit longitude;

**Item 11<sup>1</sup> Modulation characteristics**

For each carrier, according to the nature of the signal modulating the carrier and the type of modulation, indicate the following characteristics:

- a) carrier frequency modulated by a frequency-division multi-channel telephony baseband (FDM-FM) or by a signal that can be represented by a multichannel telephony baseband: indicate the lowest and highest frequencies of the baseband and the r.m.s. frequency deviation of the test tone as a function of baseband frequency;
- b) carrier frequency modulated by a television signal: indicate the standard of the television signal (including, where appropriate, the standard used for colour), the frequency deviation for the reference frequency of the pre-emphasis characteristic and the pre-emphasis characteristic itself. Also indicate, where applicable, the characteristics of the multiplexing of the video signal with the sound signal(s) or other signals;

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

AP1A Section D Space transmitting (cont.)

- c) carrier phase-shift-modulated by a pulse code modulation signal (PCM, PSK): indicate the bit rate and the number of phases;
- d) amplitude modulated carrier (including single sideband): indicate as precisely as possible the nature of the modulating signal and the kind of amplitude modulation used;
- e) for all other types of modulation, provide such particulars as may be useful for an interference study;
- f) for any type of modulation as applicable, indicate the characteristics of energy dispersal.

MOD Item 12 Regular hours of operation

Indicate in UTC the regular hours of operation on the frequency of each carrier.

*Item 13 Co-ordination*

Give the name of any administration or group of administrations with which the use of the satellite network to which the space station belongs has been successfully co-ordinated in accordance with No. [639AJ.]

*Item 14 Agreements*

Give also, if appropriate, the name of any administration with which agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.

*Item 15 Operating administration or company*

Give the name of the operating administration or company and the postal and telegraphic addresses of the administration to which communications should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of stations (see Article [15].)

**Section E. Basic Characteristics to be furnished in Notices relating to Frequencies to be received by Space Stations**

MOD *Item 1 Assigned frequency (ies)*

in MHz

MOD

NOC

Indicate the assigned frequency (ies), as defined in Article 1, in kHz, up to [28,000] kHz inclusive, above [28,000] kHz to [10,500] MHz inclusive and in GHz above [10,500] MHz (see No. [857]). At least one separate assignment notice should be made out for each antenna radiation beam.



AP1A Section E Space, to be received (cont.)

**Item 2 Assigned frequency band**

Indicate the bandwidth of the assigned frequency band in kHz (see No. [89].)

**Item 3 Date of bringing into use**

a) In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) when reception of the assigned frequency begins.

b) Whenever the assignment is changed in any of its basic characteristics, as shown in this Section (except in the case of a change in Item 4) the date to be given shall be that of the latest change (actual or foreseen, as appropriate).

ADD /Item 3 bis Period of operation

/F/57A/658  
(Corr.3)]

Indicate the proposed period of operation of the space station. This period shall be limited to the period for which the satellite network is designed. During that period, replacement satellites may be used, provided that the technical characteristics of the frequency assignment remain unchanged.]

**Item 4 Identity of the receiving space station(s)**

Indicate the identity of the receiving space station(s).

**Item 5 Orbital information**

a) In the case of a space station aboard a geostationary satellite, indicate the planned nominal geographical longitude on the geostationary satellite orbit and the planned longitudinal tolerance. Indicate also in the case where a geostationary satellite is intended to communicate with an earth station:

- 1) the arc of the geostationary satellite orbit over which the space station is visible, at a minimum angle of elevation of 10° at the Earth's surface, from its associated earth stations or service areas; and
- 2) the arc of the geostationary satellite orbit within which the space station could provide the required service to its associated earth stations or service areas; and
- 3) in the event that the arc defined in paragraph 2) above is less than the arc defined in paragraph 1) above, provide the reasons therefor.

*Note:* The arcs specified in 1) and 2) will be indicated by the geographical longitude of the extremes of these arcs on the geostationary satellite orbit.

MOD

APLA Section E Space, to be received (cont.)

b) In the case of space station(s) aboard non-geostationary satellite(s), indicate the angle of inclination of the orbit, the period, the altitudes in kilometres of the apogee and perigee of the space station(s) and the number of satellites used.

MOD

**Item 6** Associated transmitting earth station(s) or space station(s)

Identify the associated transmitting earth station(s) or space station(s) by reference to the notification thereof or in any other appropriate manner.

**Item 7** Class of station and nature of service

Indicate the class of station and nature of service performed, using the symbols shown in Appendix [10.]

**Item 8** Class of emission, necessary bandwidth and description of the transmission(s) to be received

In accordance with Article [2] and Appendix [5:]

- a) indicate the class of emission of the transmission(s) to be received;
- b) <sup>1</sup> indicate the carrier frequency or frequencies of the transmission(s) to be received;
- c) <sup>1</sup> indicate, for each carrier to be received, the class of emission, necessary bandwidth and description of the transmission(s) to be received.

**Item 9** Space station receiving antenna characteristics

For each receiving beam:

maximum

MOD

- a) in the case of a space station aboard a geostationary satellite that is intended to communicate with an earth station, indicate the gain of the space station and the ~~receiving antenna by means of~~ gain contours plotted on a map of the Earth's surface, preferably in a radial projection from the satellite on to a plane perpendicular to the axis from the centre of the Earth to the satellite. The isotropic gain at each contour which corresponds to a gain of 2, 4, 6, 10 and 20 dB intervals thereafter as necessary, below the maximum gain, shall be indicated. Where possible the gain contours of the space station receiving antenna should also be provided in the form of a numerical equation or in tabular form;

APLA Section E Space, to be received (cont.)

MOD                    b) in the case of a space station aboard a geostationary satellite in which the antenna radiation beam is directed towards another satellite, or in the case of a space station aboard a non-geostationary satellite, indicate the isotropic gain of the space station receiving antenna in the main direction of radiation and indicate the antenna radiation pattern, taking the gain in the main direction of radiation as a reference;

MOD                    c)<sup>1</sup> Indicate the type of polarization of the antenna. In the case of circular polarization, indicate the sense of polarization (see /N3153C/ and /3153D/). In the case of linear polarization, indicate the angle BT (in degrees), in a plane normal to the beam axis specified as the angle measured anticlockwise from a line parallel to the equatorial plane to the polarization vector of the wave as seen in the direction of maximum radiation. Indicate also if consent is given to the general use of this information in the determination of the need for coordination with other satellite networks according to Appendix 29;

Nos.                    a

measured anticlockwise                    from the satellite

from                    electric

d) indicate, for a geostationary satellite, the pointing accuracy of the antenna;

ADD                    e) In the case of a space station aboard a geostationary satellite operating in a band allocated in the earth-to-space direction and in the space-to-earth direction, also indicate the gain of the space station receiving antenna in the direction of those parts of the geostationary satellite orbit which are not obstructed by the earth by means of a diagram showing estimated antenna gain versus orbit longitude.

**Item 10 Noise temperature**

MOD                    Indicate the total receiving system noise temperature (in kelvins) referred to the output of the receiving antenna of the space station.

MOD                    Item 11 Regular hours of reception

Indicate in UTC the regular hours of reception of the frequency of each carrier.

<sup>1</sup> This information need only be furnished when such information has been used as a basis to effect co-ordination with another administration.

APLA Section E Space, to be received (cont.)

**Item 12 Co-ordination**

Give the name of any administration or group of administrations with which the use of the satellite network to which the space station belongs has been successfully co-ordinated in accordance with No. [639AJ.]

**Item 13 Agreements**

Give also, if appropriate, the name of any administration with which agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.

**Item 14 Operating administration or company**

Give the name of the operating administration or company and the postal and telegraphic addresses of the administration to which communications should be sent on urgent matters regarding interference and questions referring to the technical operation of stations (see Article [15].)

**Section F. Basic Characteristics to be furnished in Notices relating to Frequencies to be received by [Radio Astronomy Stations]**

**Item 1 Observed frequency**

in MHz

MOD

Indicate the centre of the frequency band observed, in kHz up to [28,000] kHz inclusive, above [28,000] kHz to [10,500] MHz inclusive and in GHz above [10,500] MHz.

**Item 2 Date of bringing into use**

a) Indicate the date (actual or foreseen, as appropriate) when reception of the frequency band begins.

b) Whenever there is a change in any of the basic characteristics, as shown in this Section (except in the case of a change in Item 3 b)), the date to be given shall be that of the latest change (actual or foreseen, as appropriate).

AP1A Section F Frequencies to be received (cont.)

**Item 3 Name and location of the station**

**a) Indicate the letters "RA".**

**b) Indicate the name by which the station is known or the name of the locality in which it is situated or both.**

MOD

**c) Indicate the country or geographical area in which the station is located. Symbols from the Preface to the International Frequency List shall be used.**

MOD

**d) Indicate the geographical co-ordinates (longitude and latitude in degrees and minutes) of the station site.**

**Item 4 Bandwidth**

**Indicate the width of the frequency band (in kHz) observed by the station.**

**Item 5 Antenna characteristics**

**Indicate the antenna type and dimensions, effective area and angular coverage in azimuth and elevation.**

**Item 6 Regular hours of reception**

**Indicate in UTC the regular hours of reception of the frequency.**

**Item 7 Noise temperature**

**Indicate the over-all receiving system noise temperature (in kelvins) referred to the output of the receiving antenna.**

**Item 8 Class of observations**

**Indicate the class of observations to be taken on the frequency band shown in Item 4. Class A observations are those in which the sensitivity of the equipment is not a primary factor. Class B observations are those of such a nature that they can be made only with advanced low-noise receivers using the best techniques.**

**Item 9 Operating administration or company**

**Indicate the identity of the operating administration or company and the postal and telegraphic addresses of the administration to which communication should be sent on urgent matters regarding interference and questions referring to the technical operation of stations (see Article [15].)**

Sections G and H - Forms of Notice - to follow

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 704-E

15 November 1979

Original: English

## COMMITTEE 6

### SEVENTH REPORT FROM WORKING GROUP 6A

1. Having considered the existing Resolution No. Spa2 - 3 which had been referred to it by Committee 6, Working Group 6A has decided to retain this Resolution with changes consequential to those made in Articles N11 and N13 of the Radio Regulations. The text of this Resolution is given in Annex 1.
2. Working Group 6A has reconsidered the text relating to certain provisions of Article N11, and appearing in square brackets in Document No. 440, in the light of decisions of Committees 4 and 5. The Working Group has agreed on the new texts appearing in Annex 2.

J.K. BJÖRNSJÖ

Chairman of Working Group 6A

Annexes: 2



A N N E X 1

RESOLUTION No. [Spa2 - 3]

**Relating to the Bringing into Use of Space Stations in the  
Broadcasting Satellite Service, prior to the Entry into Force of  
Agreements and Associated Plans for the  
Broadcasting-Satellite Service**

Geneva, 1979,

MOD

The World Administrative Radio Conference, ~~for Space Tele-~~  
~~communications (Geneva, 1971),~~

considering

[Spa2 - 2]

MOD

envisages

a) that while Resolution No. ~~Spa2-2~~ has been adopted by this Conference, envisaging plans for the broadcasting-satellite service, some administrations might nevertheless feel the need to bring stations in that service into use prior to such plans being established;

b) that administrations should, as far as possible, avoid proliferation of space stations in the broadcasting-satellite service before such plans have been established;

c) that a space station in the broadcasting-satellite service may cause harmful interference to terrestrial stations operating in the same frequency band, even if the latter are outside the service area of the space station;

MOD

[S]

[N11]

d) that the procedure specified in Article ~~9~~ 11 of the Radio Regulations contains no provisions for co-ordination between space stations in the broadcasting-satellite service and terrestrial stations and between space stations in that service and space systems of other administrations;

*resolves*

~~1. that the following procedure shall be applied until agreements and associated plans pursuant to Resolution No. Spa2-2 enter into force:-~~

MOD

1. that, except in those cases where agreements and associated plans for the broadcasting-satellite service have been established and entered into force, the following procedure shall be applied :



**Section A: Co-ordination Procedure between Space Stations in the  
Broadcasting-Satellite Service and Terrestrial Stations**

2.1 Before an administration notifies to the I.F.R.B. or brings into use any frequency assignment to a space station in the broadcasting-satellite service in a frequency band where this frequency band is allocated, with equal rights, to the broadcasting-satellite service and to a terrestrial radio-communication service, either in the same Region or sub-Region or in different Regions or sub-Regions, it shall co-ordinate the use of this assignment with any other administration whose terrestrial radiocommunication services may be affected. For this purpose, it shall inform the Board of all the technical characteristics of the station, as listed in the relevant sections of Appendix 1A to the Radio Regulations, which are necessary to assess the risk of interference to a terrestrial radiocommunication service<sup>1</sup>.

2.2 The Board shall publish this information in a special section of its weekly circular and shall also, when the weekly circular contains such information, so advise all administrations by circular telegram.

MOD

2.3 Any administration which considers that its terrestrial radio-communication services may be affected shall forward its comments to the administration seeking co-ordination and, in any case, to the Board. These comments must be forwarded within one hundred and twenty days from the date of the relevant I.F.R.B. weekly circular. It shall be deemed that any administration which has not forwarded comments within that period considers that its terrestrial radiocommunication services are unlikely to be affected.

four months

~~1- The technical data to be used in effecting co-ordination should be based on the most recent C.C.I.R. Recommendations as accepted by the administrations concerned under the terms of Resolution No. Spa2-6. In the absence of relevant C.C.I.R. Recommendations, the technical data to be used in effecting co-ordination shall be determined by agreement among the administrations concerned.~~

MOD

<sup>1</sup> The calculation methods and the interference criteria to be employed in evaluating the interference probabilities ~~/shall/ & should/~~ be based upon relevant CCIR Recommendations agreed between the Administrations concerned in application of Resolution No. Spa2 - 6 or otherwise. In the event of disagreement on a CCIR Recommendation or in the absence of such Recommendations, these methods and criteria shall be agreed between the Administrations concerned. ~~Whenever the methods and criteria have been agreed between Administrations, it shall be done without prejudice to other Administrations.~~

by

either as  
a result

the

Such agreements



, with a copy to the Board,

MOD

2.4 Any administration which has forwarded comments on the projected station shall either give its agreement or, if this is not possible, send to the administration seeking co-ordination all the data on which its comments are based as well as any ~~such~~ suggestions as it may be able to offer with a view to a satisfactory solution of the problem.

2.5 The administration which plans to bring into use a space station in the broadcasting-satellite service as well as any other administration which believes that its terrestrial radiocommunication services are likely to be affected by the station in question may request the assistance of the Board at any time during the co-ordination procedure.

2.6 If the assistance of the Board has been sought and there is a continuing disagreement between the administration seeking co-ordination and the administration which has forwarded its comments, the administration seeking co-ordination may, after a total period of one hundred and eighty days, from the date of the relevant I.F.R.B. weekly circular, send to the Board its notice concerning the frequency assignment in question.

MOD

2.6 In the event of continuing disagreement between one Administration seeking to effect coordination and one with which coordination has been sought, the Administration seeking coordination shall, except in the cases where the assistance of the Board has been requested, defer the submission of its notice concerning the proposed assignment by six months from the date of publication of the request for coordination under No. 4118D, taking into consideration the provisions of No. 4580/639BE.

information under paragraph 2.2

~~(Note : same text as No. 4136 in Article N11 slightly modified).~~

**Section B: Co-ordination Procedure between Space Stations in the  
Broadcasting-Satellite Service and Space Systems of  
other Administrations**

MOD

3. An administration intending to bring into use a space station in the broadcasting-satellite service shall, for the purpose of co-ordination with space systems of other administrations, apply the following provisions of Article 9A of the Radio Regulations:

[N11\_7]

MOD

3.1 Nos. ~~639AA to 639AI~~ inclusive. 4099 to 4112 inclusive.

MOD

3.2.1 No. ~~639AJ~~<sup>1</sup>. Nos. 4114 and 4114A<sup>1</sup>.

~~<sup>1</sup> The technical data to be used in effecting co-ordination should be based on the most recent C.C.I.R. Recommendations as accepted by the administrations concerned under the terms of Resolution No. Spa2-6. In the absence of relevant C.C.I.R. Recommendations, the technical data to be used in effecting co-ordination shall be determined by agreement among the administrations concerned.~~

MOD

<sup>1</sup> The calculation methods and the interference criteria to be employed in evaluating the interference probabilities ~~/shall/~~ /should/ be based upon relevant CCIR Recommendations agreed ~~between~~ by the Administrations concerned either as a result ~~in application~~ of Resolution No. Spa2 - 6 or otherwise. In the event of disagreement on a CCIR Recommendation or in the ~~the~~ absence of such Recommendations, ~~these~~ methods and criteria shall be agreed between the Administrations concerned. Such agreement ~~Whenever the methods and criteria have been agreed between Administrations, it~~ shall be done without prejudice to other Administrations.

3.2.2 No co-ordination under paragraph 3.2.1 is required when an administration proposes to change the characteristics of an existing assignment in such a way as not to increase the probability of harmful interference to stations in the space radiocommunication service of other administrations

~~§ 4118 §~~ to 4136 inclusive.

MOD

3.2.3 Nos. ~~639AL, 639AM, 639AO, 639AS a), c), e), f), 639AT, 639AU, 639AV, 639AW, 639AX, 639AY, 639AZ.~~

**Section C: Notification, Examination and Recording in the  
Master Register of Assignments to Space Stations in  
the Broadcasting-Satellite Service dealt with under  
this Resolution**

MOD

4.1 Any frequency assignment<sup>1</sup> to a space station in the broadcasting-satellite service shall be notified to the Board. The notifying administration shall apply for this purpose the provisions of Nos. ~~639BE, 639BF and 639BG~~ of the Radio Regulations.

4579, 4580

4581

MOD

4.2 Notices made under paragraph 4.1 shall initially be treated in accordance with No. ~~639BH~~ of the Radio Regulations.

4582

5.1 The Board shall examine each notice with respect to:

MOD

5.2 a) its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations (with the exception of those relating to the co-ordination procedures and to the probability of harmful interference) which are the subject of the following sub-paragraphs :

<sup>1</sup> The expression *frequency assignment*, wherever it appears in this Resolution, shall be understood to refer either to a new frequency assignment or to a change in an assignment already recorded in the Master International Frequency Register (hereinafter called *Master Register*).

- 5.3 b) its conformity, where applicable, with the provisions of paragraph 2.1 of Section A above, relating to co-ordination of the use of the frequency assignment with the other administrations concerned;
- 5.4 c) its conformity, where applicable, with the provisions of paragraph 3.2.1 of Section B above, relating to co-ordination of the use of the frequency assignment with the other administrations concerned;
- 5.5 d) where appropriate, the probability of harmful interference to the service rendered by a station in a space or terrestrial radiocommunication service for which a frequency assignment has already been recorded in the Master Register in conformity with the provisions of No. 501 or 639BM of the Radio Regulations as appropriate, if that assignment has not, in fact, caused harmful interference to the service rendered by a station for which an assignment has been previously recorded in the Master Register and which itself is in conformity with No. 501 or 639BM as appropriate.

4296

4587

4296

4587

6.1 Depending upon the findings of the Board subsequent to the examination prescribed in paragraphs 5.2, 5.3, 5.4 and 5.5, further action shall be as follows:

6.2 Where the Board reaches an unfavourable finding with respect to paragraph 5.2 the notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to a satisfactory solution of the problem.

together

is

6.3 Where the Board reaches a favourable finding with respect to paragraph 5.2, or where it reaches the same finding after resubmission of the notice, it shall examine the notice with respect to the provisions of paragraphs 5.3 and 5.4.

MOD

MOD

6.4 Where the Board finds that the co-ordination procedures mentioned in paragraphs 5.3 and 5.4 have been successfully completed with all administrations whose services may be affected, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the notice shall be entered in Column 2d of the Master Register with an entry in the Remarks column indicating that such recording does not prejudice in any way the decisions to be included in the agreements and associated plans referred to in Resolution No./Spa2-2.7

6.5 Where the Board finds that the co-ordination procedures mentioned in paragraph 5.3 or 5.4 have not, as appropriate, been applied or have been unsuccessfully applied, the notice shall be returned immediately by airmail to the notifying administration with the reason for its return and with such suggestions as the Board may be able to offer with a view to a satisfactory solution of the problem.

MOD

together



↑  
is

6.6 Where the notifying administration resubmits the notice and the Board finds that the co-ordination procedures have been successfully completed with all administrations whose services may be affected, the assignment shall be treated as indicated in paragraph 6.4.

6.7 Where the notifying administration resubmits the notice and states that it has been unsuccessful in endeavouring to effect the co-ordination, the notice shall be examined by the Board with respect to paragraph 5.5.

6.8 Where the Board reaches a favourable finding with respect to paragraph 5.5, the assignment shall be recorded in the Master Register. The appropriate symbol indicating the finding by the Board shall indicate that the co-ordination procedures, as appropriate, referred to in paragraph 2.1 or 3.2.1 were not successfully completed. The date of receipt by the Board of the notice shall be entered in Column 2d of the Master Register, with the remark mentioned in paragraph 6.4.

MOD

6.9 Where the Board reaches an unfavourable finding with respect to paragraph 5.5, the notice shall be returned immediately by airmail to the notifying administration with the reasons for the Board's finding and with such suggestions as the Board may be able to offer with a view to a satisfactory solution of the problem.

together

is

MOD

6.10 If the administration resubmits the notice unchanged with the insistence that it be reconsidered, but should the Board's unfavourable finding under paragraph 5.5 remain unchanged, the assignment shall be recorded in the Master Register. However, this entry shall be made only if the notifying administration informs the Board that the assignment has been in use for at least ~~one hundred and twenty days~~ without any complaint of harmful interference having been received. The date of receipt by the Board of the original notice shall be entered in Column 2d of the Master Register, with the remark mentioned in paragraph 6.4. An appropriate remark shall be placed in Column 13 to indicate that the assignment is not in conformity with the provisions of paragraphs ~~5.3, 5.4 or 5.5~~, as appropriate. In the event that the administration concerned receives no complaint of harmful interference concerning the operation of the station in question for a period of one year from the commencement of operation, the Board shall review its finding.

four months

MOD

6.11 If harmful interference is actually caused to the reception of any space station in the broadcasting-satellite service whose frequency assignment has been recorded in the Master Register as a result of a favourable finding with respect to paragraphs 5.2, 5.3, 5.4 and 5.5 of this Resolution, as appropriate, by the use of a frequency assignment to a space station which has been subsequently recorded in the Master Register in accordance with the provisions of paragraph 6.10 of this Resolution or of No. ~~639CP~~ of the Radio Regulations, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.

4616

MOD

6.12 If harmful interference is actually caused to the reception of any space radiocommunication station using an assignment recorded in the Master Register as a result of a favourable finding with respect to Nos.

4587, 4588, 4589, 4590 and 4591

~~639BM, 639BN, 639BO, 639BP, 639BQ and 639BR~~ of the Radio Regulations, as appropriate, by the use of an assignment to a space station in the broadcasting-satellite service which has been subsequently recorded in the Master Register in accordance with the provisions of paragraph 6.10 of this Resolution, the station using the latter assignment must, on receipt of advice thereof, immediately eliminate this harmful interference.

MOD

6.13 If harmful interference is actually caused to the reception of any terrestrial station using an assignment recorded in the Master Register as a result of a favourable finding with respect to No. ~~501~~ of the Radio Regulations, by the use of an assignment to a space station in the broadcasting-satellite service which has been subsequently recorded in the Master Register in accordance with the provisions of paragraph 6.10 of this Resolution, the station using the latter assignment must, on receipt of advice thereof, immediately eliminate this harmful interference.

4296

MOD

6.14 If harmful interference to the reception of any station whose assignment is in accordance with paragraph 5.2 of this Resolution, is actually caused by the use of a frequency assignment which is not in conformity with paragraph 5.2 of this Resolution, or with No. ~~501, 570AB or 639BM~~ of the Radio Regulations, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.

4296, 4370  
or 4587

A N N E X 2

ADD 4114A

(2) Frequency assignments to which the provisions of No. 4114/639AJ are applicable are those :

- in the same frequency band ~~as~~ as the planned assignment, and
- in conformity with No. 4587/639BM, and
- recorded in the Master Register, or coordinated under the provisions of this section, or
- to be taken into account for coordination with effect from the date of receipt by the Board in accordance with No. 4118/639AL, of the relevant information as annotated in Appendix 1A, or
- notified to the Board without any coordination in those cases where No. 4115/639AK applies.

~~ADD 4114A.1~~ <sup>1</sup> (Note : Examination deferred until definition of the "same band" is adopted by Committee 4.) /

MOD 4115 639AK  
Spa2

(3)

(2) No co-ordination under No. 4114/639AJ is required:

- ~~for a modification to a frequency assignment,~~
- X a) when the use of a new frequency assignment will cause, to any service of another administration, an increase in the noise temperature of any space station receiver or earth station receiver, or an increase in the equivalent satellite link noise temperature, as appropriate, ~~not exceeding the predetermined increase of noise temperature calculated in accordance with the method given in Appendix 29, or~~ 7

calculated in accordance with the method given in Appendix 29 and not exceeding the value defined therein,

threshold

(Note : Examination deferred until decision by Committee 4 on definite limits in Appendix 29.)



MOD

- b) when the ~~increase in the noise temperature~~ ~~level of interference~~ resulting from a modification to a frequency assignment, which has previously been coordinated, will not exceed the ~~value agreed during coordination~~;

~~probability~~~~that~~

ADD

- d) when, for a new frequency assignment to a receiving station, the notifying Administration states that it accepts the interference resulting from the frequency assignments listed in No. 4114A;

MOD

4124 639AO  
Spa2(1)  
§11

~~(2) An administration with which co-ordination is sought under No. 639AJ shall acknowledge receipt of the co-ordination data immediately by telegram. If no acknowledgement is received within thirty days after the date of the weekly circular publishing the information under No. 639AJ, the administration seeking co-ordination shall dispatch a telegram requesting acknowledgement, to which the receiving administration shall reply within a further period of thirty days.~~ Upon receipt of the co-ordination data, an administration shall, having regard to the proposed date of bringing into use of the assignment for which co-ordination was requested, promptly examine the matter with regard to interference<sup>1</sup> which would be caused to the service rendered by its stations in respect of which co-ordination is sought under No. 4114/639AJ and shall within ~~ninety days~~ from the date of the relevant weekly circular, notify the administration requesting co-ordination of its agreement. If the administration with which co-ordination is sought does not agree, it shall, within the same period, send to the administration seeking co-ordination the technical details upon which its disagreement is based, and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem. A copy of these comments shall also be sent to the Board.

however,

or caused by these stations. In so doing, it shall have regard to the proposed date of bringing into use of the assignment for which coordination was requested. It

then

four months

including those relevant characteristics contained in Appendix 1A which have not previously been notified to the Board,

MOD 4124.1 639A0.1  
Spa2

<sup>1</sup>The calculation methods and the interference criteria to be employed in evaluating the interference probabilities ~~shall~~ ~~should~~ be based upon relevant CCIR Recommendations agreed between the administrations concerned ~~in application~~ of Resolution No. Spa2 - 6 or otherwise. In the event of disagreement on a CCIR Recommendation or in the absence of such Recommendations, ~~these~~ methods and criteria shall be agreed between the Administrations concerned. ~~Whenever the methods and criteria have been agreed between Administrations,~~ Such agreements ~~it~~ shall be done without prejudice to other Administrations.

concluded

NOC 4132 639AY  
Spa2

(4) ~~probability~~

~~(5)~~ Where necessary, as part of the procedure under No. 4127/639AS, the Board shall assess the ~~level of~~ interference. In any case, the Board shall inform the administrations concerned of the results obtained.

NOC 4133 639AT  
Spa2

(5)

~~(6)~~ Either the administration seeking co-ordination or an administration with which co-ordination is sought, or The Board may request additional information which it may require to assess the ~~level of~~ interference to the services concerned.

~~probability~~

16  
except in the cases described in No. 4139/639AR.

MOD 4138 639AN  
Spa2

§ ~~5~~ (1) Before an administration notifies to the Board or brings into use any frequency assignment to an earth station, whether (for transmitting or receiving, in a particular band) allocated with equal rights to space and terrestrial radiocommunication services in the frequency spectrum above 1 GHz, it shall effect co-ordination of the assignment with ~~the~~ other administration whose territory lies wholly or partly within the co-ordination area of the planned earth station. For this purpose it shall send to any other such administration a copy of a diagram drawn to an appropriate scale indicating the location of the earth station and showing the co-ordination areas of the earth station for the cases of transmission and reception by the earth station and the data on which they are based, including all pertinent details of the proposed frequency assignment, as listed in Appendix 1A, and an indication of the approximate date on which it is planned to begin operations. each

The request for coordination concerning an Earth station may specify all or some of the frequency assignments of the associated space station, but thereafter each assignment shall be dealt with individually.

MOD 4138.1/639AN.1

Appendix 28 shall be used for calculation of the coordination area and contains criteria relating only to coordination between earth stations and stations in the fixed and mobile service. The criteria relating to other terrestrial radiocommunication services should be based upon relevant

by CCIR Recommendations agreed between the Administrations concerned in either as a result application of Resolution No. Spa2 - 6 or otherwise.

In the event of disagreement on a CCIR the Recommendation or in the absence of such Recommendations, these methods and criteria shall be agreed between the Administrations concerned. ~~Whenever the methods and criteria have been agreed between Administrations, it shall be done without prejudice to other Administrations.~~

Such agreements

concluded

SUP 4138.2/639AN.2

MOD

4139 639AR  
Spa2

(2) No co-ordination under No. 4138/639AN is required when an administration proposes:

a) to bring into use an earth station, the co-ordination area of which does not include any of the territory of any other country;

b) to change the ~~probability~~ characteristics of an existing assignment in such a way as not to increase the level of interference to or from the terrestrial radiocommunication stations of other administrations;

~~/ transportable  
Earth station or /~~

the operation of  
such a station

~~/ transportable  
Earth station(s) or /~~

~~/ transportable or /~~

c) to operate a mobile earth station. However if the co-ordination area associated with the operation of such a mobile earth station, in a frequency band referred to in No. 4138/639AN, includes any of the territory of another country, it shall be subject to ~~prior~~ on coordination agreement between the administrations concerned in order to avoid harmful interference to existing terrestrial radiocommunication stations of that country. This agreement shall apply to the characteristics of the mobile earth station(s), or to the characteristics of a typical mobile earth station, and shall apply to a specified service area. Unless otherwise stipulated in the agreement, it shall apply to any mobile earth

stations in the specified service area provided that the probability of harmful interference caused by them shall not be greater than that caused by the a typical earth station for which the technical characteristics appear in the notice and have been or are being submitted in accordance with No. 4578/639BD.

(Note: ~~Deferred until decision of Committee 5 on definition of transportable Earth station need for procedure for such stations~~)

ADD 4139.1

~~/ The coordination area is calculated in relation to the fixed or mobile service in accordance with the procedure described in Section 6 bis of Appendix 28. /~~

MOD 4141/639AN

in which it is  
intended to  
operate the  
mobile earth  
station

For the purpose of effecting coordination, the Administration requesting coordination shall send to each Administration concerned under No. 4138/639AN a copy of a diagram drawn to an appropriate scale indicating for transmission and reception cases the location of the earth station and its associated coordination areas, or the coordination area related to ~~a mobile earth station~~ service area, and the data on which they are based, including all pertinent information concerning the proposed frequency assignment as annotated in Appendix 1A, and an indication of the approximate date on which it is planned to begin operations. A copy of this information with the date of dispatch of the request for coordination shall also be sent ~~to the~~ Board.

for the information of the the

SUP 4141.1

MOD 4145.1/639AP.1

by  
either as a  
result of  
the  
Such agreements

<sup>1</sup>The calculation methods and the interference criteria to be employed in evaluating the interference probabilities should be based upon relevant CCIR Recommendations agreed ~~between~~ the Administrations concerned ~~in application of~~ Resolution No. Spa2 - 6 or otherwise. In the event of disagreement on a CCIR Recommendation or in the absence of such Recommendations, ~~these~~ methods and criteria shall be agreed between the Administrations concerned. ~~Whenever the methods and criteria have been agreed between Administrations, it shall be done~~ without prejudice to other Administrations. concluded

MOD 4160.1/492A.1

by  
either as a  
result

Appendix 28 shall be used for calculation of the coordination area and contains criteria relating only to coordination between earth stations and stations in the fixed or mobile service. The criteria relating to other terrestrial radiocommunication services should be based upon relevant CCIR Recommendations agreed ~~between~~ the Administrations concerned ~~in application~~ of Resolution No. Spa2 - 6 or otherwise.

In the event of disagreement on a CCIR Recommendation or in the absence of such Recommendations, ~~these~~ methods and criteria shall be agreed between the Administrations concerned. ~~Whenever the methods and criteria have been agreed between Administrations, it shall be done~~ without prejudice to other Administrations. Such agreements concluded the

MOD 4167.1/492B.1

either as a  
result of

the

<sup>1</sup>The calculation methods and the interference criteria to be employed in evaluating the interference probabilities should be based upon relevant CCIR Recommendations agreed ~~between~~ the Administrations concerned ~~in application of~~ Resolution No. Spa2 - 6 or otherwise. In the event of disagreement on a CCIR Recommendation or in the absence of such Recommendations, ~~these~~ methods and criteria shall be agreed between the Administrations concerned. ~~Whenever the methods and criteria have been agreed between Administrations, it shall be done~~ without prejudice to other Administrations. Such agreements concluded

4179A

Special Assistance by the IFRB

4179B

**30. (1) If it is requested by any administration, particularly by an administration of a country in need of special assistance, and if the circumstances appear to warrant, the Board, using such means at its disposal as are appropriate in the circumstances, shall render the following assistance:**

- a) computation of the increases in noise temperatures in accordance with No. 4115/639AK;**
- b) preparation of diagrams showing the co-ordination areas as in No. 4141/639AN;**
- c) any other assistance of a technical nature for completion of the procedures in this Article.**

4179C → ~~4179~~ 639DU  
Spa2

(2) In making a request to the Board under No. ~~4179~~ 639DT, the administration shall furnish the Board with the necessary information.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 705-E

15 November 1979

Original: English

## WORKING GROUP 6A

### SEVENTH REPORT FROM DRAFTING GROUP 6A1

Drafting Group 6A1 has considered proposals relating to Resolution [XA] and Annex A to Resolution [XB] on the cleaning up of the Master Register and the transitional procedure to cover the reallocation of displaced assignments as a consequence of changes in allocations in the Table of Frequency Allocations. The texts of the related procedures contained in the Annexes to these Resolutions are enclosed.

J.K. BJÖRNSJÖ  
Chairman of Drafting Group 6A1

Annexes: 2



A N N E X 1

(to Resolution No. /XA/)

PROCEDURE FOR REVIEWING ENTRIES IN THE MASTER REGISTER IN FREQUENCY BANDS

ALLOCATED TO THE FIXED SERVICE BETWEEN 3 000 kHz AND 27 500 kHz

1. The Board shall extract from the Master Register and shall, as soon as possible after /1 July 1980/, forward to each Administration an individual National List<sup>1</sup> of all assignments /2/ recorded on behalf of that Administration prior to that date in the Master Register in the bands allocated exclusively or on a shared basis to the fixed service between 3 000 kHz and 27 500 kHz. The Board shall at the same time draw the attention of the Administration to any assignments for which another means of telecommunications is believed to be available.

2. Each Administration, upon receiving the List mentioned in No. 1, shall inform the Board thereof by telegram. An Administration not receiving its National List by /1 October 1980/ shall promptly inform the Board who shall forthwith send to that Administration a further copy of the National List. The Board shall ensure that every Administration has received the National List pertaining to its own assignments.

---

1.1 <sup>1</sup>The number of copies of the National List to be sent to each Administration shall be determined by the Board as the result of prior enquiries. The National List shall be prepared in the format of the International Frequency List but the medium in which the List is forwarded may, at the request of individual Administrations and with the agreement of the Board, be varied to suit different circumstances.

/1.2 <sup>2</sup>For the purposes of this procedure assignments to stations of the aeronautical fixed service shall be treated as if they were stations of the fixed service within the band(s) concerned.

3. Each Administration, following acknowledgement of receipt of its National List, shall examine the List and shall :

- a) delete from it any of the entries no longer required;
- b) indicate the regular hours of operation of the frequency assignment in UTC; otherwise indicate the hours of operation as day service (HJ), night service (HN), or transition period service (HT).
- c) \*classify the remaining entries of the fixed service as follows :

- /\_Symbol A An assignment for a regular operational use which is not provided by another means of telecommunication or for a service of particular importance for example safety services, the Red Cross, Red Crescent, Red Lion and Sun, Interpol, United Nations, etc.; \_/
- /\_Symbol B An assignment for a link for which there is another means of telecommunication ; \_/
- /\_Symbol C An assignment for occasional use on a reserve basis and not requiring protection from harmful interference. \_/

4. An Administration, having completed the actions described in Nos. 2 and 3, shall return its annotated National List to the Board as quickly as possible and in any event not later than /\_31 March 1981\_/.

5. The Board shall send to each Administration an acknowledgement of receipt of its annotated National List, and shall, in cases of special difficulty or at the request of Administrations, give such help and advice as the circumstances may warrant.

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(\* To be aligned with No. 4283A of Article N12.)



6. On 1 October 1981, the Board shall publish a provisional section of the Master Register relating solely to the assignments in the bands allocated to the fixed service between 3 000 kHz and 27 500 kHz. This section shall contain all assignments shown in national lists as annotated by Administrations and those shown in national lists which have not been returned to the Board, with the exclusion of all assignments with an unfavourable finding with respect to 4296/501 without reference to No. 3279/115. The assignments in this provisional section shall be annotated as follows.

6.1 All assignments shall bear a symbol indicating a reference to this Resolution.

6.2 The dates entered in columns 2a, 2b or 2d and the findings shown in the appropriate part of column 13 shall be amended as shown in the attached table.

6.3 Frequency assignments to fixed service stations in the parts of bands re-allocated to other services shall bear a symbol indicating that they are assignments for which alternative assignments shall be found in accordance with Resolution XB, retaining the date and status afforded in the attached table.

7. Before applying paragraphs I.2 and II.2 of the table to assignments of countries having a small number of assignments, the Board shall consult the Administration whose assignment caused the unfavourable finding in order to ensure that no actual interference has occurred since the registration of the current assignment. If the reply is positive, the Board shall enter the symbol corresponding to class of operation A for the assignment and amend the unfavourable finding. Failing this, it shall apply the provisions of No. 4280A in order to find another frequency and shall proceed to replace the frequency in consultation with the Administration concerned.

8. As soon as possible, after 1 January 1982, the Board shall :

8.1 publish a supplement to the provisional section of the Master Register containing those assignments received between 1 July 1980 and 1 January 1982, and recorded in the Master Register

8.2 send to Administrations a copy of their national list;

8.3 incorporate in the Master Register the provisional section mentioned in paragraph 6 including the assignments mentioned in paragraph 8.1 above in ~~replacement~~ of the corresponding entries in the frequency bands concerned.

9. Following completion of the action described above, the Board shall publish a report showing the results obtained from the operation of this procedure.

TABLE

	Column 13a	Column 2	Column 13c
<p>I. <u>Frequency bands below 3 900 kHz (Region 1)</u> <u>3 950 kHz (Region 3) - 4 000 kHz (Region 2)</u></p> <p>I.1 <u>Lists returned to the Board :</u></p> <ul style="list-style-type: none"> <li>- <u>/ A class /</u> of operation assignments</li> <li>- <u>/ B or C class /</u> of operation assignments</li> <li>- entries RR 115</li> </ul> <p>I.2 <u>Lists not returned to the Board :</u></p> <ul style="list-style-type: none"> <li>- assignments entered with a date 2a</li> <li>- assignments entered with a date 2b</li> <li>- entries RR 115</li> </ul>	Delete any symbols indicating the finding under 502	Replace the date in 2a or 2b by <u>/ 1.1.82 /</u> in 2a	RES XA SUP RR 515
	idem	Replace the date in 2a or 2b by <u>/ 2.1.82 /</u> in 2b	RES XA SUP RR 515
	NOC	Replace the date by <u>/ 5.1.82 /</u> in 2b	RES XA
	NOC	Replace the date by <u>/ 3.1.82 /</u> in 2a	RES XA
	NOC	Replace the date by <u>/ 4.1.82 /</u> in 2b	RES XA
	NOC	Replace the date by <u>/ 5.1.82 /</u> in 2b	RES XA
<p>II. <u>Frequency bands above 3 900 kHz (Region 1)</u> <u>3 950 kHz (Region 3) - 4 000 kHz (Region 2)</u></p> <p>II.1 <u>Lists returned to the Board :</u></p> <ul style="list-style-type: none"> <li>- <u>/ A class /</u> of operation assignments</li> <li>- <u>/ B or C /</u> class of operation assignments</li> <li>- entries RR 115</li> </ul> <p>II.2 <u>Lists not returned to the Board</u></p> <ul style="list-style-type: none"> <li>- 501 favourable</li> <li>- entries RR 115</li> </ul>	Delete any symbols indicating the finding under 503	Replace the date in 2d by <u>/ 1.1.82 /</u>	RES XA SUP RR 515
	idem	Replace the date in 2d by <u>/ 2.1.82 /</u>	RES XA SUP RR 515
	NOC	Replace the date in 2d by <u>/ 5.1.82 /</u>	RES XA
	NOC	Replace the date in 2d by <u>/ 3.1.82 /</u>	RES XA
	NOC	Replace the date in 2d by <u>/ 5.1.82 /</u>	RES XA

A N N E X 2

ANNEX A TO RESOLUTION NO. /XB/

TRANSITIONAL PROCEDURE FOR THE SELECTION AND APPROVAL OF REPLACEMENT ASSIGNMENTS

PART I - PREPARATORY PHASE

Section I. Preparation and Publication by the Board of Consolidated  
Proposals for Replacement Assignments

1. For the purpose of this Resolution, the term "displaced assignment" means a frequency assignment to a station in the fixed service in the parts of the bands re-allocated from fixed service to other services for which an alternative assignment shall be found in accordance with this Resolution.
2. The Board, as soon as possible after completion of the procedure annexed to Resolution /XA/ shall prepare consolidated proposals for replacements for all displaced assignments<sup>1)</sup> listed in the Transitional Section of the Master Register in the bands between /4 000 kHz and 27 500/ kHz which the WARC has re-allocated from the fixed service to other services.
3. The displaced assignment shall be treated in the order of the revised date recorded in Column 2d as indicated in Resolution No. /XA/ and in the following order :
  - 1) assignments for national use;
  - 2) assignments for international use.
4. The displaced assignments marked C shall not be treated until all displaced assignments marked A or B have been satisfied.
5. Displaced assignments marked C shall be as far as possible evenly distributed throughout the bands that continue to be allocated to the fixed services.
6. The Board, in complying with the provisions of this Section, shall for the purposes of protecting existing recorded assignments employ only the Master Register reconstructed in accordance with the procedure annexed to Resolution /XA/.
7. The Board, upon /1 July 1983/\*) shall send to each Administration a document listing all the assignments concerning that Administration, identifying those that were recorded in the Transitional Section of the Master Register, and those proposed as replacements.

Editorial Note : \*) 18 months after the entry into force of the Final Acts

## Section II. Examination and Approval of Proposed Assignments

8. Each Administration, upon receipt of the document specified in No. 7, shall acknowledge receipt and shall then examine the proposed replacement assignments contained therein with regard to their acceptability, following which the Administration shall advise the Board as soon as possible :

- of its agreement; or
- which of the proposed assignments it finds unacceptable.

In the latter case, the Administration shall inform the Board, as quickly as possible, of its reasons therefor.

9. The Board shall examine the responses under No. 8 and shall try, preferably by applying small adjustments, to satisfy the Administration concerned in respect of the proposed assignments it found unacceptable. The Board shall do so in the following way:

- The Board shall collect all responses received under No. 8 within six months after /1 July 1983\_/\*), and then process them together and without any priority being applied to the reply of any Administration; and then
- the Board shall collect all responses received under No. 8 in the period from six months to nine months after /1 July 1983\_/\*), and then process this second batch in the same manner as described above for the first batch.

10. The procedure described in this section shall terminate on /1 July 1984\_/\*\*).

## Section III. Subsequent Action by the Board

11. The Board, upon termination of the procedure prescribed by Sections I and II of this Annex, shall insert in the Master Register all replacement assignments that have been agreed by Administrations, with annotations to indicate :

- that they shall have the same common status as the undisplaced assignments as provided for in Resolution /XA\_/, and
- their provisional nature in accordance with No. 4332/537.

12. The Board shall, for all assignments mentioned in No. 11, insert in Column 2d of the Master Register the appropriate date according to 6.3 of the Annex to Resolution /XA\_/.

13. The Board shall then publish, in recapitulatory supplements to the International Frequency List, all replacement assignments made in accordance with the procedure prescribed in Part 1 of this Annex.

14. The Board, upon publication of the supplements prescribed by No. 13, shall inform by telegram any Administration having outstanding displaced assignments classified A which have not been satisfied.

Editorial Note : \*) 18 months after the entry into force of the Final Acts

\*\*) 30 months after the entry into force of the Final Acts

#### Section IV. Implementation of Article N12

15. As from /1 July 1984/, the provisions of Article N12 shall apply to frequency bands allocated to the fixed service between 4 000 kHz and 27 500 kHz.

16. Following that date, an Administration, having been informed by the Board under No. 14 that certain of its displaced assignments have not been replaced under this transitional procedure, shall be free to select new assignments taking into account the assignments recorded in the Master Register under No. 11, and shall submit new notices to the Board in accordance with Article N12/9.

#### PART II - TRANSFER PHASE

#### Section V. Subsequent Action by Administrations

17. An Administration, having received and accepted replacements for its recorded assignments that were displaced by decisions of the WARC-1979, shall effect the change-over from the old to the new assignment not later than :

- /date X/ for frequency bands above /10/ MHz; and
- /date Y/ for frequency bands below /10/ MHz.

18. An Administration shall promptly inform the Board of the date on which the change-over from an old to a replacement assignment takes place. The Board shall remove from that replacement assignment the special symbol placed in accordance with No. 4332/537 (see No. 11 above), in the Master Register thus indicating that it has been implemented, and shall enter the date of the change-over in Column 2c. The 2c date recorded with the displaced assignment shall be entered in the Remarks Column.

19. An Administration, having effected the change to a replacement assignment of class of operation A, and having experienced harmful interference or having received a complaint of harmful interference involving another class A assignment:

- a) shall make every effort with any other Administration concerned to resolve the problem, and, if unsuccessful;
- b) may select and submit to the Board an alternative replacement assignment.<sup>1)</sup>

20. Upon a favourable finding by the Board of the replacement assignment selected under No. 19 b), the Administration shall be entitled to have inserted in Column 2d of the Master Register against that assignment the common date of /1 January 1981/.

#### Section VI. Relevance of Dates in the Master Register

21. The relevance of the dates related to displaced assignments are referred to in the Annex to Resolution /XA/ and Article N12.

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1) Upon request from an Administration, the Board shall assist in the application of Provision 0033 b).

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 706-E

20 November 1979

Original : English

COMMITTEE 5

## SUMMARY RECORD

OF THE

TENTH MEETING OF COMMITTEE 5

(FREQUENCY ALLOCATIONS)

Friday, 9 November 1979, at 1400 hrs

Chairman : Mr. M. HARBI (Algeria)

### Subjects discussed

### Document No.

- |   |   |
|---|---|
| 1. Approval of the summary record of the seventh meeting of Committee 5 | 501   |
| 2. Note by the Chairman of Committee 4                                  | 442   |
| 3. Note by the Chairman of Committee 6                                  | 518   |
| 4. Statement by the Chairman  |   |
| 5. Fourth, fifth, sixth and seventh reports of Working Group 5C         | 341(Rev.1), 386,<br>409 + Corr.1,<br>451, 454, 544,<br>410 + Corr.1,<br>399(Rev.1), 435 |



1. Approval of the summary record of the seventh meeting of Committee 5 (Document No. 501)

1.1 The delegates of the Netherlands and Brazil said that they would hand in corrections to paragraphs 4.1 and 4.10 respectively.

1.2 The delegate of the United Kingdom pointed out an error at the end of paragraph 5.7.

The summary record was approved, as amended (see Corrigendum No. 1 to Document No. 501).

2. Note by the Chairman of Committee 4 (Document No. 442)

The Committee took note of Document No. 442 and decided to refer it to Working Group 5D.

3. Note by the Chairman of Committee 6 (Document No. 518)

The Committee took note of Document No. 518.

4. Statement by the Chairman

4.1 The Chairman said he wished to make a general statement with regard to the addition of countries' names to footnotes. Whereas the deletion of country names was welcome, additions could raise serious problems and should be proposed in the Working Groups, since they were liable to affect the contents of the Table. At the first meeting of Committee 5, it had been unanimously agreed that the number of footnotes should be limited to a bare minimum and that the notes should be standardized as far as possible. The next step was obviously to reduce the number of country names in those texts, yet the Committee Secretariat daily received numerous requests for further additions, which it could not accept because they had to be made with the agreement of Committee 5. The Chairman urged delegations to consider the grave consequences of series of additions in the footnotes, which might well modify the tenor of the Table and affect the work of the Groups and of the Committee.

4.2 The delegate of Ecuador said that, although the addition of countries' names to footnotes might be undesirable in many cases, the situation of small delegations must be taken into account: they were not in a position to send representatives to all Working Group meetings, and the Committee meeting was often the only forum in which they could make known their well-considered and well-founded decision to request the insertion of their country's name in a footnote.

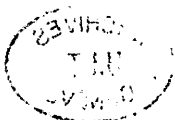
4.3 The Chairman said that countries had the right to present requests in Committee 5 but he wished the additions to reflect a real operational necessity.

4.4 The delegate of Jamaica said that the Chairman had raised a point of the greatest importance. Decisions on entries in the Table of Allocations took hours and even days to reach, yet could be nullified by the addition of too many countries' names to the accompanying footnotes.

5. Fourth, fifth, sixth and seventh reports of Working Group 5C (Documents Nos. 341(Rev.1), 386, 409 + Corr.1, 451, 454, 544, 410 + Corr.1, 399(Rev.1), 435)

5.1 Fourth report (Document No. 341(Rev.1))

5.1.1 The Chairman of Working Group 5C reminded the Committee that when the original report had been discussed the changes made in Provision 3548 had necessitated consequential amendments in Provision 3546. During the debates in the Working Group, it had been decided to insert a new Footnote 3550A. The number "33A" should be inserted in lieu of the square brackets in Provisions 3531X and 3560 and the words "Bulgaria and" should be deleted from Provision 3548D.





Annex 1

5.1.2 Provision 3548

Approved.

5.1.3 Provision 3548B

5.1.3.1 The delegate of the United States asked that his country's name be deleted from the provision.

Approved, as amended.

5.1.4 Provisions 3546 and 3550A

5.1.4.1 The delegates of Poland, Hungary, Bulgaria and Czechoslovakia asked that their countries' names be added to Provision 3550A.

5.1.4.2 The delegates of Sweden and Denmark objected to those additions, since the 73 - 74 MHz band was extensively used in their countries for the land mobile services which it would be difficult to coordinate with other services across the Baltic Sea. The introduction of broadcasting stations using those frequencies was bound to cause harmful interference to their mobile services.

5.1.4.3 The delegate of Yugoslavia also objected to the addition of the four countries in question to Provision 3550A.

5.1.4.4 The delegate of Iran observed that the use of the word "local" in Provisions 3546 and 3550A was ambiguous and suggested that the word be deleted and that the phrase "of the neighbouring countries concerned" be inserted after "agreement".

5.1.4.5 The delegate of the Federal Republic of Germany said that his country was in a similar position to that of Sweden and Denmark. The solution might be to use the phrase "subject to agreement with the countries concerned", without referring to "neighbouring" countries.

5.1.4.6 The delegate of Greece suggested that the phrase in question should read "provided agreement is reached between the countries concerned whose services operating in accordance with the Table are liable to be affected".

5.1.4.7 The delegate of the USSR said that the suggestions of the two preceding speakers were acceptable to him.

5.1.4.8 The delegates of France and Italy said they could not see why the appropriate standardized text in Document No. 239(Rev.2) should not be used in both footnotes.

5.1.4.9 The delegates of Sweden and Denmark said that the new texts suggested did not differ greatly from the original. Coordination should be effected unilaterally by newly-introduced broadcasting stations, which must take the situation of mobile services in neighbouring and other countries into account.

5.1.4.10 The Chairman of Working Group 5C suggested that the sentence should read "The use of these bands by the broadcasting service is subject to agreement under the procedure set forth in Article N13A".

5.1.4.11 The delegate of the USSR said he could accept that wording for Provision 3550A, but wished the existing wording of Provision 3546 to be retained, since it had been in existence since 1959 and its application had never caused any difficulty. On the other hand, he could agree to replace the word "local" by the phrase suggested by the Iranian delegate.

Provision 3546 was approved as amended by the delegate of Iran.

Provision 3550A was approved with the amendment suggested by the Chairman of Working Group 5C.

5.1.4.12 The delegates of Yugoslavia and Denmark reserved their delegations' right to return to the question of the addition of the names of four new countries to Provision 3550A.

5.1.5 Provisions 3553, 3551, 3552, 3531X, 3550 and 3558

Approved.

## Annex 2

5.1.6 Provisions 3554B and 3554A

5.1.7 Provisions 3548A and 3548D

The delegate of Poland asked that his country's name be transferred from Provision 3548D to 3548A. Provision 3548D could then be deleted.

Approved as amended.

5.1.8 Provision 3558X

Approved.

5.1.9 Provision 3560

The delegate of the Philippines asked that her country's name be added to the Provision.

Approved as amended.

5.1.10 Provision 3548C

Approved

5.1.11 Provision 3553A

5.1.11.1 The delegate of Iran said that either the name of Afghanistan should be deleted from the Provision or the following sentence should be added : "The introduction of the broadcasting service in these countries is subject to special agreements between the Administrations concerned".

5.1.11.2 The delegate of Afghanistan said he could not agree with the deletion of his country's name, since the broadcasting transmitters would be used in large cities far from Afghanistan's borders with other countries and harmful interference would therefore be unlikely. He could, however, agree to the proposed additional sentence.

Approved as amended.

Document No. 341(Rev.1) as a whole, as amended, was approved.

5.2 Fifth report (Document No. 386)

5.2.1 The Chairman of Working Group 5C said that the Group had spent a considerable amount of time trying to reach the compromise set out in the Annex. The ad hoc Group which had discussed Provision 3541A had decided that, since the problem also affected the band 174 - 230 MHz for which no Resolution would be required, the words in square brackets at the end of the Provision and paragraphs 2 and 3 of the report could be deleted.

5.2.2 Provision 3541

Approved.

5.2.3 Provisions 3539 and 3541A

5.2.3.1 The delegate of the USSR, referring to Provision 3541A, said that the introduction of the land mobile services of a large number of European countries in Region 1 into bands which had been used for television for many years was likely to cause a deterioration and limitation of the television service provided to tens of millions of viewers. The Special Preparatory Meeting had clearly stated that it was practically impossible to obtain compatibility between television and mobile services. He therefore categorically opposed the introduction of land mobile services in the 47 - 68 MHz and 174 - 230 MHz bands.

5.2.3.2 The Chairman of Working Group 5C reiterated that the compromise text had been worked out with great difficulty and appealed to delegates to support that effort.

5.2.3.3 The delegate of Italy said that the compromise text could be improved by the addition of the words "of countries other than those mentioned in the footnote" at the end of the Provision.

5.2.3.4 The delegate of Denmark observed that the footnote was concerned with the long-term use of that part of the spectrum. In fact, he did not believe that much harmful interference would be caused to millions of viewers by the low-power transmitters of land mobile stations; indeed, such interference would certainly be much less than that caused to mobile services by powerful broadcasting transmitters. He could support the Italian suggestion, if that would make the compromise text more acceptable.

5.2.3.5 The delegate of the USSR said that, although the provision was not satisfactory to him, especially owing to the deletion of the reference to a Resolution, in order to speed up the Committee's work he reserved the right to return to the question later in connection with the band 174 - 230 MHz.

5.2.3.6 The delegates of France, Liechtenstein, Luxembourg and Tunisia asked that their countries' names be added to Provision 3541A as amended by the Italian delegation.

5.2.3.7 The delegate of Kenya asked that his country's name be deleted from Provision 3539 and added to Provision 3541.

5.2.3.8 The delegate of Somalia asked that his country's name be deleted from Provision 3541A and added to Provision 3539.

5.2.3.9 The delegates of Sudan and Madagascar asked that their countries' names be added to Provision 3539.

Provisions 3539 and 3541A were approved as amended.

5.2.3.10 The delegate of Syria pointed out that Provision 3541A now contained the names of nearly 50 countries and that the allocations in the Table no longer made any sense. Delegations should pay heed to the statement made by the Chairman earlier in the meeting.

5.2.4 Provisions 3541B and 3541C

Approved.

Document No. 386 as a whole, as amended, was approved.

5.3 Sixth report (Document No. 409 + Corr.1, 451, 544)

The Chairman of Working Group 5C introduced Document No. 409 + Corr.1, drawing particular attention to paragraphs 3 and 4. He indicated that on page 4, ADD 3571A should be placed in square brackets.

5.3.1 Annex 1

5.3.1.1 The delegates of the Federal Republic of Germany and Italy said that they wished their countries' names to be included in footnote 3563/264.

5.3.1.2 The delegate of Finland proposed that the Committee should agree on the Table of Allocations for the 100 - 108 MHz band and should consider all the footnotes to the Table at its next meeting.

5.3.1.3 The delegate of France said that it was not necessary to defer consideration of footnotes for Regions 2 and 3, and proposed that only footnotes referring to Region 1 should be deferred.

It was so agreed.

5.3.1.4 The delegate of the USSR referring to footnote 3571/272, asked whether the delegations listed in it could accept the addition at the end of the footnote of the words "subject to an agreement concluded in accordance with the provisions of Article N13A".

5.3.1.5 The delegate of China said that he could not accept the proposed addition.

5.3.1.6 The delegate of the USSR reserved his delegation's position on the amendment he had proposed and said that he would return to the matter in Plenary.

5.3.1.7 The delegate of Papua New Guinea said, with reference to bands 87 - 100 MHz in Region 3, that at a meeting of Working Group 5C on 17 October, agreement had been reached to retain fixed and mobile services in the Table on a primary basis together with broadcasting, as indicated in Document No. DT/110. Before that report had been discussed, a revised report Document No. DT/110(Rev.1) was published which down-graded fixed and mobile services to a secondary basis and that was discussed at a meeting on 26 October. Objections were raised to the change, and no consensus was either sought or reached on the subject. While his delegation could accept the inclusion of its name in a footnote, it would much prefer that those services should be retained on a primary basis as originally agreed.

5.3.1.8 The delegate of New Zealand confirmed the remarks made by the delegate of Papua New Guinea and said that he had been deeply disturbed by the way in which the change of status had been made. He believed that if the footnotes were to be referred back to Working Group 5C for discussion the box allocation should also be referred back.

5.3.1.9 The Chairman of Working Group 5C said that his Working Group had adopted Document No. DT/110(Rev.1) by a majority and as a result had published Document No. 409 + Corr.1. The New Zealand delegation must have been aware of the fact since it had produced its proposal in Document No. 451. The New Zealand delegation's reservations had been noted at Working Group level and he saw no point in referring the matter back to the Working Group.

5.3.1.10 After a further discussion, in which the delegates of New Zealand, Australia and Fiji expressed concern regarding the relegation of the fixed and mobile services to secondary status in the bands in question, the Chairman put to the countries of Region 3 the question of whether the Table of Allocations should be maintained as given in Document No. 409.

Three expressed themselves in favour of the Table, nine against and one abstention.

The Chairman then put to the vote the question whether fixed and mobile services should have primary status in Region 3 in the bands in question.

There were ten in favour of that proposal and one abstention.

5.3.1.11 The Chairman said that footnote 3565A would therefore be deleted.

5.3.1.12 The delegate of New Zealand withdrew his delegation's Document No. 451, and said that footnotes 3566/267 and 3566A might remain as they stood in Document No. 409.

5.3.1.13 The delegate of India, explaining his vote, said that his Administration had made a proposal for the inclusion of the fixed and mobile services in the band in question on a primary basis, but it had been prepared to follow the consensus of the meeting with regard to the footnote. In the first vote he had abstained because it did not affect his Administration.

5.3.1.14 Provision 3563/264

The delegates of the Federal Republic of Germany, Italy, Monaco, Liechtenstein, the People's Democratic Republic of Yemen and Ireland asked that the names of their countries should be added to footnote 3563/264.

5.3.1.15 The delegate of Tunisia said that his country wished to be protected against the allocation in 3563/264.

5.3.1.16 The delegates of the Netherlands and Denmark reserved their positions with regard to the footnote.

5.3.1.17 On a proposal by the delegate of Italy, supported by the delegate of Spain, it was agreed that footnote 3563/264 should be placed in square brackets until a decision has been taken on the 100 - 108 MHz band.

5.3.1.18 Provision 3564/265

The delegate of the United Kingdom said that in view of the number of reservations which had been expressed on that provision, his delegation had held discussions with a number of countries and had agreed on a proposed new text which was given in Document No. 544. He asked the Committee to consider that instead of the text in Annex 1 to Document No. 409.

5.3.1.19 The delegates of France and Ireland said that if the text proposed in Document No. 544 were adopted, they would withdraw their reservations.

It was agreed to adopt the text of Provision 3564/265 as given in Document No. 544, and to delete the square brackets round the provision in Annex 1 to Document No. 409.

Annex 1 as thus amended was approved.

## 5.3.2 Annex 2

5.3.2.1 The Chairman of Working Group 5C said that in view of the large support expressed in Working Group 5C to the Document No. 415, Box 136 - 137 would have to be placed within square brackets. The name of Thailand should be added to footnote 3584/281E. Referring to the introduction to the report, he suggested that paragraphs 6 and 8 might be referred back to the Working Group for further consideration.

5.3.2.2 The delegate of New Zealand made the following statement :

- "1. At this Conference the New Zealand delegation also represents the Cook Islands Government.
2. Small satellite systems, properly engineered in accordance with international standards, have a valuable role to play in the exchange of health, education, scientific and community-interest information between isolated communities.

3. In the Pacific there exists the Peacesat experiment, i.e. Pan Pacific Education and Communications Experiments by Satellites, and the Cook Islands Government has asked New Zealand to draw the attention of the Conference to this system. The system utilizes the ATS-1 satellite and involves some twelve countries in the Pacific Basin. It consists of a single voice circuit, the up-link being on 149.22 MHz and the down-link on 135.6 MHz.

4. The Cook Islands Government view is that the technical requirements for community-orientated small satellite systems should be -

- narrow band
- VHF/UHF frequencies preferred
- low cost and simple terminal equipment
- limited construction and maintenance expertise.

The Peacesat organization envisages having available three groups of frequencies namely - 136/148 MHz, 430/439 MHz and 620/788 MHz.

5. The view of the New Zealand Administration is that while it supports the concept of properly engineered small-satellite systems, it believes that there are a number of technical and operational questions relating to Peacesat which require further detailed study before it could fulfil what we regard as the minimum criteria for an international service.

6. Therefore, Mr. Chairman, we would wish on behalf of the Cook Islands Government to draw the attention of the Conference to the Peacesat system while at the same time we would advocate the need for further study particularly of questions relating to sharing criteria and power flux-densities. It seems to us that it would be appropriate to raise the technical and operating questions relating to Peacesat at the appropriate Study Groups of the CCIR for consideration at the next appropriate WARC."

5.3.2.3 The delegates of Kuwait and Qatar asked that their countries names should be deleted from Provision 3583/281C.

5.3.2.4 The delegate of Bahrain asked that the names of Bahrain and the United Arab Emirates should be deleted from Provision 3583/281C and added to Provision 3584/281E.

5.3.2.5 The delegate of France proposed that footnote 3573/273A should be completed by the addition of the phrase "on a secondary basis in accordance with the procedure in Article N13A".

5.3.2.6 The delegate of the United States said that he could not agree to allocation on a secondary basis, as proposed by the French delegate, and he would prefer the provision to be referred back to Working Group 5C.

5.3.2.7 The Chairman of Working Group 5C said that the question was one of substance, not of form, and it would be better for it to be decided by the Committee since Working Group 5C had already failed to reach agreement on it.

5.3.2.8 The Chairman asked if the Committee could agree in principle with the use of space radio-communication techniques in the 117.975 - 137 MHz band.

5.3.2.9 The delegate of France said that delegations' opinions were divided on the question of principle. He believed that the aeronautical mobile-satellite (R) service should use frequencies near the 1 500 MHz band to avoid overloading on the VHF band.

5.3.2.10 The delegate of the United States considered that the problem fell into ICAO's competence and should be settled by that organization.

5.3.2.11 The delegate of Canada recalled that in coordinating frequencies for the Aerosat project in the VHF band it had been considered that the frequencies set aside for it could no longer be used for air/ground communication over about two-thirds of North America. The possibility of future large-scale implementation of the project would involve constraints on the use of the band which would suffer serious congestion in the early 1990's. Present techniques for space communications for that service were not compatible with the present use of the band. He proposed the deletion of the footnote which constituted a danger to the service involved.

5.3.2.12 The delegate of Argentina supported the proposal.

5.3.2.13 The Chairman put to the vote the proposal for deletion of MOD 3573/273A, noting that Switzerland held Liechtenstein's proxy and that Algeria held Guinea-Bissau's proxy.

The proposal was adopted by 45 votes to 14, with 34 abstentions.

5.3.2.14 The delegate of the United States reserved the right to raise the matter in Plenary.

5.3.2.15 The delegate of Jordan requested the inclusion of his country in the list in MOD 3584/281E.

5.3.2.16 The delegate of Pakistan opposed the proposed deletion of No. 3582/281AA which allowed equal status for fixed and mobile services and the proposed modification of No. 3584/281E which would transform additional services into alternative services.

5.3.2.17 The Chairman noted that there was no support for those views. Summing up the debate on Annex 1, he recalled that the Committee had made certain alterations to the status of fixed and mobile services in Region 3, adopted the frequency allocations for the 100 - 108 MHz band and retained in square brackets MOD 3563/264 and MOD 3564/265. Regarding Annex 2, the Committee had referred the 136 - 137 band back to Working Group 5C and deleted MOD 3573/273A.

Document No. 409 and Corr.1, as amended, was adopted.

5.4 Seventh report of Working Group 5C (Document No. 410 and Corr.1, Document No. 399(Rev.1), Document No. 435)

5.4.1 The Chairman of Working Group 5C, introducing the document, drew attention to the Corrigendum and pointed out that Iraq should be deleted from footnote ADD 3585A. The text of ADD 3589A had given rise to a division of opinion in the Working Group and had only been approved as a compromise solution on condition that its provisions would apply to only two countries. The addition of more countries would not be acceptable to the Working Group.

5.4.2 MOD 3577/275 : it was agreed to add the names of the following countries : Tanzania, Chad, Central African Republic, Bahrain, United Arab Emirates, Libya, Somalia, Jordan, Guinea, Oman and Liberia.

5.4.3 ADD 3585A : it was agreed to add the names of the following countries : Belgium, Spain, Israel, Liechtenstein, Portugal, Mali, Somalia and Italy. It was further agreed to delete Iraq and Jordan from the list.

5.4.4 MOD 3587/283 : it was agreed to delete the names of Qatar, Denmark and Jordan.

5.4.5 ADD 3589A : the delegates of Kenya, Pakistan, Afghanistan and Tanzania requested the inclusion of their countries' names in the footnote.

5.4.6 The Chairman of Working Group 5C recalled the decision made by the Working Group that the number of countries concerned should not exceed the two already listed.

5.4.7 The delegate of Italy, supported by the Chairman of Working Group 5C, proposed the deletion of ADD 3589A.

5.4.8 The proposal to delete ADD 3589A was adopted by 66 votes to 15, with 14 abstentions.

5.4.9 The delegate of Singapore made the following statement :

"My delegation was disappointed by the decision taken to delete footnote 3589A which was agreed upon earlier by Working Group 5C of this Committee to permit Indonesia and Singapore to use the frequency band 144 - 146 MHz for the fixed and mobile services, subject to no interference to the amateur-satellite service.

The use of this frequency band in Singapore in the manner provided for in the footnote would not interfere with any countries who voted against it. As for our neighbouring countries, we had already consulted them before this footnote was approved by Working Group 5C.

As my country has substantially invested in equipment operating in 144 - 146 MHz, my delegation has no alternative but to reserve our right to continue to use this frequency band for the fixed and mobile services in my country on a primary basis, regardless of the outcome of this Conference."

5.4.10 The delegate of Norway believed that countries wishing to use bands allocated on a world-wide basis for world-wide services such as the amateur-satellite service should continue to do so under RR 115.

5.4.11 MOD 3592/285B : it was agreed to include the Central African Republic in the list of countries. It was further agreed to delete the names of the following countries : Algeria, Bulgaria, Netherlands, Czechoslovakia, Turkey, Morocco, Syria, Guatemala, Jordan, El Salvador, Thailand, Tunisia and Kenya.

5.4.12 The delegate of the United States welcomed the fact that so many countries had withdrawn their names from the footnote. It was most unfortunate to plan a footnote for a service which might cause harmful interference to radionavigation services on the narrow band involved, and he urged those delegations whose countries' names still appeared in the footnote to consider the need to protect their own shipping using the system in coastal areas.

5.4.13 The delegates of Greece and Yugoslavia said their countries wished to use the land mobile service on a secondary basis.

5.4.14 The delegate of Norway, supported by the delegate of the United Kingdom, proposed the deletion of MOD 3592/285B.

5.4.15 The proposal to delete MOD 3592/285B was adopted by 63 votes to 7 with 10 abstentions.

5.4.16 The delegate of Iraq expressed his surprise at the way in which the footnote had been handled. He held reservations about the procedure which had been followed.

5.4.17 The Chairman said that the Committee had acted in full accordance with the Convention and the Rules of Procedure governing voting.

Document No. 410 and Corr.1, as amended, was adopted.

The meeting rose at 1800 hours.

The Secretary :

M. SANT

The Chairman :

M. HARBI



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 707-E

16 November 1979

Original : English

## PLENARY MEETING

### THIRD REPORT OF COMMITTEE 7

(General Administration)

Committee 7 has had nine meetings to date. In the course of discussions on the proposals and documents allocated to Committee 7 in accordance with its terms of reference, the following decisions were taken :

#### 1. Article N1

1.1 A Working Group (7B) was set up under the chairmanship of Mr. A.L. Witham (United Kingdom) to deal with all proposals concerning the title, the preamble and Section I of Article N1. Working Group 7B had seven meetings.

1.2 Working Group 7B, in its reports to Committee 7, submitted a series of texts for the revision of the title, the preamble and Section I of Article N1. (See Documents Nos. 395 and Corr.1, 419 and 528.)

1.3 During the discussion, some delegates expressed the view that the definitions of "telegraphy" and of certain associated terms were unsatisfactory. Since they were currently under review by the CCITT and the CCIR, a method should be found by which changes subsequently agreed to could be imported into Article N1. This applied particularly to the definition of the term "telegraphy", in view of Resolution 44 of the Plenipotentiary Conference (Malaga-Torremolinos, 1973).

1.4 In addition, the proposal for modifying the French language versions of provisions 3007 and 3013 raised, right from the beginning, a question of substance, namely :

- a) whether the Conference was competent to make changes to definitions appearing also in the Convention; and
- b) whether the proposed modifications complied with No. 102 of the Convention : The texts "shall be drawn up in the official languages of the Union, in versions equivalent in form and content".

1.4.1 Lengthy discussion started on the presentation of the proposal to the Plenary Meeting of Committee 7 and continued throughout the different meetings of Working Group 7B : during the adoption of the Final Report of Working Group 7B, during the adoption of the Report of Working Group 7B to the Plenary of Committee 7, and finally during the adoption of the draft Report of Committee 7 to the Plenary and to Committee 9.

1.4.2 In this last session Committee 7 adopted unanimously the modified texts in French, English and Spanish.

1.4.3 At the same time, it was accepted that this Conference could not modify the Convention, but if the Conference decided to amend provisions of the Radio Regulations which are also covered in the Convention it could submit a Resolution to the Plenipotentiary Conference seeking a revision of the related texts of the Convention.

2. The revised texts as adopted by Committee 7 have been submitted to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 708).

H.L. VENHAUS

Vice-Chairman of Committee 7

For reasons of economy, this document is printed in a limited number. Participants are therefore kindly asked to bring their copies to the conference since only a few additional copies can be made available.



INTERNATIONAL TELECOMMUNICATION UNION

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 708-E

16 November 1979

Original : English

COMMITTEE 9

## THIRD SERIES OF TEXTS FROM COMMITTEE 7 TO THE EDITORIAL COMMITTEE

The texts mentioned in Document No. 707 are hereby submitted to the Editorial Committee.

H.L. VENHAUS  
Vice-Chairman of Committee 7

Annex : 1



A N N E X

CHAPTER NI

Terminology

ARTICLE NI/1<sup>9</sup>

Terms and Definitions

Preamble

MOD 3001/1

For the purposes of these Regulations, the following terms shall have the meanings defined below. These terms and definitions do not, however, necessarily apply for other purposes. Definitions identical to those contained in the International Telecommunication Convention (Malaga-Torremolinos, 1973) are marked (CCNV.).

Note : If in the text of a definition below, a term is printed in italics, this means that the term itself is defined in this article.

Section I. General Terms

MOD 3002/2

Telecommunication : Any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, visual optical or other electromagnetic systems (CONV.).

~~Note by the General Secretariat~~

~~See also the Analytical Table of the RR under Definition~~

ADD 3002A Public correspondence: Any telecommunication which the offices and stations must, by reason of their being at the disposal of the public, accept for transmission (CONV.).

SUP 3003/3

NOC 3004/9 Radiocommunication: Telecommunication by means of radio waves (CONV.).

MOD 3005 7

Radio Waves (or Hertzian Waves): Electromagnetic waves of frequencies <sup>arbitrarily</sup> lower than 3 000 GHz, propagated in space without artificial guide.

NOC 3006/8

Radio: A general term applied to the use of radio waves (CONV.).

ADD 3006A

Class of emission: The set of characteristics of an emission, designated by standard symbols, i.e. type of modulation, modulating signal, type of information to be transmitted, and also if appropriate, any additional signal characteristics.

MOD 3007 10

Telegraphy: <sup>A form</sup> ~~A system~~ of telecommunication<sup>s</sup> which is concerned in any process providing transmission and reproduction at a distance of documentary matter, such as written or printed matter or fixed images, or the reproduction at a distance of any kind of information in such a form. ~~The foregoing definition appears in the Convention, but, for the purposes of these Regulations, telegraphy shall mean, unless otherwise specified, "A system of telecommunication for the transmission of written matter by the use of a signal code".~~ <sup>however</sup> Radio ~~these~~ Regulations, telegraphy shall mean, unless otherwise specified, "A system of telecommunication for the transmission of written matter by the use of a signal code". <sup>form</sup> therein, "telegraphy" shall mean

MOD 3008 11

Frequency-Shift Telegraphy: Telegraphy by frequency modulation in which the telegraph signal shifts the frequency of the carrier between predetermined values. ~~There is phase continuity during the shift from one frequency to the other.~~

SUP 3009/12

MOD 3010 13

Telegram: Written matter intended to be transmitted by telegraphy for delivery to ~~the~~ addressee; this term also includes radiotelegrams unless otherwise specified. ~~In this~~ In this definition the term Telegraphy has the meaning defined in the Convention.

same general as.

MOD 3011 14  
Mar2

Radiotelegram: A telegram, originating in or intended for a mobile station or a mobile earth station, ~~in the maritime mobile-satellite service,~~ transmitted on all or part of its route over the radiocommunication channels of ~~a mobile service~~ <sup>the</sup> or of the maritime mobile-satellite service.

MOD 3012 14A  
Mar2

Radiotelex Call: A telex call, originating in or intended for a mobile station or a mobile earth station transmitted on all or part of its route over the radiocommunication channels of the ~~maritime mobile service~~ or the ~~maritime mobile-satellite service~~.

MOD 3013/17

Telephony: <sup>A form</sup> ~~A system~~ of telecommunication<sup>s</sup> set up for the transmission of speech or, in some cases, other sounds.

MOD 3014/18

Radiotelephone Call : A telephone call, originating in or intended for a mobile station or a mobile Earth station in the maritime mobile-satellite service transmitted on all or part of its route over the radiocommunication channels of a mobile service or of the maritime mobile-satellite service. ITU

MOD 3015/19

Television: <sup>A form</sup> ~~A system~~ of telecommunication<sup>s</sup> for the transmission of transient images of fixed or moving objects.

MOD 3016/20

Facsimile : A ~~system of telecommunication~~ form of telegraphy for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

In this definition the term Telegraphy has the same general meaning defined in the Convention.

as

MOD 3017/15

Telemetering Telemetry: The use of telecommunication for automatically indicating or recording measurements at a distance from the measuring instrument.

MOD 3018/16

Radiotelemetering-Radiotelemetry: Telemetering Telemetry by means of radio waves.

ADD 3018A

Telecommand : The use of telecommunication for the transmission of signals to initiate, modify or terminate functions of the equipment at a distance.

NOC 3019/4

**Simplex Operation:** Operating method in which transmission is made possible alternately in each direction, for example, by means of manual control.<sup>1</sup>

NOC 3020/5

**Duplex Operation:** Operating method in which transmission is possible simultaneously in both directions.<sup>1</sup>

3019.1 4.1  
3020.1 5.1

<sup>1</sup> In general, duplex and semi-duplex operation require two frequencies in radiocommunication: simplex may use either one or two.

NOC 3021/6

*Semi-duplex Operation:* Operating method which is simplex at one end of the circuit and duplex at the other.<sup>1</sup>

ADD 3021A

Single-sideband [transmission]: An amplitude modulated [transmission] with one sideband only.

ADD 3021B

Full carrier single-sideband [transmission]: A single-sideband [transmission] without suppression of the carrier.

ADD 3021C

Reduced carrier single-sideband [transmission]: A single-sideband [transmission] in which the degree of carrier suppression could enable the carrier to be reconstituted and to be used for de-modulation.

ADD 3021D

Suppressed carrier single-sideband [transmission]: A single-sideband [transmission] in which the carrier is virtually suppressed and not intended to be used for de-modulation.

NOC 3022/26

*Tropospheric Scatter:* The propagation of radio waves by scattering as a result of irregularities or discontinuities in the physical properties of the troposphere.

NOC 3023/27

*Ionospheric Scatter:* The propagation of radio waves by scattering as a result of irregularities or discontinuities in the ionization of the ionosphere.

ADD 3023A

Industrial, Scientific and Medical (ISM)

Applications : Operation of equipment or appliances designed to generate and use locally radio-frequency energy for industrial, scientific, medical, or similar purposes, excluding applications in the field of telecommunications.

domestic

MOD 3095/84AW  
SpaTelemetrytelemetry

*Space Telemetry:* The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft.

SUP 3096/84AX  
SpaNOC 3097/84AY  
Spa

(MOD) - only concerns the Spanish and French texts.

*Space Telecommand:* The use of radiocommunication for the transmission of signals to a space station to initiate, modify or terminate functions of the equipment on a space object, including the space station.

3021.1 6.1

<sup>1</sup> In general, duplex and semi-duplex operation require two frequencies in radiocommunication; simplex may use either one or two.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

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COMMITTEE 5

TWENTY-FOURTH REPORT OF WORKING GROUP 5D TO COMMITTEE 5  
(ALLOCATIONS)

Subject : Frequency bands 12.75 - 13.25, 14.3 - 14.5, 15.35 - 15.7 GHz

1. Frequency band between 12.75 and 13.25 GHz

All proposals relating to this band were considered, and the Working Group decided unanimously to recommend the adoption of the revised Table and the revised provisions as given in Annex 1.

2. The Working Group postponed the final decision on footnotes 3789A, 3789AA and 3788B pending a decision on broadcasting-satellite uplink allocation.

3. Frequency band between 14.3 and 14.5 GHz

All proposals relating to this band were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 2.

4. The delegation of the USSR reserved the right to come back in Committee 5 to the footnote 3795/408A and to the suppression of the radionavigation-satellite service in the band 14.3 - 14.4 GHz.

5. The delegations of Bulgaria and the USSR reserved the right to come back in Committee 5 to the allocations to the fixed and mobile except aeronautical mobile services in the band 14.3 - 14.4 GHz.

6. The delegations of France and the United States of America reserved the right to come back to provision 3794B in Committee 5.

7. Frequency bands between 15.35 and 15.7 GHz

All proposals relating to these bands were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 3.

8. The delegation of the USSR reserved the right to come back in Committee 5 to the footnote 3750/383B in the band 15.4 - 15.7 GHz and to the retention of footnote 3687/352B.

9. The Working Group decided to suppress footnotes 3796/408B, 3686/352A, 3792/407.

Dr. B.S. RAO  
Chairman of Working Group 5D

Annexes : 3



A N N E X 1

GHz  
12.75 - 13.25

Region 1	Region 2	Region 3
12.75 - 13.25	FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE  Space research (Deep space) (Space-to-Earth)  / 3789AA / / 3789A /	

ADD 3789AA

/ The band 12.5 - 13.25 GHz in Region 1 and the band 12.75 - 13.25 GHz in Regions 2 and 3 are earmarked for the organization of uplinks to broadcasting-satellites operating in the bands 11.7 - 12.5 GHz and 11.7 - 12.2 GHz respectively. /

ADD 3789A

/ No feeder links are authorized in the bands / 12.5 - 12.75 GHz, 14 - 14.25 GHz and 14.25 - 14.5 GHz in Region 1 and / 12.75 - 13.25 GHz in the three Regions. /





A N N E X 2

GHz  
14.3 - 14.5

Region 1	Region 2	Region 3
14.3 - 14.4  FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE except aeronautical mobile  3794B	14.3 - 14.4  FIXED-SATELLITE (Earth-to-space)    3794B	14.3 - 14.4  FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE except aeronautical mobile  3794B
14.4 - 14.47	FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE except aeronautical mobile  Space research (Space-to-Earth)  3794B	
14.47 - 14.5	FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE except aeronautical mobile  Radio astronomy  3794B 3797/408C	

SUP 3795/408A (in the band 14.3 - 14.4 GHz)

ADD 3789A No feeder links are authorized in the bands  
12.5 - 12.75 GHz, 14 - 14.25 GHz and 14.25 - 14.5 GHz in Region 1 and  
12.75 - 13.25 GHz in the three Regions.

ADD 3794B The band 14 - 14.5 GHz is also allocated to the mobile-  
satellite (Earth-to-space) service on a secondary basis. Such use is limited  
to transportable Earth stations.

SUP 3796/408B (in the band 14.4 - 14.5 GHz)

MOD 3797/408C In making assignments to stations of other services to  
which the band 14.47 - 14.5 GHz is allocated, Administrations are urged to take  
all practicable steps to protect spectral line observations of the radio  
astronomy service from harmful interference. Emissions from space and airborne  
stations can be particularly serious sources of interference to the radio  
astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).

A N N E X 3

GHz  
15.35 - 15.7

Region 1	Region 2	Region 3
15.35 - 15.4	RADIO ASTRONOMY  EARTH EXPLORATION-SATELLITE (Passive)  SPACE RESEARCH (Passive)  3799/409C 3799C	
15.4 - 15.7	AERONAUTICAL RADIONAVIGATION  3686/352A 3687/352B 3750/383B	

MOD 3799/409C Additional allocation : in Saudi Arabia, Bahrain, Cameroon, Congo, Guinea, Iran, Israel, Libya, Pakistan, Qatar, Syria, Somalia and Yugoslavia, the band 15.35 - 15.4 GHz is also allocated to the fixed and mobile services on a secondary basis.

ADD 3799C All emissions in the band 15.35 - 15.4 GHz are prohibited, except for those under the provisions of No. 3799/409C. The use of passive sensors by other services is also authorized.

MOD 3686/352A The bands 1 610 - 1 626.5 MHz, 5 000 - 5 250 MHz and 15.4 - 15.7 GHz are reserved on a world-wide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such use and development is subject to agreement obtained under the procedure set forth in Article N13A.

MOD 3687/352B The bands 1 610 - 1 626.5 MHz, 5 000 - 5 250 MHz and 15.4 - 15.7 GHz are also allocated to the aeronautical mobile satellite (R) service on a primary basis. Such use is subject to agreement obtained under the procedure set forth in Article N13A.

SUP 3792/407

MOD 3750/383B The bands 5 000 - 5 250 MHz and 15.4 - 15.7 GHz are also allocated to the fixed-satellite service and the inter-satellite service for connection between one or more Earth stations at specified fixed points on the Earth and satellites when these services are used in conjunction with the aeronautical radionavigation and/or aeronautical mobile (R) service. Such use shall be subject to agreement obtained under the procedure set forth in Article N13A.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 710-E  
16 November 1979  
Original : English

COMMITTEE 5

TWENTY-FIFTH REPORT OF WORKING GROUP 5D TO COMMITTEE 5  
(ALLOCATIONS)

Subject : Frequency bands 1 429 - 1 525 MHz, and 1 660.5 - 1 670 MHz

1. Frequency bands between 1 429 and 1 525 MHz

All proposals relating to these bands were considered, and the Working Group decided unanimously to recommend the adoption of the revised Table and the revised provisions as given in Annex 1.

2. Frequency band between 1 660.5 and 1 670 MHz

All proposals relating to this band were considered, and the Working Group decided unanimously to recommend the adoption of the revised Table and the revised provisions as given in Annex 2.

Dr. B.S. RAO  
Chairman of Working Group 5D

Annexes : 2



A N N E X 1

MHz  
1 429 - 1 525

Region 1	Region 2	Region 3
1 429 - 1 525	1 429 - 1 525	
FIXED	FIXED	
MOBILE except aeronautical mobile	MOBILE	
3679A	3679A 3680AA	

ADD 3679A

In the bands 1 400 - 1 727 MHz, 101 - 120 GHz and 197 - 220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extra-terrestrial origin.

ADD 3680AA

In Region 2, in Australia and in Papua New Guinea the use of the bands 1 435 - 1 525 MHz and 1 525 - 1 535 MHz by the aeronautical mobile service for telemetering purposes has priority over other uses by the mobile services. .



A N N E X 2

MHz  
1 660.5 - 1 670

Region 1	Region 2	Region 3
1 660.5 - 1 668.4	RADIO ASTRONOMY  SPACE RESEARCH (Passive)  Fixed  Mobile except aeronautical mobile  3696/353A 3696A 3698A 3679A 3696B	
1 668.4 - 1 670	METEOROLOGICAL AIDS  FIXED  MOBILE except aeronautical mobile  RADIO ASTRONOMY  3696/353A 3679A	

SUP 3699/354B

ADD 3679A (See Annex 1)

MOD 3696/353A In making assignments to stations of other services to which the band 1 660 - 1 670 MHz is allocated, Administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).

SUP 3697/354

ADD 3696A Additional allocation : in Afghanistan, India, Indonesia, Nigeria and Pakistan, the band 1 660,5 - 1 668,4 MHz is also allocated to the meteorological aids service on a secondary basis.

ADD 3696B In view of the successful detection by astronomers of two hydroxyl spectral lines in the regions of 1 665 MHz and 1 667 MHz, Administrations are urged to give all practicable protection in the band 1 660.5 - 1 668.4 MHz for future research in radio astronomy particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1 664.4 - 1 668.4 MHz as soon as practicable.

ADD 3698A

Different category of service : in Afghanistan, Saudi Arabia, Austria, Benin, Congo, Costa Rica, Ivory Coast, Cuba, Egypt, Ethiopia, Hungary, India, Indonesia, Iran, Israel, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Mongolia, Oman, Uganda, Pakistan, Poland, Qatar, the German Democratic Republic, Singapore, Somalia, Syria, Tanzania, Chad, Czechoslovakia, Tunisia, Yemen AR, the PDR of Yemen and Yugoslavia, the allocation of the band 1 660.5 - 1 668.4 MHz to the fixed service and the mobile (except aeronautical mobile) service is on a primary basis. Such use is limited to equipment operating on or before 1 January 1985.

SUP 3698/354A

Only in the band 1 660 - 1 670 MHz.

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(Geneva, 1979)

Document No. 711-E  
16 November 1979  
Original : English

## COMMITTEE 5

TO COMMITTEE 5

1. The Working Group discussed in detail the possibilities of allocations to the fixed-satellite service for the feeder link of the broadcasting-satellite service.
2. In the first part of the discussions after the Chairman of Working Group 5D9 made a formal presentation of his report, discussions centered around the frequency band contained therein. The Working Group tried to find a band for this purpose that would find the favour of the majority of the Working Group. In order to provide an indication of this choice to aid the Working Group to steer their approach, with a view to arriving at a compromise solution, show of cards of delegations was taken to indicate a choice for the frequency bands under consideration. The choice so indicated is as follows :  
  
for 14.5 - 15.35 GHz - 35 delegations  
17.3 - 18.1 GHz - 22 delegations  
12.75 - 13.25 GHz - 8 delegations  
10.7 - 11.7 GHz (both directions) - 10 delegations.
3. In the second part of the discussions, the USSR made a proposal to provide for feeder links in two bands 10.7 - 11.7 GHz and 17.3 - 18.1 GHz with a provision for the Administrations to choose either of them according to technical and other considerations. This was supported by some Administrations and also opposed by others.
4. An alternative compromise proposal was made by India. After considerable discussion the following two proposals emerged as the potential compromises that would be considered by the Working Group. They are :  
  
Proposal I 10.7 - 11.7 GHz ) with a provision for the Administrations to  
17.3 - 18.1 GHz ) choose either of them  
  
Proposal II 14.5 - 15.35 GHz ) with a provision for the Administrations to  
17.3 - 18.1 GHz ) choose either of them
5. At the request of Australia and the United Kingdom, the measure of support and opposition for either proposal was subsequently taken with the following results :  
  
Proposal I 10.7 - 11.7 GHz and 17.3 - 18.1 GHz (with provision)  
34 Administrations supported  
34 Administrations opposed  
  
Proposal II 14.5 - 15.35 GHz and 17.3 - 18.1 GHz (with provision)  
43 Administrations supported  
29 Administrations opposed



6. Thus, one can see purely from indications of preferences for the compromise proposals the Proposal I ended in a tie. The Proposal II, on the other hand, has come out with a clear majority. However, it is referred to Committee 5 to take a final decision on this subject.

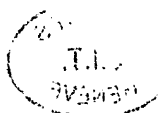
7. Some delegations wished the following points to be placed on record with a view to draw the attention of the Committee 5.

7.1 The Jamaican delegation drew attention of the Working Group to the aspect of principle involved in regard to 14.5 - 15.35 GHz band on the question of ensuring equitable access to the spectrum that needs primary consideration and this was supported by the Indian and Nigerian delegations.

7.2 The USSR delegation informed the Working Group that it will not be possible to guarantee coordination or protection between the uplink of the broadcasting-satellite service and the existing systems in the band 14.5 - 15.35 GHz.

7.3 The delegation of the United States of America also stated that in view of their existing and planned systems, in the band 14.5 - 15.35 GHz, they could not guarantee coordination or protection for uplinks to the broadcasting-satellite service.

Dr. B.S. RAO  
Chairman of Working Group 5D





# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 712-E

16 November 1979

Original : French

COMMITTEE 3

## Note by the Secretary-General

### POSITION OF WARC ACCOUNTS ON 15 NOVEMBER 1979

I hereby submit for examination by the Budget Control Committee an estimate of the expenditure of the Conference at 15 November 1979.

This estimate shows a margin of 3,000 Swiss francs compared with the budget allocation.

M. MILI

Secretary-General

Annex : 1



## A N N E X

Item	Title	Budget approved by AC	Revised budget <sup>1)</sup>	Transfers of credits		Credits available	Expenditure at 15 November 1979				Difference + / -
				Item/ Item	sub-head/ sub-head <sup>2)</sup>		actual	committed	estimated	total	
1	2	3	4	5	6	7	8	9	10	11	12
11.101	Sub-head 1 - <u>Staff</u>										
	<u>Salaries and related expenses</u>										
	Interpretation	1.850.000	1.939.000	-	-	1.939.000	936.309	882.818	82.873	1.902.000	-
	IFRB reinforcement staff	180.000	180.000	-	-	180.000	160.856	28.013	131	189.000	-
	CCIR reinforcement staff	15.000	15.000	-	-	15.000	-	-	-	-	-
	Transitional allowance	-	-	-	-	-	25.628	5.200	172	31.000	-
	Reprography	-	-	-	+60.000	60.000	29.295	23.641	7.064	60.000	-
11.102	Sundry common services	3)	-	-	-	-	-	-	-	-	-
		2.045.000	2.134.000	-	+60.000	2.194.000	1.152.088	939.672	90.240	2.182.000	12.000
	<u>Travel expenses</u>										
11.103	Recruitment travel expenses	170.000	170.000	-22.000	-	148.000	18.112	74.103	17.785	110.000	38.000
	<u>Insurance</u>										
	UNJSPF	-	-	22.000	-	22.000	27.091	6.000	- 91	33.000	-
	Sickness	37.000	37.000	-	-	37.000	6.013	19.000	- 13	25.000	-
	Accidents	13.000	13.000	-	-	13.000	-	-	14.000	14.000	-
		50.000	50.000	22.000	-	72.000	33.104	25.000	13.896	72.000	-
	TOTAL SUB-HEAD 1	2.265.000	2.354.000	-	+60.000	2.414.000	1.203.304	1.038.775	121.921	2.364.000	50.000

Item	Title	Budget approved by AC	Revised budget <sup>1)</sup>	Transfers of credits		Credits available	Expenditure at 15 November 1979				Difference + / -
				Item/ Item	sub-head/ sub-head <sup>2)</sup>		actual	committed	estimated	total	
1	2	3	4	5	6	7	8	9	10	11	12
11.111	Sub-head 2 - <u>Premises and equipment</u>										
	<u>Premises, furniture, machines</u>										
	Rental for CIGC	1.008.000	1.008.000	-	-	1.008.000	884.000	-	26.000	910.000	-
	SII maintenance	45.000	45.000	-	-	45.000	1.896	29.000	29.104	60.000	-
	Cleaning	25.000	25.000	-	-	25.000	-	15.200	9.800	25.000	-
	Supervision	20.000	20.000	-	-	20.000	2.356	-	20.644	23.000	-
	Lease - other premises	50.000	50.000	-	-	50.000	7.500	1.500	-	9.000	-
	Lease of machines	12.000	12.000	-	-	12.000	15.020	28.238	8.742	52.000	-
	Display board	-	-	-	-	-	38.357	22.363	1.280	62.000	-
	Sundry	-	-	-	-	-	16.810	6.392	8.796	32.000	-
11.113		1.160.000	1.160.000	-	-	1.160.000	965.939	102.693	104.368	1.173.000	-13.000
	<u>Document production</u>										
	Internal production	250.000	250.000	-	-	250.000	383.582	44.000	220.418	648.000	-
	Outside production	550.000	550.000	-	-60.000	490.000	-	14.000	100.000	114.000	-
	Preparation IFRB report	90.000	90.000	-	-	90.000	47.468	-	532	48.000	-
11.114		890.000	890.000	-	-60.000	830.000	431.050	58.000	320.950	810.000	20.000
	<u>Office supplies and expenses</u>										
	Supplies and equipment	30.000	30.000	-	-	30.000	64.523	10.527	9.950	85.000	-
	Local transport and removal	10.000	10.000	-	-	10.000	8.277	9.723	-	18.000	-
		40.000	40.000	-	-	40.000	72.800	20.250	9.950	103.000	-63.000

Item	Title	Budget approved by AC	Revised budget <sup>1)</sup>	Transfers of credits		Credits available	Expenditure at 15 November 1979				Difference + / -
				Item/Item	sub-head/sub-head <sup>2)</sup>		actual	committed	estimated	total	
1	2	3	4	5	6	7	8	9	10	11	12
11.115	<u>Post, telegraph and telephone</u>										
	Post	350.000	350.000	-	-	350.000	189.469	-	125.531	315.000	-
	Telephone	5.000	5.000	-	-	5.000	110	-	390	500	-
	Telegrams	5.000	5.000	-	-	5.000	90	-	410	500	-
		360.000	360.000	-	-	360.000	189.669	-	126.331	316.000	44.000
11.116	Technical installations	10.000	10.000	-	-	10.000	-	-	10.000	10.000	-
11.117	Sundry and unforeseen	42.000	42.000	-	-	42.000	12.846	6.414	22.740	42.000	-
	TOTAL SUB-HEAD 2	2.502.000	2.502.000	-	-60.000	2.442.000	1.672.304	187.357	594.339	2.454.000	-12.000

Item	Title	Budget approved by AC	Revised budget <sup>1)</sup>	Transfers of credits		Credits available	Expenditure at 15 November 1979				Difference + / -
				Item/Item	sub-head/sub-head <sup>2)</sup>		actual	committed	estimated	total	
1	2	3	4	5	6	7	8	9	10	11	12
11.121	Sub-head 3 - <u>Other expenses</u>										
	<u>Final acts of the Conference</u>										
	Date entry	36.000	33.000	-	-	38 000	-	22.162	50.638	73.000	-
	Printing	200.000	200.000	-	-	200.000	-	8.040	191.960	200.000	-
	Chinese translation	70.000	70.000	-	-	70.000	-	-	70.000	70.000	-
	Russian translation	70.000	70.000	-	-	70.000	-	-	70.000	70.000	-
	TOTAL SUB-HEAD 3	378.000	378.000	-	-	378.000	-	30.202	382.798	413.000	-35.000
	Sub-head 4/1980 - <u>Finalizing</u>										
	Expenditure 1980	240.000	240.000	-	-	240.000	-	-	240.000	240.000	-
	GRAND TOTAL	5.385.000	5.474.000	-	-	5.474.000	2.875.608	1.256.334	1.339.058	5.471.000	3.000

NOTES : 1) Budget approved by the Administrative Council and taking into account the additional credits under Administrative Council Resolution No. 647.

2) In accordance with the Union's Financial Regulations, Article 15, paragraph 3.

3) Following a change in the budgetary structure adopted by the Administrative Council in 1976, expenditure on staff under the heading of the General Secretariat Common Services is shown in a special section (Section 17) from the 1977 budget onwards.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 713-E

16 November 1979

Original : English

## PLENARY MEETING

Republic of Iraq

### DRAFT RESOLUTION

Relating to the Division of the World into Climatic Zones  
For the Purpose of Calculation of Propagation Parameters

The World Administrative Radio Conference, Geneva, 1979,

#### considering

- a) that the propagation of radio waves, particularly at frequencies greater than 1 GHz, is significantly influenced by rain, sand and dust storms;
- b) that measured values of rainfall intensity and more particularly short term rain intensity statistics are not available for certain geographical regions;
- c) that very little information exists on the occurrence and effects of sand and dust storms;
- d) that for the purpose of evaluating propagation characteristics, the CCIR has divided the world into five climatic zones, broadly corresponding to the characteristics of the rainfall and this division is no longer adequate;
- e) that the present division of the world into such a limited number of climatic zones is likely to be insufficiently precise to give a correct evaluation of attenuation and scattering by rain in some parts of the world;
- f) that the effects of dust and sand storms have not been adequately examined and evaluated, either in terms of their severity or in terms of their temporal variations;
- g) that the CCIR has some studies in progress on the effects of rain, dust and sand storms;

#### requests the CCIR

- 1. to expedite and expand the studies on the effects of rain and to give greater emphasis to the studies of sand and dust storms;
- 2. to advise on the nature of the studies required in geographical regions for which little information exists;
- 3. in the light of new data becoming available, to give particular attention to the revision of the current classification of the world into climatic zones; and



resolves that Administrations should

1. encourage and undertake, as a matter of urgency, measurements in their countries of the rates of precipitation of rain and of the spatial and temporal variations of this precipitation including its cellular structure;
  2. encourage and undertake, also as a matter of urgency, measurements of the influence of sand and dust storms on propagation; and
  3. communicate the results of such measurements to the CCIR to enable the development of a better and more comprehensive description of the phenomena which apply and an improved classification of dust and sand storms and rainfall climates for application to radio communication problems.
- 



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 714-E  
16 November 1979  
Original : English

## PLENARY MEETING

### EIGHTEENTH REPORT OF COMMITTEE 4

Committee 4 has unanimously decided to modify four Resolutions (Nos. Spa2 - 4, Mar2 - 20, Mar2 - 21 and Sat-7) and six Recommendations (Nos. 15, Spa 4, Aer 2, Spa2 - 9, Spa2 - 11, Spa2 - 12).

The amended texts have been transmitted to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 715).

N. MORISHIMA  
Chairman of Committee 4





# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Corrigendum No. 1 to  
Document No. 715-E  
21 November 1979  
Original : English

## COMMITTEE 9

### EIGHTEENTH SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

MOD

RESOLUTION No. Mar2 - 20

Relating to the Use of Class /A3A/ and /A3J/ Emissions  
for Distress and Safety Purposes on the Carrier  
Frequency 2 182 kHz

(MOD)

The World Administrative Radio Conference, Geneva, 1979,

noting

a) that the Radio Regulations require the use on the carrier frequency  
2 182 kHz of :

MOD

- class /A3/ or /A3H/ emissions by ship, aircraft and survival craft stations;
- class /A3H/ emissions by coast stations;
- the classes of emission, specified in Appendix 20A, by emergency position-indicating radiobeacons;

b) that the main object of these provisions is to maintain reliable  
distress and safety communications by using proven techniques;

noting also

a) the Final Report of the Panel of Experts, Geneva, 1963;

MOD

b) the relevant CCIR studies concerning single-sideband techniques  
(see CCIR Question 26-1/8, Recommendations 488, 543 and Report 744);

recognizing

MOD

that the use of class /A3A/ and /A3J/ emissions on the carrier frequency  
2 181 kHz would provide the operational advantages, inherent in single-sideband  
techniques which are already being obtained on other frequencies;

ADD

recognizing, however,

that the CCIR recommends that class /A3A/ emissions should not be used  
for distress and safety purposes (see CCIR Recommendation 543);



MOD

considering

- a) that a large number of equipments employing class /A3/ and /A3H/ emissions will still be in use for distress and safety purposes on 1 January 1982; //
- b) that single-sideband equipment must be designed to work with closer frequency tolerances and higher technical standards than those necessary for double-sideband equipment;
- c) that equipment designed for safety purposes, particularly survival craft equipment, should :
- be capable of reliable operation in varying environments, and after long periods of storage;
  - be easy to operate by an inexperienced person in all circumstances;
  - be relatively low priced;
- d) that the requirement for direction-finding and homing must be satisfied;
- e) that the need to transmit and receive the two-tone radiotelephone alarm signal, including signals from emergency position-indicating radiobeacons, must also be satisfied, taking into account the frequency tolerances in Appendix /20A/ and the relevant CCIR Recommendations; //

MOD

resolves

1. that continuation of the study of the use of class /A3J/ emissions for distress and safety purposes is required; //
2. that this study should be completed in time for a decision on the date for the final conversion to class /A3A/ and /A3J/ emissions on the carrier frequency 2 182 kHz to be made by the next competent World Administrative Radio Conference; //

MOD

requests the CCIR

to continue its studies on the above-mentioned subject as a matter of urgency and, if possible, to issue Recommendations sufficiently in advance of the above-mentioned conference;

requests the Secretary-General

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

invites the Inter-Governmental Maritime Consultative Organization

to consider the matter as part of the study currently being undertaken of the maritime distress and safety system.



MOD

RESOLUTION No. Mar2 - 21

Relating to the Use of Class /A3A/ and /A3J/ Emissions on the  
Carrier Frequencies 4 125 kHz and 6 215.5 kHz Used to  
Supplement the Carrier Frequency 2 182 kHz  
for Distress and Safety Purposes

[ ]

(MOD)

The World Administrative Radio Conference, Geneva, 1979,

noting

MOD

a) that the Radio Regulations permit, until 1 January 1984, the use, on  
the carrier frequencies 4 125 kHz and 6 215.5 kHz, of class /A3H/ emissions by  
coast, ship and aircraft stations (see No. /6644/13511/ of the  
Radio Regulations);

[ ]

[ ]

b) that the main object of these provisions is to maintain reliable  
distress and safety communications using proven techniques;

noting also

a) the Final Report of the Panel of Experts, Geneva, 1963;

MOD

b) relevant CCIR studies concerning single-sideband techniques;  
(see CCIR Question 26-1/8, Recommendations 488, 543 and 544)

recognizing

MOD

that the use of class /A3A and A3J/ emissions on the carrier  
frequencies 4 125 kHz and 6 215.5 kHz would provide the operational advantages  
inherent in single-sideband techniques, which are already being obtained on  
other frequencies;

[ ]

ADD

recognizing, however,

that the CCIR recommends that class /A3A/ emissions should not be  
used for distress and safety purposes (see CCIR Recommendation 543);

considering

MOD

a) that a large number of equipments employing class /A3H/ emissions  
are still in use for distress and safety purposes;

[ ]

MOD

b) that equipment employing class /A3J/ emissions must be designed  
to work with closer frequency tolerances and higher technical standards than  
those necessary for equipment employing class /A3H/ emission and envelope  
detection in the receiver;

[ ]

[ ]

c) that equipment designed for safety purposes should in all circumstances, be capable of reliable operation and be easy to operate by an inexperienced person;

resolves

MOD that no further study of the use of class /A3A/ and /A3J/ emissions for distress and safety purposes on the carrier frequencies 4 125 kHz and 6 215.5 kHz is required (see CCIR Recommendations 543 and 544);

requests the Secretary-General

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

invites

1. the Inter-Governmental Maritime Consultative Organization to consider the matter as part of the study currently being undertaken of the maritime distress and safety system;
2. the next competent World Administrative Radio Conference to consider this matter further.

N. MORISHIMA  
Chairman of Committee 4

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 715-E

16 November 1979

Original : English

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COMMITTEE 9

EIGHTEENTH SERIES OF TEXTS FROM COMMITTEE 4  
TO THE EDITORIAL COMMITTEE

Committee 4 has unanimously decided to modify four Resolutions  
(Nos. Spa2 - 4, Mar2 - 20, Mar2 - 21 and Sat-7) and six Recommendations  
(Nos. 15, Spa 4, Aer 2, Spa2 - 9, Spa2 - 11, Spa2 - 12).

The texts shown in the Annex are hereby submitted to the Editorial Committee  
(see also Document No. 714).

N. MORISHIMA  
Chairman of Committee 4

Annex : 1



A N N E X

RESOLUTION No. Spa2 - 4

(MOD)

**Relating to the experimental Use of Radio Waves by Ionospheric  
Research Satellites**

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

MOD

- a) that research into the Earth's ionosphere is very important in the study of the relationship between the Sun and the Earth and also for the effective use of radio-wave transmission via the ionosphere;
- b) that successful research has been conducted with satellites such as Alouette 1 and 2, ~~and~~ ISIS 1 and 2, in which top-side sounding equipment is installed; and ISS
- c) that similar ionospheric research satellites will be used for further research into the ionosphere and beyond;
- d) that top-side sounding equipment is operated mostly in a frequency-sweeping pulse mode;
- e) that these types of satellite are usually operated intermittently during a limited period each day according to the orbital characteristics;
- f) that operation of the sounder can be accurately commanded at will by the earth station concerned;

*resolves*

that administrations may continue to permit the transmission of radio waves from ionospheric research satellites in orbit above the ionosphere in the MF and HF bands provided that suitable means are available for controlling the transmission from these satellites as required by No. 470V of the Radio Regulations to prevent harmful interference to other services.



MOD

**RESOLUTION No. Mar2 - 20**

**Relating to the Use of Class [A3A] and [A3J] Emissions  
for Distress and Safety Purposes on the Carrier  
Frequency 2 182 kHz**

(MOD) The World Administrative Radio Conference, Geneva, 1979,

*noting*

a) that the Radio Regulations require the use on the carrier frequency 2 182 kHz of:

MOD

- class [A3] or [A3H] emissions by ship, aircraft and survival craft stations;
- class [A3H] emissions by coast stations;
- the classes of emission, specified in Appendix 20A, by emergency position-indicating radiobeacons;

b) that the main object of these provisions is to maintain reliable distress and safety communications by using proven techniques;

*noting also*

a) the Final Report of the Panel of Experts, Geneva, 1963;

MOD

b) the relevant C.C.I.R. studies concerning single sideband techniques, in particular those relating to Question 19/8; ← [26-1/8] ;

*recognizing*

MOD

that the use of class [A3A] and [A3J] emissions on the carrier frequency 2 182 kHz would provide the operational advantages inherent in single sideband techniques;

MOD

*considering*

a) that a large number of equipments employing class [A3] and [A3H] emissions will still be in use for distress and safety purposes on 1 January 1982;

b) that single sideband equipment must be designed to work with closer frequency tolerances and higher technical standards than those necessary for double sideband equipment;

c) that equipment designed for safety purposes, particularly survival craft equipment, should:

- be capable of reliable operation in varying environments, and after long periods of storage;
- be easy to operate by an inexperienced person in all circumstances;
- be relatively low priced;

d) that the requirement for direction-finding and homing must be satisfied;

e) that the need to transmit and receive the two-tone radiotelephone alarm signal, including signals from emergency position-indicating radiobeacons, must also be satisfied, taking into account the frequency tolerances in Appendix 20A and the relevant C.C.I.R. Recommendations;

*resolves*

MOD

1. that study of the use of class [A3A] and [A3J] emissions for distress and safety purposes is required;

MOD

2. that this study should be completed in time for a decision on the date for the final conversion to class [A3A] and [A3J] emissions on the carrier frequency 2182 kHz to be made by the next competent World Administrative Radio Conference;

*requests the C.C.I.R.*

to study the above-mentioned subject as a matter of urgency and, if possible, to issue Recommendations sufficiently in advance of the above-mentioned conference;

*requests the Secretary-General*

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

*invites the Inter-Governmental Maritime Consultative Organization*

to consider the matter as part of the study currently being undertaken of the maritime distress and safety system.

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## RESOLUTION No. Mar2 - 21

MOD

Relating to the Use of Class **A3A** and **A3J** Emissions on the  
Carrier Frequencies ~~4 136.3 kHz~~ and ~~6 204 kHz~~<sup>1</sup> used to  
**4 125** Supplement the Carrier Frequency **2 182 kHz**  
for Distress and Safety Purposes **6 215.5**

(MOD)

The World Administrative Radio Conference, Geneva, 1979.

*noting*

MOD

a) that the Radio Regulations permit, until 1 January 1984, the use, on the carrier frequencies ~~4 136.3 kHz~~ and ~~6 204 kHz~~,<sup>1</sup> of class **A3H** emissions by coast, ship and aircraft stations (see No. **13511** of the Radio Regulations);

b) that the main object of these provisions is to maintain reliable distress and safety communications using proven techniques;

*noting also*

a) the Final Report of the Panel of Experts, Geneva, 1963;

MOD

b) relevant C.C.I.R. studies concerning single sideband techniques, in particular, those relating to Question ~~19/8~~; ← **26-1/8** ;

*recognizing*

**4 125 kHz and 6 215.5**

MOD

↓ that the use of class **A3A** and **A3J** emissions on the carrier frequencies ~~4 136.3 kHz~~ and ~~6 204 kHz~~<sup>1</sup> would provide the operational advantages inherent in single sideband techniques;

MOD

<sup>1</sup> These frequencies ~~will~~ have replaced the carrier frequencies ~~4 136.3 kHz~~ and ~~6 204 kHz~~ as from 1 January 1978.

*considering*

MOD

~~are~~ <sup>are</sup> a) that a large number of equipments employing class ~~A3H~~ emissions ~~will still be in use for distress and safety purposes after 1 January 1978;~~

b) that equipment employing class ~~A3A~~ and ~~A3J~~ emissions must be designed to work with closer frequency tolerances and higher technical standards than those necessary for equipment employing class ~~A3H~~ emission and envelope detection in the receiver;

c) that equipment designed for safety purposes should, in all circumstances, be capable of reliable operation and be easy to operate by an inexperienced person;

MOD

~~noting further~~  
~~resolves~~

MOD

that study ~~is required~~ of the use of class ~~A3A~~ and ~~A3J~~ emissions for distress and safety purposes ~~and that this study should be completed in advance of the agreed date for the cessation of class A3H emissions on the carrier frequencies 4 125 kHz and 6 215.5 kHz<sup>1</sup>~~ <sup>has been</sup> completed by the CCIR (see Recommendations 543 and 544);

~~requests the C.C.I.R.~~

SUP

~~to study this subject as a matter of urgency and, if possible, to issue Recommendations well in advance of the next competent World Administrative Radio Conference;~~

*requests the Secretary-General*

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

MOD

<sup>1</sup> These frequencies ~~will~~ have replaced the carrier frequencies 4 136.3 kHz and 6 204 kHz as from 1 January 1978.

NOC

*invites*

1. the Inter-Governmental Maritime Consultative Organization to consider the matter as part of the study currently being undertaken of the maritime distress and safety system;
  2. the next competent World Administrative Radio Conference to consider this matter further.
- 

RESOLUTION No. Sat - 7

(MOD)

**Relating to the use, by space stations operating in the frequency bands 11.7-12.2 GHz (in Regions 2 and 3) and 11.7-12.2 GHz (in Region 1), of the geostationary orbit and no other**

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

NOC

*considering*

- a) that a Plan designating frequency assignments in the above-mentioned frequency bands and positions in the geostationary orbit has been adopted by the Conference for Regions 1 and 3;
- b) that a similar plan for Region 2 is expected to result from a regional administrative radio conference in 1982;
- c) that the operation of space radiocommunication services in the frequency bands concerned in orbits other than the geostationary orbit would be incompatible with the plans referred to in a) and b) above;

NOC

*resolves*

that administrations shall ensure that their space stations in these frequency bands are operated in the geostationary orbit and no other.

**RECOMMENDATION No. 15**

**Relating to Frequency Modulation Transmissions**

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

- a) that listeners should be enabled to hear national broadcasting transmissions free of interference from other stations ;
- b) that in many regions, the overloading of Bands 5 and 6 is such that listening is becoming increasingly difficult ;
- c) that experience has shown that where frequency modulated transmissions are broadcast in Band 8, listeners in those countries are assured of improved reception ;

*recommends*

MOD

that the Members and ~~Associate Members~~ of the Union should consider the possibility of using frequency modulated transmissions in the Band 8 for their national broadcasting services.

↑  
sound

RECOMMENDATION No. Spa 4

to the C.C.I.R. Relating to the  
Study of Modulation Methods for Radio-Relay Systems  
in Relation to Sharing with ~~Communication-Satellite Systems~~

Fixed

MOD

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

(MOD)

a) that Article ~~3~~<sup>N7</sup> of the Radio Regulations permits the sharing of certain frequency bands by the ~~communication-satellite service~~ and the fixed service; fixed

MOD

b) that the sharing criteria to avoid mutual interference between the stations in these two services have been established in Articles ~~7~~<sup>N25</sup> and N26;

c) that among many factors of over-all efficiency of utilization of frequency bands it seems that the reduction of interference between two services is most important;

*noting*

a) that the over-all efficiency of utilization of the frequency bands shared by the two services depends on the methods of modulation used by the systems concerned; fixed

MOD

b) that studies of the preferred modulation characteristics for ~~communication-satellite systems~~ are to be carried out under Study Programme ~~235D (IV)~~<sup>2D-1/4</sup> of the C.C.I.R.;

*recommends*

2 - 3/4

MOD

that the C.C.I.R. should study especially, under the general framework of Question ~~236 (IV)~~, modulation methods (such as pulse-code modulation using phase or frequency modulation) in particular for line-of-sight radio-relay systems in relation to sharing with ~~communication-satellite systems~~. fixed

RECOMMENDATION No. Aer 2

**relating to a study of the utilization of space communication  
techniques in the aeronautical mobile (R) service**

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

- a) the continuing efforts of the aeronautical mobile (R) service to obtain improvements in communications commensurate with increases in the number, size and speed of aircraft ;
- b) the efforts of the International Telecommunication Union to reduce congestion in the bands between 4 and 27.5 MHz; and
- c) the need to effect conservation in the use of the high frequency spectrum ;

*noting*

- a) that successful application of space radiocommunication techniques to the communication needs of international civil aviation offers the possibility of substantially improving aeronautical mobile (R) service communications while avoiding congestion in the bands between 4 and 27.5 MHz;
- b) that tests have demonstrated the capability of effecting communication between aircraft and aeronautical stations by relay via a stationary satellite ;
- c) that the state of the art in space radiocommunication techniques is rapidly advancing ;
- d) that the technical potential is such that space radiocommunication techniques could provide a capability for accommodating, in the near future, many of the aeronautical mobile (R) service communication requirements over major world air routes on all but the polar routes ;
- e) that before administrations will be willing to undertake a programme to implement space radiocommunication techniques they will need a comprehensive investigation into those techniques and a statement of the measures that need to be taken ;
- f) that the ability of administrations to undertake such a programme is intimately linked to the economic implications involved ;
- g) that the International Civil Aviation Organization (I.C.A.O.) is the international body primarily concerned with the establishment of standards and recommended practices governing communication systems and techniques used to support international civil aviation ; ~~and that Organization has included the subject of space radiocommunication techniques on the agenda of its Communications/Operations Divisional Meeting scheduled to convene in October 1966 ;~~
- h) that the C.C.I.R. has ~~a Study Group on Space Systems and Radioastronomy as well as~~ a Study Group on Mobile Services and that close co-ordination of the work of the C.C.I.R. and I.C.A.O. in this field is desirable ;

MOD

MOD

*recommends*

1. that administrations, bearing in mind the economic and operational aspects involved, should take account of the possibilities of satisfying the communication needs of the aeronautical mobile (R) service on major world air routes by the use of space radiocommunication techniques ; and
2. that administrations should give further study to these questions taking as a basis for their consideration the factors listed in the Annex hereto.

**ANNEX TO RECOMMENDATION No. Aer 2**

(Note : The list of factors which follows is not claimed to be exhaustive nor is it intended to limit consideration of any other aspects pertinent to the use of space radiocommunication techniques by the aeronautical mobile (R) service.)

1. The technical parameters of the satellite and aircraft receiving and transmitting system, including :
  - a) Required received (carrier) power at the satellite (from the aircraft).
  - b) Required received (carrier) power at the aircraft (from the satellite).
  - c) Satellite effective radiated power (per channel).
  - d) Aircraft effective radiated power (per channel).
  - e) Type of emission which should be employed.
  - f) Bandwidth of each channel.
  - g) Channelling arrangement.
  - h) Polarization requirements.
  - i) Need for omni-directional aircraft antennae ; sea/ground reflections.
  - j) Required separation between transmit and receive frequencies at the satellite.
  - k) Requirement on the satellite for capability of aircraft to use each channel independently (multiple/random access).
  - l) Requirements in relation to system reliability.
  - m) Other considerations.
2. The number and location of satellites, including :
  - a) In regard to provision of service, disposition of air routes and the number of flights over each air route.
  - b) Group of air routes which may be served via a common satellite.
  - c) Number of satellites needed to provide service to each group of air routes.
  - d) Location of each of the satellites.
  - e) Number of channels needed aboard each satellite.
  - f) Other considerations.

3. Technical performance requirements of aeronautical (R) stations, including :
    - a) Suitable transmitting and receiving antennae characteristics : gain, beamwidth, siting, etc.
    - b) Minimum effective radiated power.
    - c) Development and utilization of low-cost aeronautical (R) station (terminal) facilities.
    - d) Need for a selective calling system (SELCAL).
    - e) Other considerations.
  4. Method of operation and location of aeronautical (R) stations, including :
    - a) The method of operation : where multiple frequencies are provided on the satellite, the need, or absence of need, to continue the present practice of providing route separation by use of different/separate frequencies ; that is,
      - should all (R) frequencies on the satellite be available at all aeronautical (R) stations ; or
      - should the communication load be distributed between available frequencies, each of which is limited to a specific geographic area ; or
      - some other arrangement.
    - b) As appropriate, to list (by frequency) each of the aeronautical (R) stations which should employ each satellite frequency.
    - c) Other considerations.
  5. Provisions for handling aeronautical point-to-point communications :
    - a) Technical system performance parameters of the terminal equipment.
    - b) Technical system performance parameters of the satellite equipment.
    - c) Requirement on the satellite for capability of terminals to have independent access to relaychannels through the satellite (multiple/random access).
    - d) Frequency bands to be used.
    - e) Required separation between transmit and receive frequencies on the satellite.
    - f) Development and utilization of low-cost terminal facilities.
    - g) The entity or entities which should provide, own or operate the satellites and terminal facilities as well as the extent to which aeronautical point-to-point communications should be handled.
    - h) Other considerations.
  6. Estimated costs of a satellite system to include : land-based, airborne and satellite-borne facilities.
  7. Operational aspects of a satellite system, including all facilities mentioned in paragraph 6 above, particularly :
    - a) The environment within which the system must work.
    - b) The evolutionary process of introducing the system.
-



RECOMMENDATION No. Spa2 - 9

Relating to the Co-ordination of Earth Stations

(MOD) The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

N11

MOD

- a) that under the terms of Article ~~9A~~ of the Radio Regulations, frequency assignments to earth stations in certain bands shared with equal rights between terrestrial radiocommunication services and space radiocommunication services must be co-ordinated with a view to preventing mutual harmful interference;
- b) that the calculation method described in Appendix 28 to the Radio Regulations applies solely to frequencies in the 1-40 GHz range;
- c) that Tables I and II of this Appendix do not show numerical values for all the necessary parameters of certain space radiocommunication services and terrestrial radiocommunication services sharing frequency bands with equal rights;

*invites the C.C.I.R.*

to continue as a matter of urgency its study:

- of data not included in Tables I and II of Appendix 28 to the Radio Regulations, relating to the space radiocommunication services and terrestrial radiocommunication services sharing frequency bands with equal rights;
- of the formulation of calculation methods for determining the co-ordination area of earth stations at frequencies below 1 GHz and above 40 GHz;

*recommends to administrations*

that until the next competent World Administrative Radio Conference they should use:

- any C.C.I.R. Recommendation, if applicable, for the values missing from Tables I and II of Appendix 28 to the Radio Regulations;
- the methods of determining the co-ordination area for frequencies below 1 GHz and above 40 GHz, which may be the subject of a C.C.I.R. Recommendation.

RECOMMENDATION No. Spa2 - 11

**Relating to Carrier Energy Dispersal in Systems in the  
Fixed-Satellite Service**

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

a) that use of carrier energy dispersal techniques in systems in the fixed-satellite service can result in a substantial reduction of interference to stations of a terrestrial service operating in the same frequency bands;

MOD

b) that the use of such techniques can result in a substantial reduction in the level of interference between systems in the fixed-satellite service operating in the same frequency bands;

c) that such techniques are being regularly and successfully employed in systems in the fixed-satellite service without noticeable deterioration of the quality of operation;

*recommends*

1. that systems in the fixed-satellite service employing angle modulation by analogue signals should use carrier energy dispersal techniques as far as is practicable with a view to spreading energy at all times and in a manner consistent with the satisfactory operation of the systems;

2. that systems in the fixed-satellite service employing digital modulation should use carrier energy dispersal techniques when this becomes technically feasible and is practical.

(URS

Doc. 63A)

and in a corresponding increase of efficiency in the utilization of the geostationary orbit;

RECOMMENDATION No. Spa2 - 12

**Relating to Technical Standards for the Assessment  
of harmful Interference in the Frequency Bands above 28 MHz**

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

MOD

- a)** that the definition of harmful interference (No. [93] of the Radio Regulations), being of a qualitative nature, leads to a purely subjective estimation of the nuisance;
- b)** that, for the accomplishment of its regulatory tasks, the I.F.R.B. has adopted in its technical standards, for the frequency bands below 28 MHz, values for the ratio between the wanted signal and the interfering signal, below which harmful interference may be expected;
- c)** that "harmful interference" implies a considerable degree, or probability, of interference;
- d)** that, as a consequence, it is desirable to determine the level of interference by which any emission, radiation or induction affects a radio-communication service beyond specific limits established to ensure the quality and reliability of performance required by the nature of the service;
- e)** that the assessment of interference levels is related to various factors such as the nature of the services concerned, number of interference sources, percentages of time during which the interfering signal affects the wanted signal;

*and noting*

a) that the I.F.R.B. has been considering the maximum allowable values of interference given in the pertinent C.C.I.R. Recommendations to be values which ensure a satisfactory service;

b) that, however, the I.F.R.B. does not possess data on the extent to which these recommended values and the associated percentages of time may be exceeded without affecting a service beyond the specific limits established to ensure the quality and reliability of performance required by the nature of the service;

*invites the C.C.I.R.*

*to continue to*

MOD ~~to~~ study this subject and to recommend the technical criteria for the frequency bands above 28 MHz, allocated to space radiocommunication, radio astronomy, and the terrestrial radiocommunication services concerned, in order to enable the I.F.R.B. and administrations to apply such criteria for these bands.

~~and invites the I.F.R.B.~~

SUP ~~to publish, for the information of administrations, its technical standards based upon the relevant provisions of the Radio Regulations and Appendices thereto, the decisions of Administrative Conferences of the Union as appropriate, the Recommendations of the C.C.I.R., the state of the radio art, and the development of transmission techniques.~~

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# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 716-E

16 November 1979

Original : English

## PLENARY MEETING

### NINETEENTH REPORT OF COMMITTEE 4

Committee 4 has unanimously decided to modify five Recommendations (Nos. Sat-2, Sat-3, Sat-4, Sat-5 and Sat-6).

The amended texts have been transmitted to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 717).

N. MORISHIMA  
Chairman of Committee 4



**CONFERENCE ADMINISTRATIVE  
MONDIALE  
DES RADIOCOMMUNICATIONS**

(Genève, 1979)

Corrigendum No. 1 au  
Document No. 717-F/E/S  
19 novembre 1979 1

COMMISSION 9  
COMMITTEE 9  
COMISIÓN 9

DIX-NEUVIEME SERIE DE TEXTES SOUMIS PAR LA COMMISSION 4  
A LA COMMISSION DE REDACTION

NINETEENTH SERIES OF TEXTS FROM COMMITTEE 4  
TO THE EDITORIAL COMMITTEE

DECIMONOVENA SERIE DE TEXTOS DE LA COMISIÓN 4  
A LA COMISIÓN DE REDACCIÓN

pages 1 et 3 : biffer tout ce qui concerne la Recommandation No. Sat-3.

pages 1 and 3 : cancel all concerning Recommendation No. Sat-3.

páginas 1 y 3 : suprimase todo relativo a la Recomendación N° Sat-3.

N. MORISHIMA  
Président de la Commission 4  
Chairman of Committee 4  
El Presidente de la Comisión 4



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 717-E

16 November 1979

Original : English

COMMISSION 9

## NINETEENTH SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has unanimously decided to modify five Recommendations  
(Nos. Sat-2, Sat-3, Sat-4, Sat-5 and Sat-6).

The texts shown in the Annex are hereby submitted to the  
Editorial Committee (see also Document No. 716)

N. MORISHIMA  
Chairman of Committee 4

Annex : 1



A N N E X

RECOMMENDATION No. Sat - 2

**Relating to the radiation of harmonics of the fundamental frequency  
by broadcasting-satellite stations**

(MOD) The World Administrative Radio Conference, Geneva, 1979,

*considering*

MOD a) that the frequency band [23.6-24] GHz is allocated to the radio astronomy service on a primary basis;

MOD b) that the second harmonic of the fundamental frequency of broadcasting-satellite stations operating within the band [1.8-12] GHz may seriously disturb radio astronomy observations in the band [23.6-24] GHz if effective steps are not taken to reduce the radiation level produced by this harmonic;

*in view of*

MOD the provisions of No. <sup>3248/673</sup>~~673~~ of the Radio Regulations;

*recommends*

MOD that, when defining the characteristics of their space stations operating in the broadcasting-satellite service, particularly within the band [1.8-12] GHz, administrations take all necessary steps to reduce the radiation level of the second harmonic below the values indicated in the relevant CCIR Recommendations.

---



RECOMMENDATION No. Sat - 3

To the CCIR relating to studies of propagation at 12 GHz  
for the broadcasting-satellite service

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

a) the need for ample information on the various propagation factors  
required for the planning of the broadcasting-satellite service;

SUP

~~b) the technical data required to enable the 1979 World Administrative  
Radio Conference to revise the Radio Regulations;~~

(MOD)

~~c) b)~~ the studies being pursued by the CCIR under the appropriate Study  
Programmes;

*invites the CCIR*

1. to continue the study of the effects of precipitation attenuation at  
low angles of incidence in all climatic zones;

MOD

2. to <sup>continue</sup> ~~initiate~~ the study of the effects of sand and dust storms;

3. to examine the relationship between the propagation characteristics  
for 99% of the worst month and those for the year;

4. to examine, for emissions using circular polarization, the level of the  
depolarized component relative to the polarized component;

SUP

~~5. to submit as much information as possible on these problems to the  
1979 World Administrative Radio Conference.~~

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RECOMMENDATION No. Sat - 4

To the CCIR relating to transmitting antennae  
for the broadcasting-satellite service

(MOD) The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

a) the need for ample information on transmitting antennae for the  
planning of the broadcasting-satellite service;

SUP ~~b)~~ the technical data required to enable the 1979 World Administrative  
Radio Conference to revise the Radio Regulations;

(MOD) ~~c)~~ b) the studies being pursued by the CCIR under the appropriate Ques-  
tions and Study Programmes;

*invites the CCIR*

1. to continue the study of reference patterns for the co-polar and  
cross-polar components of transmitting antennae for the broadcasting-  
satellite service for both individual and community reception, and  
in particular the practicable means of achieving various degrees of  
improved side-lobe suppression and the economic implication thereof;

MOD 2. to <sup>continue</sup> ~~initiate~~ the study of the technical characteristics designed to  
achieve a pointing accuracy for transmitting antennae such that:

- the deviation of the antenna beam from its nominal direction  
of pointing shall not exceed  $0.1^\circ$ ;
- the angle of rotation of the transmitting beam about its axis  
shall not exceed  $\pm 2^\circ$ .

SUP 3. ~~to submit as much information as possible on these problems to the~~  
~~1979 World Administrative Radio Conference.~~

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RECOMMENDATION No. Sat - 5

To the CCIR relating to up-links for the  
broadcasting-satellite service

(MOD)

The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

SUP

(MOD)

(MOD)

(MOD)

(MOD)

(MOD)

- a) the need for ample information on the characteristics of up-links for planning the broadcasting-satellite service;
- ~~b)~~ the technical data required to enable the 1979 World Administrative Radio Conference to revise the Radio Regulations;
- ~~c)~~ b) the studies being pursued by the CCIR under the appropriate Study Programme;
- ~~d)~~ c) that the carrier-to-noise ratios for the up-links to broadcasting satellites should be of the order of ten times greater than those for the down-links;
- ~~e)~~ d) that, as regards up-links interference between broadcasting satellites at different orbital positions, adequate up-link protection ratios (approximately 10 dB greater than those in the down-link) would appear to be readily achievable by antenna pattern discrimination in earth station transmitting antennae which would clearly have to be larger in diameter than the receiving antennae used in the down-links;
- ~~f)~~ e) that, where planning is based on isolation parameters such as radiation patterns for space station transmitting antennae, carrier interleaving, and/or polarization discrimination in meeting the down-link carrier-to-interference requirements between service areas served from a single orbital position, the increased carrier-to-interference requirements in the up-links serving the satellite(s) at that same orbital position will have to use the same isolation parameters provided that this produces an improvement of about 10 dB in net isolation. The characteristics of the transmitting Earth station will clearly not affect this isolation, apart from the purity of their on-beam polarization;
- ~~g)~~ f) that in the implementation of broadcasting-satellite systems, consideration must be given to all aspects of associated space operation service functions (tracking, telemetry, telecommand and ranging) in connection with the operation of broadcasting satellites;

*invites the CCIR*

1. to continue the study of those radiation characteristics of receiving antennae of space stations in the broadcasting-satellite service which, singly or in combination with other means of discrimination, would give the necessary protection ratios for the up-links of systems in the broadcasting-satellite service for (a) satellite(s) occupying a given position in the geostationary satellite orbit;
2. to continue the study of those polarization characteristics of receiving antennae of space stations in the broadcasting-satellite service which, singly or in combination with other means of discrimination, would give the necessary protection ratios for the up-links of systems in the broadcasting-satellite service for (a) satellite(s) occupying a given position in the geostationary satellite orbit;
3. to continue the study of the technical up-link characteristics required to implement the plan for this service;
4. to study the technical and design characteristics and requirements which affect the provision of "space operation service functions" of space stations in the broadcasting-satellite service;
5. to study the requirements for adjacent-channel isolation in up-links for (a) satellite(s) in the broadcasting-satellite service occupying a given position in the geostationary satellite orbit;
- ~~6. to draw up a Report at the Special Joint Meeting of CCIR Study Groups to be held for the preparation of technical data for the 1979 World Administrative Radio Conference.~~

SUP

RECOMMENDATION No. Sat - 6

To the CCIR relating to spurious emissions  
in the broadcasting-satellite service

(MOD) The World Administrative Radio Conference,  
Geneva, 1979,

*considering*

a) that space stations in the broadcasting-satellite service operating at high power levels are likely to cause interference to services in adjacent and in harmonically related frequency bands due to spurious emissions;

MOD b) that, in the planning of the broadcasting-satellite service, account must be taken of the need to reduce interference to services operating in adjacent bands to acceptable levels at the lower and upper edges of the bands [11.7-12.2] GHz in Regions 2 and 3 and [11.7-12.5] GHz in Region 1, and to the radio astronomy service which has an exclusive allocation at [23.6-24] GHz in all three Regions;

SUP c) ~~the technical data required to enable the 1979 World Administrative Radio Conference to revise the Radio Regulations;~~

(MOD) ~~d/~~ c) the studies being pursued by the CCIR under the appropriate Study Programme;

*invites the CCIR*

MOD to continue, as a matter of urgency, the study of the technical and operational aspects of spurious emissions from space stations in the broadcasting-satellite service, ~~to enable the Special Joint Meeting of CCIR Study Groups to draw up a report for the 1979 World Administrative Radio Conference.~~

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 718-E  
16 November 1979  
Original : English

COMMITTEE 5

International Air Transport Association

IATA COMMENTS ON ADJACENT BAND PROTECTION FOR THE ILS LOCALIZER SYSTEM  
IN THE BAND 108 - 112 MHz FROM BROADCAST SYSTEMS IN THE 100 - 108 MHz BAND

1. IATA is seriously concerned about the prospect of the increase in the probability of interference being experienced by the Instrument Landing System (ILS) operating in the band 108 - 112 MHz.
2. The probability of increased interference arises from :
  - a) The allocation, in Region 1, of the adjacent band 100 - 108 MHz to the broadcasting service.
  - b) The lack, at the present time, of any criteria to ensure the prevention of direct or indirect (intermod products) interference from the adjacent band.
  - c) The possibility that the new broadcasting plans for Region 1 in the band 100 - 108 MHz will be established and implemented before such criteria could be derived.
  - d) The known cases of such interference which have been reported from Regions 2 and 3 where similar conditions have existed for some time.
3. Catastrophic events could arise as a result of direct or indirect interference emanating from broadcasting systems operating in the adjacent band 100 - 108 MHz. These events could be caused as a result of :
  - a) The **complete** dependence by the pilot conducting manual approaches during darkness or poor weather conditions on the indications from the ILS System to ensure that the aircraft is lined up with, and will land on, the desired runway and not on the surrounding terrain.
  - b) The possibility that the pilot would not be aware of a malfunction of the ILS arising from interference and will proceed to a landing on the assumption that his guidance system is correct.
  - c) The even greater dependence of the aircraft on signals from the ILS when an automatic landing is being effected.

Note : The azimuth control of the aircraft derived from the ILS Localizer System operating in the 108 - 112 MHz band directly drives the automatic flight control system of the aircraft and so controls the aircraft ailerons. If the localizer receiver in the aircraft is interfered with, the resultant effect is that the autopilot will instruct the aircraft to bank. On the final approach phase such banking could cause the wing of the aircraft to strike the ground or obstructions as a result of the aircraft azimuth change with obvious disastrous effects.

4. IATA is of the opinion that Administrations engaged in the preparation of the Region 1 Broadcasting Plan should be fully aware of the possible consequences arising from adjacent band interference, however caused, and should ensure that such planning is carried out with the guidance of adequate technical and siting criteria which, if established in sufficient time, will ensure freedom from such interference to a safety of life service.



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 719-E

16 November 1979

Original : English

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COMMITTEE 7

People's Republic of Bangladesh

## **REQUEST FOR ADDITIONAL CALL SIGN**

The Administration of the People's Republic of Bangladesh is at present using the only International Call Sign Series S2A-S3Z which was allocated on provisional basis after independence.

Due to continuous development of telecommunications in the country, the series presently allocated is practically exhausted. The Bangladesh Administration therefore requests the Conference that the next vacant Call Sign Series S4A-S5Z be allocated to Bangladesh and the same be entered in the New Appendix C (AP C 3 747) of the Radio Regulations.

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# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 720-E

16 November 1979

Original : English

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COMMITTEE 6

EIGHTH REPORT OF WORKING GROUP 6A

1. Working Group 6A has considered all proposals relating to Appendix 1B and has agreed on the attached texts which are submitted for the consideration of Committee 6.

2. During the examination of the proposals, the attention of Working Group 6A was drawn to Document No. 615 concerning a proposal by France relating to draft amendments to Appendix 29 which has been referred to Committee 6. Working Group 6A requests Committee 6 to take this document into consideration for possible adoption and submission to the Plenary Meeting (Document No. 661/B18 refers).

J.K. BJÖRNSJÖ  
Chairman of Working Group 6A

Annex : 1





A N N E X

APPENDIX 1B

**Advance Publication Information to be furnished  
for a Satellite Network**

(see Article N11/9A)

**Section A. General Instructions**

**Item 1** Information shall be provided separately for each satellite network.

**Item 2** Information to be furnished for each satellite network shall include general characteristics (Section B), and, as applicable, characteristics in the Earth-to-space direction (Section C), characteristics in the space-to-Earth direction (Section D), and characteristics for space-to-space relay (Section E). In addition, the administration or one acting on behalf of a group of named administrations submitting the advance information may provide as supplementary information, data for interference calculations for the purpose of inter-network coordination (Section F).

ADD

**Section B. General Characteristics to be furnished for a Satellite Network**

**Item 1** Identity of the satellite network

Clearly identify the satellite network and, if applicable, identify the satellite system of which it will form a part.

**Item 2** Date of bringing into use

Indicate the date by which the satellite network is expected to be brought initially into use.

ADD /~~Item 2bis~~ Period of operation

Indicate the proposed period of operation of the space station(s) of the satellite network. This period shall be limited to the period for which the satellite network is designed. During that period, replacement satellites may be used, provided that the technical characteristics of the frequency assignments remain unchanged./

**APIB** Section B. General Characteristics (cont.)

**Item 3** Administration or group of administrations submitting the advance information

Give the name of the administration or the names of the administrations in the group submitting the advance information on the satellite network and the postal and telegraphic addresses of the administration(s) to which any communication should be sent.

**Item 4** Orbital information relating to the space station(s)

**a)** In the case of a space station aboard a geostationary satellite, give the planned nominal geographical longitude on the geostationary satellite orbit and the planned longitudinal ~~and inclination~~ tolerance. Indicate also:

- 1) the arc of the geostationary satellite orbit over which the space station is visible, at a minimum angle of elevation of  $10^\circ$  at the Earth's surface, from its associated earth stations or service areas;
- 2) the arc of the geostationary satellite orbit within which the space station could provide the required service to its associated earth stations or service areas; and
- 3) in the event that the arc defined in paragraph 2) above is less than the arc defined in paragraph 1) above, provide the reasons therefor.

*Note:* The arcs specified in 1) and 2) will be indicated by the geographical longitude of the extremes of these arcs on the geostationary satellite orbit.

**b)** In the case of space station(s) aboard non-geostationary satellite(s), indicate the angle of inclination of the orbit, the period, the altitudes in kilometres of the apogee and perigee.

AP1B Section B. General Characteristics (cont.)

of the space station(s) and the number of satellites used having the same characteristics.

Section C. Characteristics of the Satellite Network in the Earth-to-Space direction

**Item 1** Earth-to-space service area(s)

Indicate the service area(s) on the Earth associated with each receiving antenna of the space station.

**Item 2** Class of stations and nature of service

For each Earth-to-space service area, indicate the class of the stations in the satellite network and the nature of the service to be performed, using the symbols shown in Appendix [10.]

**Item 3** Frequency range

For each Earth-to-space service area, indicate the frequency range within which the carriers will be located.

**Item 4** Power characteristics of the transmitted wave

MOD

- a) For each Earth-to-space service area indicate the maximum spectral power density (in dBW/Hz)<sup>1</sup> to be delivered to the antenna of the transmitting earth stations (the bandwidth over which this is averaged depends on the nature of the service concerned)

ADD

for each size of transmitting earth station antenna and, if available, the total peak power (in dBW) and the necessary bandwidth of this emission.

ADD

- b) If available, indicate, for each Earth-to-space service area, the actual radiation pattern (relative to isotropic) of the transmitting earth station antenna having the highest off beam equivalent isotropically radiated spectral power density for each size of transmitting earth station antenna.

ADD

- c) If available, for television carriers and for each Earth-to-space service area, indicate the peak envelope power to be delivered to the input of the earth station transmitting antenna.
- d) If available, indicate the minimum carrier power delivered to the antenna of the earth station for narrow bandwidth carriers.

ADD

<sup>1</sup>

The most recent version of CCIR Report 792 should be used to the extent applicable in calculating the maximum power density per Hz.

**APIB Section C. Characteristics, Earth-to-space direction (cont.)****Item 5 Characteristics of space station receiving antennae**

For each Earth-to-space service area:

- a)** in the case of a space station <sup>maximum</sup> aboard a geostationary satellite, <sup>and the</sup> indicate the ~~estimated~~ gain of the space station receiving antenna ~~by means of~~ gain contours plotted on a map of the Earth's surface preferably using a radial projection from the satellite in a plane perpendicular to the axis from the centre of the Earth to the satellite. The isotropic gain at each contour which corresponds to a gain of 2, 4, 6, 10 and 20 dB and at 10 dB intervals thereafter as necessary, below the maximum gain, shall be indicated. Whenever possible the estimated gain contours of the space station receiving antenna should also be provided in the form of a numerical equation or in a tabular form;
- b)** in the case of a space station aboard a non-geostationary satellite, indicate the estimated isotropic gain of the space station receiving antenna in the main direction of reception and indicate the antenna radiation pattern in those directions which can intersect with the Earth's surface, taking the gain in the main direction of radiation as a reference;
- c)** if available, for each space station receiving antenna, indicate the type of polarization of the antenna. In the case of circular polarization, indicate the direction of polarization (see Nos. [N3153C] and [N3153D]);
- d)** in the case of a space station aboard a geostationary satellite operating in a band allocated in the earth-to-space direction and in the space-to-earth direction, also indicate the estimated gain of the space station receiving antenna in the direction of those parts of the geostationary satellite orbit which are not obstructed by the earth by means of a diagram showing estimated antenna gain versus orbit longitude.

**Item 6 Noise temperature of the receiving space station**

For each Earth-to-space service area, when other than a simple frequency changing transponder is used aboard the space station

indicate the lowest total receiving system noise temperature referred to the output of the receiving antenna.

**Item 7 Necessary bandwidth**

If available, in the case of narrow bandwidth carriers, indicate the necessary bandwidth.

**Item 8 Modulation characteristics**

If available, in the case of television carriers, indicate the characteristics of energy dispersal such as the peak-to-peak frequency deviation (in MHz) and the sweep frequency (in kHz) of the energy dispersal waveform.

AP1B **Section D. Characteristics of the Satellite Network in the Space-to-Earth Direction****Item 1 Space-to-Earth service area(s)**

Indicate the service area(s) on the Earth associated with each transmitting antenna of the space station.

**Item 2 Class of stations and nature of service**

For each space-to-Earth service area, indicate the class of the stations in the satellite network and the nature of the service to be performed, using the symbols shown in Appendix [10.]

**Item 3 Frequency range**

For each space-to-Earth service area, indicate the frequency range within which the carriers will be located.

**Item 4 Power characteristics of the transmission**

- MOD a) For each space-to-Earth service area, indicate the maximum spectral power density ( $\text{dBW/Hz}$ )<sup>1</sup> to be delivered to the transmitting antenna of the space station (the bandwidth over which this is averaged depends on the nature of the service concerned). and, if available, the total peak power (in dBW) and the necessary bandwidth of this emission.
- ADD b) If available, for narrow bandwidth carriers and for television carriers, indicate the peak envelope power to be delivered to the input of the space station transmitting antenna.
- ADD c) If available, indicate the minimum carrier powers delivered to the antenna of the satellite station for narrow bandwidth carriers.

**Item 5 Characteristics of space station transmitting antennae**

For each space-to-Earth service area:

- ADD a) in the case of a space station aboard a geostationary satellite, <sup>maximum</sup> indicate the estimated gain of the space station transmitting antenna by means of gain contours plotted on a map of the Earth's surface; preferably in a radial projection from the satellite in a plane perpendicular to the axis from the centre of the Earth to the satellite. The isotropic gain at each contour which corresponds to a gain of 2, 4, 6, 10 and 20 dB and at 10 dB intervals thereafter as necessary, below the maximum gain, shall be indicated. Whenever possible, the estimated gain contours of the space station transmitting antenna should also be provided in the form of a numerical equation or in tabular form;
- ADD b) in the case of space station aboard a non-geostationary satellite, indicate the estimated isotropic gain of the space station transmitting antenna in the main direction of transmission and indicate the antenna radiation pattern in those directions which can intersect with the Earth's surface, taking the gain in the main direction of transmission as a reference;

ADD <sup>1</sup> The most recent version of CCIR Report 792 should be used to the extent applicable in calculating the maximum power density per Hz.

## AP1B Section D. Characteristics, Space-to-Earth direction (cont.)

- ADD c) if available, for each space station transmitting antenna, indicate the type of polarization of the antenna. In the case of circular polarization, indicate the direction of polarization (see Nos. /N3153C/ and /N3153D/);
- ADD d) in the case of a space station aboard a geostationary satellite operating in a band allocated in the earth-to-space direction and in the space-to-earth direction, also indicate the estimated gain of the space station transmitting antenna in the direction of those parts of the geostationary satellite orbit which are not obstructed by the earth by means of a diagram showing estimated antenna gain versus orbit longitude.

**Item 6 Characteristics of receiving earth stations**

- ADD a) For each space-to-Earth service area, when other than a simple frequency changing transponder is used aboard the space station, indicate the lowest total receiving system noise temperature of the earth stations referred to the output of the receiving antenna.

MOD For each space-to-Earth service area and for each projected usage<sup>1</sup>, when simple frequency changing transponders are used on the space station, indicate 1) the lowest equivalent satellite link noise temperature and the associated value of transmission gain and 2) the values of transmission gain and associated equivalent link noise temperature that correspond to the highest ratio of transmission gain to equivalent satellite link noise temperature. The transmission gain is evaluated from the output of the receiving antenna of the space station to the output of the receiving antenna of the earth station. For each projected usage, indicate also the receiving antenna(e) of the space station to which each simple frequency changing transponder will be connected.

- ADD b) If available, indicate for each space-to-Earth service area the actual radiation pattern (relative to isotropic) of the receiving earth station for each size of receiving earth station antenna having the highest off beam level. When simple frequency changing transponders are used on the space station, indicate also, if available, the pattern associated with each equivalent satellite link noise temperature indicated above.

## ADD Item 7 Necessary bandwidth

If available, in the case of narrow bandwidth carriers, indicate the necessary bandwidth.

## ADD Item 8 Modulation characteristics

If available, in the case of television carriers, indicate the characteristics of energy dispersal such as the peak-to-peak frequency deviation (in MHz) and the sweep frequency (in kHz) of the energy dispersal waveform.

<sup>1</sup> A different usage will be considered to take place when different types of carriers are employed (different by virtue of maximum power spectral density), or when different types of receiving earth stations are employed (different by virtue of receiving antenna gain).

AP1B **Section E. Characteristics to be furnished for Space-to-Space Relay**

Where the satellite network is connected to one or more satellite networks by means of space-to-space relay, indicate the following:

- a) identity or identities of the other satellite network(s) to which the satellite network is connected;
- b) transmit and receive frequency bands;
- c) classes of emission;
- d) nominal equivalent isotropically radiated power(s) on the beam axis.

ADD Section F. Supplementary information (if available)

ADD Item 1 General

Supplementary information may be provided inter alia by an administration or one acting on behalf of a group of named administrations who so desire. This information may be used as data for interference calculations associated with the advance notification process. The information may consist of part or all the data contained in the following items which are not exhaustive but provide an indication of the type of information which may be supplied.

ADD Item 2 Earth-to-space direction

For each Earth-to-space service area, the following information may be provided:

- a) class of emission, necessary bandwidth and modulation characteristics (including energy dispersal if employed) for each type of carrier transmitted;
- b) earth station e.i.r.p. for each type of carrier associated with each type and diameter of earth station antenna;
- c) technical description and system parameters of command transmissions (except for coding data).

ADD Item 3 Space-to-Earth direction

For each space-to-Earth service area, the following information may be provided:

- a) class of emissions, necessary bandwidth and modulation characteristics (including energy dispersal if employed) for each type of carrier;
- b) satellite transmitter power to be delivered to the satellite transmit antenna for each type of carrier;
- c) technical description and system parameters of beacon and telemetry emissions (except for coding data).

ADD Item 4 Any other information which may be useful.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 721-E

16 November 1979

Original : English

## PLENARY MEETING

### Federal Republic of Germany

#### PROPOSALS FOR THE WORK OF THE CONFERENCE

D/721/445    ADD    3711A                      Additional allocation : in the Federal Republic of Germany the band 2 300 - 2 450 MHz is also allocated to the mobile (except aeronautical) service on a primary basis subject to the agreement of the Administrations to the following countries / France, Switzerland, the Netherlands, Liechtenstein /.

Reasons : In the European area as well as in the Federal Republic of Germany there is a great demand for the land mobile service which can no longer be met in the 400 MHz band so far used. For propagation reasons the band of 2 300 - 2 450 MHz is still suitable for mobile services and especially appropriate for broadband transmission. This band is allocated to mobile services on a secondary basis.

In order to keep interference to other radio services low, the mobile aeronautical service should be excluded. Since objections were raised by some countries during the discussion of the above frequency band in Committee 5, we propose an appropriate footnote for the Federal Republic of Germany giving a primary status to the mobile service except the aeronautical service and providing an appropriate protection for those countries which have raised objections.





**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 722-E

16 November 1979

Original : English

COMMITTEE 5

TWENTY-SEVENTH AND TWENTY-EIGHTH REPORTS OF WORKING GROUP 5D TO COMMITTEE 5  
(ALLOCATIONS)

Subject : Provision for Regions 2 and 3 in the band 3 400 - 3 600

1. The Working Group discussed the second report of the Chairman of ad hoc Group 5D8 (DL/198) and the allocations in its Annex, which reads as follows :

RADIOLOCATION SECONDARY IN THE TABLE

Footnote :

In Regions 2 and 3 in the band 3 400 - 3 600 MHz, the radiolocation service is allocated on a primary basis. However, all Administrations operating radiolocation systems in this band are urged to cease operations by 1985. After this date, Administrations shall take all practicable steps to protect the fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.

2. The delegations of Cuba and Ecuador expressed their view that the text of the footnote in its present form is not strong enough and their desire to strengthen it was indicated.

3. Some delegations of Region 3 countries expressed difficulties in accepting the footnote made applicable to Region 3. From the sixteen delegations (including USA, UK and France) present at the meeting representing Administrations of Region 3 countries, (listed below in paragraph 5), eight delegations (including the United States of America and the United Kingdom) showed preference for the footnote as worded above in paragraph 2, and four delegations showed preference for suppression of the words "Region 3" from the text and to include specific names of countries of Region 3 instead, if necessary.

4. List of delegations present at the meeting, representing Administrations of Region 3 countries : Australia, China, Republic of Korea, United States of America, France, India, Indonesia, Iran, Japan, New Zealand, Pakistan, Papua New Guinea, Philippines, United Kingdom, Singapore and Thailand.

5. The Working Group submits the footnote as given above in paragraph 2 to Committee 5 for further consideration.

Dr. B.S. RAO  
Chairman of Working Group 5D



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 723-E

16 November 1979

Original : French

English

Spanish

## COMMITTEE 5

### THIRTEENTH REPORT OF WORKING GROUP 5C TO COMMITTEE 5

Subject : Frequency bands between 470 and 960 MHz

1. Working Group 5C considered all proposals in the bands 470 - 960 MHz. It was agreed by a majority to recommend the revised Tables in the Annex to this Report to Committee 5 for adoption.

2. The countries mentioned in footnote 3659/331 reserved their position on the status of the aeronautical radionavigation service which they would like to see as permitted.

3. India reserved her position on the suppression of footnote 3669/339A, as she wished this to be maintained.

4. The United States of America reserved their position on the proposed addition to footnotes 3650B, 3650E, 3669A and 3670A of the words "subject to agreement obtained under the procedure set forth in Article N13A". These they would like to see deleted.

The United States of America also made a statement of principle concerning the world-wide needs of the mobile services referring to Documents Nos. 588, 15(Add.1) and 16(Add.1) and reserved their right to come back to this matter in Committee 5.

5. Ireland and France reserved their position on footnote 3651/325.

6. Algeria reserved its position on the inclusion of Tunisia in footnote 3661A.

7. Italy reserved its position on the footnote 3662A.

8. Norway and Sweden reserved their position on footnote 3662C, which they would wish to see extended to Region 1 so as to have a world-wide allocation.

9. Ireland and the United Kingdom reserved their position on footnote 3662B.

10. Belgium, Ireland and the United Kingdom reserved their position on footnote 3662D.

11. Several delegations reserved their position on footnote 3662F, which they believed would result in interference to the broadcasting service in Africa.

K. OLMS

Chairman of Working Group 5C

Annex : 1



## A N N E X

MHZ.

Region 1	Region 2	Region 3
470 - 790  BROADCASTING	470 - 512  BROADCASTING  Fixed  Mobile  3650B 3650BA	470 - 585  FIXED  MOBILE  BROADCASTING  3650CA 3650C 3668/339 3650F
	512 - 608  BROADCASTING    3650E	585 - 610  FIXED  MOBILE  BROADCASTING  RADIONAVIGATION
	608 - 614  RADIO ASTRONOMY  Mobile-satellite (except aeronautical mobile-satellite) (Earth-to-space)	3658/330B 3660/332 3660A
3653AA 3650A 3651A 3651/325 3653A 3653B 3653/328 3654/329 3657/330A 3659/331 3660/332 3661/332A	614 - 806  BROADCASTING  Fixed  Mobile  3650B 3661/332A 3657B	610 - 890  FIXED  MOBILE  BROADCASTING
790 - 862  FIXED  BROADCASTING  3662 BA 3662DA 3659/331 3662A 3662B 3662D 3662/333 3661A	806 - 890  FIXED  MOBILE  BROADCASTING	
862 - 890  FIXED  MOBILE except aeronautical mobile  BROADCASTING 3662E  3659/331 3662/333 3662F 3662G		3658/330B 3668/339 3657A 3660A 3660/332 3661/332A 3662C



MHz  
890 - 960

Region 1	Region 2	Region 3
890 - 942	890 - 902	890 - 942
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	MOBILE
BROADCASTING 3662E	Radiolocation	BROADCASTING
Radiolocation	3669A	Radiolocation
	902 - 928	
	FIXED	
	Amateur	
	Mobile except aeronautical mobile	
	Radiolocation	
	3669A 3670/340	
	928 - 942	
	FIXED	
	MOBILE except aeronautical mobile	
	Radiolocation	
3662F 3662G 3659/331 3662/333	3669A	3669B
942 - 960	942 - 960	942 - 960
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	Mobile	MOBILE
BROADCASTING 3662E		BROADCASTING
3662F 3662G 3659/331 3662/333	3670A	3670B

- ADD 3650A Additional allocation : in Burundi, Ethiopia, Kenya and Libya, the band 470 - 582 MHz is also allocated to the fixed service on a permitted basis and subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3650B Different category of service : in Ecuador, the United States of America and Jamaica, the allocation of the bands 470 - 512 MHz and 614 - 806 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141), subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3650BA Different category of service : in Mexico and Venezuela, the allocation of the band 470 - 512 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141), subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3650C Additional allocation : in China, the band 470 - 485 MHz is also allocated to the space research (Space-to-Earth) and the space operation (Space-to-Earth) services on a primary basis subject to agreement obtained under the procedure set forth in Article N13A and should not cause harmful interference to existing and planned broadcasting stations.
- ADD 3650CA Alternative allocation : in Singapore, the band 470 - 585 MHz is allocated to the broadcasting service on a primary basis.
- ADD 3650E Additional allocation : in Costa Rica, Ecuador, the United States of America, Jamaica and Venezuela, the band 512 - 608 MHz is also allocated to the fixed and mobile services on a primary basis subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3650F Additional allocation : in India, the band 549.75 - 550.25 MHz is also allocated to the space operation service (Space-to-Earth) on a secondary basis.
- MOD 3651/325 Additional allocation : in the United Kingdom, the band 590 - 598 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- ADD 3651A Additional allocation : in the United Kingdom, the following bands are also allocated to the aeronautical radionavigation service on a primary basis : 582 - 590 MHz until 31 December 1987; 598 - 606 MHz until 31 December 1994.
- All new assignments in these bands are subject to the agreement of the Administrations of the following countries : Federal Republic of Germany, Belgium, Denmark, France, Ireland, Luxembourg and the Netherlands.
- SUP 3652/327
- MOD 3653/328 Additional allocation : in Belgium, the band 582 - 606 MHz is also allocated to the radionavigation service on a primary basis until 31 December 1984.
- ADD 3653A Additional allocation : in France and Italy, the band 582 - 606 MHz is also allocated to the radionavigation service on a permitted basis until 1 January 1990.

ADD	3653AA	Additional allocation : in Oman, the band 582 - 606 MHz is also allocated to the radionavigation service on a secondary basis.
ADD	3653B	Additional allocation : in Denmark, the band 590 - 598 MHz is also allocated for existing stations in the aeronautical radionavigation service on a primary basis until 1 January 1995.
MOD	3654/329	Additional allocation : in Egypt (A.R.), Israel and Libya, the band 582 - 790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.
SUP	3655/329A	
SUP	3656/330	
SUP	3656.1/330.1	
MOD	3657/330A	Additional allocation : in the African Broadcasting Area (see No. 3422A), the band 606 - 614 MHz is also allocated to the radio astronomy service on a permitted basis.
ADD	3657A	Additional allocation : in New Zealand, the band 610 - 620 MHz is also allocated to the amateur service on a secondary basis.
ADD	3657B	Different category of service : in Costa Rica, the allocation of the band 614 - 806 MHz to the fixed service is on a primary basis (see 3432/141), subject to agreement obtained under the procedure set forth in Article N13A.
MOD	3658/330B	Additional allocation : in India, the band 608 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
MOD	3659/331	Additional allocation : in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Roumania, Czechoslovakia and the USSR, the band 645 - 960 MHz is also allocated to the aeronautical radionavigation service on a secondary basis.
MOD	3660/332	In Region 1, except in the African Broadcasting Area (see No. 3422A), and in Region 3, the band 608 - 614 MHz is also allocated to the radio astronomy service on a secondary basis. In making assignments to stations of other services to which the band is allocated, Administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).
ADD	3660A	Additional allocation : in China, the band 606 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
NOC	3661/332A	Within the frequency band 620 - 790 MHz, assignments may be made to television stations using frequency modulation in the broadcasting-satellite service subject to agreement between the Administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Resolutions Nos. Spa2 - 2 and Spa2 - 3). Such stations shall not produce a power flux-density in excess of the value -129 dBW/m <sup>2</sup> for angles of arrival less than 20° (see Recommendation No. Spa2 - 10) within the territories of other countries without the consent of the Administrations of those countries.

ADD	3661A	Alternative allocation : in Italy and Tunisia, the band 790 - 838 MHz is allocated to the broadcasting service on a primary basis.
MOD	3662/333	In Region 1, stations of the fixed service using tropospheric scatter may operate in the band 790 - 960 MHz subject to agreement obtained under the procedure set forth in Article N13A. When used for such operations, the allocation of the band 790 - 862 MHz to the fixed service is on a secondary basis to that of the broadcasting service.
ADD	3662A	Alternative allocation : in France, the band 790 - 830 MHz is allocated to the broadcasting service on a primary basis.
ADD	3662B	Additional allocation : in Denmark, Norway and Sweden, the band 790 - 862 MHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis and subject to agreement obtained under the procedure set forth in Article N13A.
ADD	3662BA	Additional allocation : in the Federal Republic of Germany and the Netherlands, the band 790 - 862 MHz is also allocated to the mobile, except aeronautical mobile, service on a secondary basis.
ADD	3662C	Additional allocation : in Regions 2 and 3, the band 806 - 890 MHz is also allocated to the mobile-satellite, except aeronautical mobile-satellite, service on a primary basis. The use of this system is intended for operation within national boundaries and subject to agreement obtained under the procedure set forth in Article N13A. In Region 3, this service shall not cause harmful interference to services operating in accordance with the Table.
ADD	3662D	Additional allocation : in France, the band 830 - 862 MHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis and subject to agreement obtained under the procedure set forth in Article N13A.
ADD	3662E	In Region 1, in the band 862 - 960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see No. 3422A) excluding Algeria, Egypt, Libya and Morocco. Such operations shall be in accordance with the Final Acts of the African VHF/UHF Broadcasting Conference, Geneva, 1963.
ADD	3662F	Additional allocation : in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, Finland, France, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Norway, the Netherlands, Sweden, Switzerland and Yugoslavia, the band 862 - 960 MHz is also allocated to the aeronautical mobile service on a primary basis. The operation of aeronautical and aircraft stations in this band shall be limited to the few channels required in a public radio-telephone system and shall be subject to agreement obtained under the procedure set forth in Article N13A.
ADD	3662G	Additional allocation : in Saudi Arabia, the band 862 - 960 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under the procedure set forth in Article N13A and on the condition that no harmful interference is caused to services operating in accordance with the Table.

SUP 3663/334

SUP 3664/335

ADD 3662DA

Alternative allocation : in Italy, the band 838 - 854 MHz is allocated to the broadcasting service on a primary basis as from 1 January 1995.

SUP 3665/336

SUP 3666/337

SUP 3667/338

MOD 3668/339

Alternative allocation : in Pakistan, the bands 470 - 582 MHz and 610 - 890 MHz are allocated to the broadcasting service on a primary basis.

SUP 3669/339A

ADD 3669A

Different category of service : in the United States of America, the allocation of the band 890 - 942 MHz to the radiolocation service is on a primary basis and subject to agreement obtained under the procedure set forth in Article N13A. (See No. 3432/141.)

ADD 3669B

Different category of service : in Australia, the allocation of the band 890 - 942 MHz to the radiolocation service is on a primary basis. (See No. 3432/141.)

MOD 3670/340

In Region 2, the band 902 - 928 MHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 915 MHz). Radio services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 5002A.

ADD 3670A

Different category of service : in the United States of America, the allocation of the bands 942 - 947 MHz and 952 - 960 MHz to the mobile service is on a primary basis and subject to agreement obtained under the procedure set forth in Article N13A. (See No. 3432/141.)

ADD 3670B

Additional allocation : in Region 3, the band 942 - 960 MHz is also allocated to the mobile-satellite, except aeronautical mobile-satellite, service on a primary basis. The operation of satellite systems in this band is limited to national use and subject to agreement obtained under the procedure set forth in Article N13A.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 724-E

16 November 1979

Original : French

English

Spanish

## COMMITTEE 5

### FOURTEENTH REPORT OF WORKING GROUP 5C TO COMMITTEE 5

Subject : Frequency bands 87 - 108 MHz

1. Working Group 5C, after continued consideration of the band 100 - 108 MHz, agreed to present Annex 1 to this Report to Committee 5 for adoption. This Annex shows a revised and corrected Table of frequency allocations between 87 and 108 MHz and associated footnotes. It replaces Annex 1 of Document No. 409.

2. The USSR reserved its position on the time limit of 1 January 1985, in footnote 3569A, which they would wish to see deleted.

3. China reserved its position on the inclusion of its country in footnote 3570A in Annex 1 and in resolves 1) in Resolution B in Annex 2.

4. The related Resolution B is presented as Annex 2 to this Report, for adoption by Committee 5. This Resolution concerns the convening of a Planning Conference for Sound Broadcasting in the band 87.5 - 108 MHz.

Jordan reserved its position on this Resolution.

5. A Recommendation relating to the compatibility between the broadcasting service and the aeronautical radionavigation service is presented as Annex 3, for adoption by Committee 5.

K. OLMS  
Chairman of Working Group 5C

Annexes : 3



A N N E X 1

MHz  
87 - 108

Region 1	Region 2	Region 3
		87 - 100
87.5 - 100		FIXED
BROADCASTING	88 - 100	MOBILE
3563/264 3564/265	BROADCASTING	BROADCASTING
		3566/267
100 - 108	BROADCASTING	
	3566/267 3564/265 3571/272 3566A 3569A 3570A 3570B 3570C 3570D	

SUP 3554/255

SUP 3555/256

SUP 3557/258

MOD 3566/267

Alternative allocation : in New Zealand, the bands  
87 - 88 MHz and 100 - 108 MHz are allocated to the land mobile service on a  
primary basis.

ADD 3566A

Different category of service : in New Zealand, the  
allocation of the band 100 - 108 MHz to the broadcasting service is on a  
secondary basis (see No. 3431/140).

MOD 3563/264

Additional allocation : in the Federal Republic of Germany,  
Spain, France, Ireland, Italy, Liechtenstein, the United Kingdom, Switzerland and  
Yemen (P.D.R. of) the band 87.5 - 88 MHz is also allocated to the land mobile  
service on a permitted basis and subject to agreement obtained under the  
procedure set forth in Article N13A.

SUP 3567/268

MOD 3571/272

Additional allocation : in China, the Republic of Korea,  
the Philippines and Singapore, the band 100 - 108 MHz is also allocated to the  
fixed and mobile services on a permitted basis.



- MOD 3564/265 Additional allocation : in the United Kingdom the band 97.6 - 102.1 MHz is also allocated to the land mobile service on a permitted basis, until 31 December 1989. The use of this band by the land mobile service is restricted to those stations in operation on 1 January 1980. The withdrawal of land mobile stations will be arranged in consultation with the Administrations concerned.
- ADD 3569A In Region 1, existing systems in the fixed and mobile, except aeronautical mobile (R), services may continue to use the band 100 - 104 MHz on a primary basis until the date of entry into force of the new regional broadcasting agreement referred to in Resolution B or 1 January 1985 whichever is the earlier date.
- ADD 3570B Additional allocation : in Austria, Bulgaria, Hungary, Israel, Kenya, Mongolia, Poland, Roumania, Syria, the German Democratic Republic, the United Kingdom, Somalia, Czechoslovakia and the USSR, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995 and, thereafter, on a secondary basis.
- ADD 3570C Additional allocation : in France, Italy, Sweden, Turkey, and Yugoslavia, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995.
- ADD 3570A Broadcasting stations in the band 100 - 108 MHz in Region 1, and in Afghanistan, Iran and Pakistan, shall be established and operated in accordance with an agreement and associated plan for the band 87.5 - 108 MHz to be drawn up by a regional broadcasting conference (see Resolution B). Prior to the date of entry into force of this agreement, broadcasting stations may be introduced subject to agreement between Administrations concerned, on the understanding that such an operation shall in no case prejudice the establishment of the plan.
- ADD 3570D Additional allocation : in Finland and Yugoslavia, the band 104 - 108 MHz is also allocated to the fixed service on a permitted basis, until 31 December 1995. The effective radiated power of any station shall not exceed 25 watts.

A N N E X 2

RESOLUTION B

Relating to the Convening of a Planning Conference  
for Sound Broadcasting in the Band 87.5 - 108 MHz  
for Region 1 and Certain Countries Concerned in Region 3

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the extension of the primary allocation to the broadcasting service in Region 1 from 87.5 - 100 MHz to 87.5 - 108 MHz;
- b) that in Region 1 the band 100 - 108 MHz is at present allocated to the mobile except aeronautical mobile (R), service and in some countries also to the fixed service;
- c) that several countries in Region 3 with land boundaries adjoining Region 1 also use this band for the broadcasting service;
- d) that for those countries in Region 1 which use or intend to use the band 87.5 - 100 MHz for frequency modulated sound broadcasting, there is a need to establish a new sound broadcasting plan for the whole of the band 87.5 - 108 MHz;
- e) that for the other countries in Region 1 there is a need to establish a sound broadcasting plan for the band 100 - 108 MHz;
- f) that this new plan should in no way affect existing or planned assignments to television stations in the band 87.5 - 100 MHz made in accordance with the Regional Agreement, Stockholm, 1961;
- g) the requirement to introduce sound broadcasting stations in the band 100 - 108 MHz in accordance with this plan at the earliest possible date;
- h) the desirability of modifying the relevant parts of existing agreements dealing with sound broadcasting in the band 87.5 - 104 MHz to take into account the latest technical standards;
- i) that radio equipment used by aircraft for automatic landing purposes, which operates in the adjacent band 108 - 112 MHz, may be subject to harmful interference from nearby broadcasting stations operating in the band 87.5 - 108 MHz, if the frequencies of the respective stations are not selected with care, and that such interference can put human life at risk;

resolves

- 1. that a regional conference shall be convened before 31 December 1983 to draw up an agreement for Region 1 and the countries concerned in Region 3, and an associated plan for sound broadcasting in the band 87.5 - 108 MHz for Region 1 and Afghanistan, Iran and Pakistan;

2. that this conference shall take place in two sessions :

- the first session will establish the technical bases for the preparation of the plan, including the establishment of mutual criteria for sharing between sound broadcasting and other services, including television broadcasting, operating within the band 87.5 - 108 MHz;

- the second session, preferably to be separated from the first session by a period of more than six months, but not more than 12 months, will draw up the agreement and associated plan;

3. that countries concerned in Region 3 must be given the opportunity to participate in this conference;

requests

the CCIR, as a matter of urgency, to study the technical bases for consideration in planning and for the determination of the protection criteria between sound broadcasting stations and television broadcasting stations and between sound broadcasting stations and stations in the fixed and mobile, except aeronautical mobile (R), services;

invites

the Administrative Council to fix the dates and agenda for this conference;

calls upon Administrations

to bear in mind the problems of incompatibility with radionavigation stations operating in adjacent bands when planning the use of the band 87.5 - 108 MHz.

A N N E X 3

RECOMMENDATION NO. ...

Relating to the Compatibility between the  
Broadcasting Service in the Band 100 - 108 MHz and the  
Aeronautical Radionavigation Service in the Band 108 - 117.975 MHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the increasing use of VHF broadcasting, with relatively high powers, in the band 100 - 108 MHz;
- b) that the band 108 - 117.975 MHz is used on a world-wide basis for internationally agreed aeronautical radionavigation systems;
- c) that the portion of the band 108 - 111.975 MHz is used for Instrument Landing Systems (ILS) which is used by aircraft for automatic landing purposes;
- d) that the portion of the band 111.975 - 117.975 MHz is used for the VHF Omnidirectional Radio Range (VOR) system;
- e) that interference problems between the broadcasting and aeronautical services have occurred in parts of Regions 2 and 3;

realizing

- a) that intermodulation products from combinations of broadcasting transmissions may fall in the aeronautical radionavigation band 108 - 117.975 MHz;
- b) that the intermodulation products may be formed in the radionavigation receiver;
- c) that high power broadcasting transmissions could result in blocking of the radionavigation receivers;
- d) that the emissions of the aeronautical radionavigation service may cause interference to the broadcasting service;

requests the CCIR

- a) to study urgently the problem of interference between the two services;
- b) to establish suitable criteria for the protection of both services;

invites

the International Civil Aviation Organization and other appropriate international organizations to study urgently the problem and communicate the results of these studies to the CCIR;

recommends

that Administrations, in assigning frequencies to the broadcasting service in the band 100 - 108 MHz, and to the aeronautical radionavigation service in the band 108 - 117.975 MHz, should take note of the potential interference problems that could exist and apply appropriate protective measures.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 725-E

21 November 1979

Original : English

COMMITTEE 2

SUMMARY RECORD

OF THE

SECOND MEETING OF COMMITTEE 2

(CREDENTIALS)

Thursday, 15 November 1979, at 1430 hrs

Chairman : Mr. C.J. MARTINEZ (Venezuela)

Subjects discussed

Document No.

1. First and second reports of Working Group C2A
2. Draft report of Committee 2 to the Plenary Meeting
3. Approval of the summary record of the first meeting of Committee 2

264, 546

DT/213

176





1. First and second reports of Working Group C2A (Documents Nos, 264 and 546)

1.1 Document No. 264 (First report)

Paragraph 3 gave rise to a number of statements which the Chairman announced were related more closely to Document No. DT/213 than to Document No. 264. These statements are therefore recorded in connection with Document No. DT/213.

Document No. 264 was approved.

1.2 Document No. 546 (Second report)

Approved.

1.3 The Chairman announced that the credentials of six further delegations had been deposited since the issue of Document No. 546 and examined by the Working Group. The credentials of the State of Bahrain, the United Arab Emirates, Peru and the Democratic Socialist Republic of Sri Lanka had been found to be in order and the names of those countries would be added to the list in the Annex to Document No. DT/213. The provisional credentials of the Republic of Bolivia and the Republic of Panama had also been accepted and would also appear in the Annex to that document.

2. Draft report of Committee 2 to the Plenary Meeting (Document No. DT/213)

2.1 Paragraph 1

Paragraph 1 was approved.

2.2 Paragraph 2

The Chairman said that the number of meetings and the appropriate dates would be inserted.

Paragraph 2 was approved on that understanding.

2.3 Paragraph 3

2.3.1 The delegate of the USSR, supported by the delegate of the Byelorussian Soviet Socialist Republic, made the statement reproduced in Annex 1.

The delegate of the German Democratic Republic made the statement reproduced in Annex 2.

2.3.2 The delegate of the United States, speaking on behalf of his own delegation and of the delegations of the United Kingdom and France, made the statement reproduced in Annex 3.

2.3.3 The delegate of the Federal Republic of Germany made the statement reproduced in Annex 4.

2.4 Paragraph 4

2.4.1 The delegate of Cuba made the statement reproduced in Annex 5.

2.4.2 The delegate of China, supported by the delegate of Thailand, made the statement reproduced in Annex 6.

The delegates of the German Democratic Republic and of the Czechoslovak Socialist Republic made the statement reproduced in Annexes 7 and 8.



2.4.3 The delegate of Hungary, drawing attention to No. 361 of the Convention, said that the credentials in question had not been signed by the competent authority of the country concerned and were therefore unacceptable.

2.4.4 In reply to a question by the Chairman, the Legal Adviser explained that in Working Group 2A he had expressed the view that the geographical location in which the credentials were signed was immaterial and that there was no legal objection to the fact that they had been signed by the Deputy Prime Minister, Mr. Yeng Sary, who was also the Minister for Foreign Affairs.

2.4.5 The delegate of the USSR, supported by the delegations of the German Democratic Republic, Czechoslovakia, Poland, Bulgaria, The Ukrainian Soviet Socialist Republic, the Mongolian People's Republic, Nicaragua and the Byelorussian Soviet Socialist Republic, made the statement reproduced in Annex 9.

2.4.6 The delegate of the United States made the statement reproduced in Annex 10.

2.4.7 The delegate of Papua New Guinea reserved his delegation's position with respect to the method of publication of the name of Democratic Kampuchea in the report (with or without square brackets).

2.4.8 The delegate of Nicaragua suggested that paragraph 4 should be deleted.

2.4.9 The delegate of Cuba opposed the removal of the square brackets.

2.4.10 In response to a request by a number of delegates, the Chairman said that delegations' statements could be appended either to the report or to the summary record of the meeting.

2.4.11 The delegate of the Federal Republic of Germany supported the proposal for the removal of the square brackets. That would not imply any prejudgment as to the underlying facts of the situation but would merely reflect what had taken place in Working Group 2A.

2.4.12 The Chairman suggested that the existing wording of paragraph 4 should be replaced by the following : "With regard to the credentials of the delegation of Democratic Kampuchea, some delegations expressed doubts as to the legitimacy of the Government which deposited the credentials concerned and made reservations in this connection. [These reservations are appended to the summary record of the second meeting of Committee 2 (Document No. ...)]". [These reservations are published as an Annex to this report\_"]

2.4.13 The delegate of China suggested that the existing text of paragraph 4, with the square brackets removed, should be retained, and that the text proposed by the Chairman, starting with the words "Some delegations expressed doubts ...." should be added.

2.4.14 The delegate of the USSR pointed out that certain delegations had emphatically declared that they did not recognize the credentials of Democratic Kampuchea. It was therefore incorrect to state that they had expressed doubts.

2.4.15 The delegate of the United States suggested that the relevant portion of the Chairman's amendment should be replaced by the words "a number of delegations expressed different views on the appropriateness of the credentials of the Government of Democratic Kampuchea. These statements are annexed to Document No. 725".

2.4.16 The delegate of the USSR said that the paragraph should reflect the fact that the legality of the credentials had been called in question.

2.4.17 The delegate of Czechoslovakia, supported by the delegate of Cuba, said that the point at issue was that of the validity of the credentials.

2.4.18 The Legal Adviser agreed that "validity" was the appropriate word to reflect the discussion that had taken place in the Working Group.

2.4.19 The delegate of the United States agreed to the replacement of the word "appropriateness" in his amendment by the word "validity".

2.4.20 The delegate of China said that he could agree to the United States amendment, as amended, provided that Democratic Kampuchea was included without square brackets in the list of countries whose credentials had been found to be in order.

2.4.21 The delegate of the United States agreed that if the compromise text for paragraph 4 was to appear without square brackets it would be appropriate to remove the square brackets round Democratic Kampuchea in the Annex, leaving the footnote as it stood.

2.4.22 The delegate of the USSR opposed that suggestion. It would be more logical to have a more detailed statement on the fact that a number of delegates had questioned the legitimacy of the credentials.

2.4.23 The delegate of the United States pointed out that delegations would have an opportunity to set forth their detailed views in the statements that were to be appended to the report or to the summary record of the meeting. He therefore urged the Soviet Union delegate to accept the compromise text.

2.4.24 The Chairman considered that the views of all delegations would be met if the compromise text was adopted and if their statements were appended to the summary record of the present meeting. Delegations wishing to have their statements so appended should hand them in to the Secretariat.

2.4.25 The delegate of the USSR said that he could agree to that procedure provided that a footnote was inserted to indicate that the credentials of Democratic Kampuchea were not recognized by all delegations participating in the Conference.

2.4.26 The delegate of China was opposed to the insertion of such a footnote.

2.4.27 The Chairman considered that the existing footnote in the Annex should be sufficient to draw the attention of delegations in the Plenary Meeting to the issue. The Plenary Meeting was more representative than Committee 2 and the delegations wishing to express their views could do so in that body.

The compromise text for paragraph 4 was approved.

2.4.28 Paragraph 5

Paragraph 5 was approved.

2.4.29 Annex

The Annex was approved with the removal of the brackets around Democratic Kampuchea.

Document No. DT/213, as amended was approved.

3. Approval of the summary record of the first meeting of Committee 2 (Document No. 176)

The summary record of the first meeting was approved.

The meeting rose at 1700 hours.

The Secretary :

A. WINTER-JENSEN

The Chairman :

C.J. MARTINEZ

Annexes : Statement by the delegate of the Union of Soviet Socialist Republics (Annex 1)

Statement by the delegate of the German Democratic Republic (Annex 2)

Statement on behalf of the delegations of the United States of America, France and the United Kingdom (Annex 3)

Statement by the delegate of the Federal Republic of Germany (Annex 4)

Statement by the delegate of Cuba (Annex 5)

Statement by the delegate of the People's Republic of China (Annex 6)

Statement by the delegate of the German Democratic Republic (Annex 7)

Statement by the delegate of the Czechoslovak Socialist Republic (Annex 8)

Statement by the delegate of the Union of Soviet Socialist Republics (Annex 9)

Statement by the delegate of the United States of America (Annex 10)

A N N E X 1

STATEMENT BY THE DELEGATE OF THE USSR

The delegation of the USSR draws attention to the fact that, according to the list of delegations of 26 September 1979, the delegation of the Federal Republic of Germany comprises persons occupying official posts in (West) Berlin. On the basis of the provisions of the Quadripartite Agreement of 3 September 1971, which defines the status of (West) Berlin, the Soviet delegation deems it necessary to state the following :

The Quadripartite Agreement specifies (Part II, paragraph B; Annex II, paragraph 1) that the links between the western sectors of Berlin and the Federal Republic of Germany will be maintained and developed with due regard to the fact that these sectors, now as in the past, are not a constituent part of the Federal Republic of Germany and will not be administered by the Federal Republic in the future.

Under this Agreement, (West) Berlin is not a constituent part of the Federal Republic of Germany and is not administered by that country. Persons representing (West) Berlin may take part in international conferences as members of the delegation of the Federal Republic of Germany only on the basis of the provisions of the Quadripartite Agreement of 3 September 1971, which lays down the particular framework for such participation.

The list of members of the delegation of the Federal Republic of Germany should therefore indicate that the persons occupying official positions in (West) Berlin form part of the delegation of the Federal Republic of Germany solely on the basis of, and in accordance with, the Quadripartite Agreement of 3 September 1971.

A N N E X 2

STATEMENT BY THE DELEGATE OF THE GERMAN DEMOCRATIC REPUBLIC

The delegation of the German Democratic Republic shares the opinion of the USSR delegation just expressed concerning the membership of permanent residents of Berlin (West) in the delegation of the Federal Republic of Germany.

The delegation of the German Democratic Republic draws attention to the stipulations of the Quadripartite Agreement of 3 September 1971 according to which Berlin (West) is no constituent part of the Federal Republic of Germany and may not be governed by it.

The participation of permanent residents of Berlin (West) in the delegation of the Federal Republic of Germany is therefore only admissible on the basis and in accordance with the Quadripartite Agreement.

A N N E X 3

STATEMENT ON BEHALF OF THE DELEGATIONS OF THE UNITED STATES OF AMERICA,  
FRANCE AND UNITED KINGDOM OF GREAT BRITAIN

The Quadripartite Agreement of 3 September 1971, to which the Soviet delegation referred, applies to the whole of Berlin and not only to its western sectors : it did not determine the status of the city.

The statement by the Soviet delegate contains an incomplete and consequently misleading reference to the Quadripartite Agreement (QA). The relevant passage of that agreement to which the Soviet representative referred provides that the ties between the western sector of Berlin and the Federal Republic of Germany will be maintained and developed, taking into account that the sectors continue not to be a constituent part of the Federal Republic of Germany and not to be governed by it.

Annex 4 of the Quadripartite Agreement states that, provided matters of security and status are not affected, permanent residents of the western sector of Berlin may participate jointly with parties from the Federal Republic of Germany in international exchanges and exhibitions. There is therefore no reason why such members of the Federal Republic of Germany delegation should be listed separately or differently. It is moreover for the Federal Republic of Germany alone to decide on the listing of its delegation.

Regarding another intervention on this subject, I would like to point out that States which are not parties to the Quadripartite Agreement are not competent to comment authoritatively on its provisions.

A N N E X 4

STATEMENT BY THE DELEGATE OF THE FEDERAL REPUBLIC OF GERMANY

The government of the Federal Republic of Germany shares the positions set out in the declaration of the delegation of the United States of America made on behalf of the Three Powers.

It regrets the attempts of the delegations of the Soviet Union and the German Democratic Republic to interfere with the listing of certain members of the delegation of the Federal Republic of Germany to this Conference.

It is, as a matter of principle, for every member country alone to decide on which institutions or persons it wishes to involve in its contribution to the work of this organization.

Moreover, the Federal Government is of the view that it is the task of this Conference to promote international cooperation in the field of telecommunications and not to discuss political matters which are beyond the scope of this organization. My government, therefore, regrets that the cooperation within the framework of this Conference and moreover within this organization is hampered by such politically motivated declarations.



A N N E X 5

STATEMENT BY CUBA

The delegation of Cuba challenges the acceptance by the Credentials Committee of the representation of so-called Democratic Kampuchea, for the following reasons :

The Pol Pot régime, guilty of genocide a thousand times over, in no way represents the interests of the Cambodian people.

The admission of the Pol Pot régime to this Conference is simply a formality reflecting purely political interests, as witness the fact that it has taken no part in the work or discussions of the Conference. Indeed, since it has no authority or jurisdiction over the territory of that country, it can exercise no control over telecommunication operations.

Moreover, the admission of so-called Democratic Kampuchea is in conflict with the Preamble to and Article 1 of the International Telecommunication Convention, which stipulate that any country or sovereign country may be a Member of the Union, but not would be governments without territory, as is the case in question.

The delegation of Cuba proposes that, in the absence of the rightful representatives of the people of Kampuchea, nobody should go on record as having participated in this Conference on behalf of that country.

A N N E X 6

STATEMENT BY THE DELEGATE OF THE PEOPLE'S REPUBLIC OF CHINA

Mr. Chairman,

The Chinese delegation holds that the Government of Democratic Kampuchea is the sole legal Government of Kampuchea. It is an iron-clad fact known to the whole world that Democratic Kampuchea is a member state of the United Nations. Democratic Kampuchea continues to enjoy the recognition by the 34th session of the UN General Assembly which is currently sitting. The so-called "People's Republic" of Kampuchea is nothing but a tool of the big and small hegemonists and is hence absolutely illegal. It can in no way represent the Kampuchean People. All allegations which confound the right and wrong are aimed at winning international recognition for the puppet Government of Kampuchea propped up with bayonets and guns and thus legalizing, in a vain attempt, the invasion of Kampuchea by the big and small hegemonists.

Mr Chairman,

The Chinese delegation shares the view of the majority of delegations participating in Working Group 2A that the credentials of the delegation of Democratic Kampuchea are in accord with provision 361 of the Convention and consequently in order. We would like, therefore, to propose :

- a) to delete the square brackets around the 4th item on the first page of Document No. DT/213 and add at the end of this paragraph the following sentence :

"It was found after examination by Committee 2 that the credentials of the delegation of Democratic Kampuchea were in order."

- b) to delete the square brackets around Democratic Kampuchea in paragraph 1.1.2 of the Annex to Document No. DT/213.

A N N E X    7

STATEMENT BY THE DELEGATE OF THE GERMAN DEMOCRATIC REPUBLIC

The delegation of the GDR fully supports the statement of Cuba, Hungary and the USSR; it strongly protests against the presence and acceptance of a representative of the criminal régime of Pol Pot not authorized to speak on behalf of the people of Kampuchea. The GDR delegation can only recognize the Revolutionary People's Council as the legitimate Government of Kampuchea in the international relations.

A N N E X 8STATEMENT BY THE DELEGATE OF THE CZECHOSLOVAK SOCIALIST REPUBLIC

The delegation of the Czechoslovak Socialist Republic protests against the presence of the so-called "delegation" of the Pol Pot régime at this Conference. The sole representative of the Cambodian people is the Revolutionary People's Council of the People's Republic of Kampuchea, which alone is entitled to represent the country in international organizations.

A N N E X 9

STATEMENT BY THE DELEGATE OF THE USSR

Nine months ago a popular revolution took place in Kampuchea, leading to the overthrow of the Pol Pot clique, which had been pursuing a policy of genocide against its own people, and to the formation of the People's Republic of Kampuchea.

The new Government -- the People's Revolutionary Council -- is in complete control of the situation in the country, enjoys the support of an absolute majority of the Kampuchean people and is consequently alone entitled to represent Kampuchea in the international arena, including the United Nations and its specialized agencies.

No person who has not been appointed by the People's Revolutionary Council of Kampuchea is entitled to represent Kampuchea in the United Nations or its specialized agencies.

The Soviet delegation strongly protests against the presence at this Conference of a so-called "representative" of the tyrannical Pol Pot régime overthrown by the Kampuchean people, since that is a violation of the sovereignty of the People's Republic of Kampuchea.

A N N E X 10

STATEMENT BY THE DELEGATE OF THE UNITED STATES

Mr. Chairman,

The United States believes that neither the régime of Heng Semarin of the People's Republic of Kampuchea nor that of Pol Pot of the Government of Democratic Kampuchea, its predecessor, represents the true aspirations of the Cambodian people.

Concerning the technical question of credentials at this Conference, the United States reluctantly supports the acceptance of the credentials of the Government of Democratic Kampuchea. I would like to point out, however, that the acceptance of credentials does not imply in any way a political judgment about the nature of the Government in question and should not be construed as support for the Pol Pot régime itself.

The United States supports the emergence of a genuinely independent non-aligned Kampuchean Government that is at peace with its neighbours, represents the aspirations of the Khmer people, and respects their human rights. Neither the Pol Pot régime nor the Heng Semarin régime meet this criterion.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 726-E  
16 November 1979  
Original : English

## COMMITTEE 5

### FIFTEENTH AND FINAL REPORT OF WORKING GROUP 5C TO COMMITTEE 5

1. Working Group 5C considered all proposals on the Resolutions and Recommendations relating to its terms of reference.
2. The action recommended in Annex 1 with regard to existing Resolutions and Recommendations was agreed unanimously.
3. Recommendation No. Spa 7 had to be revised in view of the changes made to the table of frequency allocations, i.e. the introduction of the aeronautical mobile (R) service and the time-limited allocation to the space services. The revised Recommendation is given in Annex 2.
4. Having examined Document No. 588 and DT/216, the Working Group agreed to recommend to Committee 5 the adoption of two new Recommendations, reproduced in Annexes 3 and 4.

India, Kenya and Nigeria reserved their position on the reference to a frequency range "around 900 MHz" which appears in both texts.
5. Annex 5 is a table summarizing the proceedings of Working Group 5C's twenty-two meetings and indicating the related document numbers. This table has been kindly made available by the Australian delegation and may help delegations to prepare their own reports. It is, therefore, for information only.

K. OLMS  
Chairman of Working Group 5C

Annexes : 5



ANNEX 1

SUP Resolution No. 11

Relative to the convening of a Special Regional Conference.

NOC Resolution No. Aer2 - 6

Relating to the Use of Frequency Bands, higher than the HF bands, in the Aeronautical Mobile (R) Service and the Aeronautical Mobile-Satellite (R) Service for Communication and for Meteorological Broadcasts.

SUP Recommendation No. 14

To Administrations in Region 1. Relating to the Broadcasting Service in the Band 100 - 108 MHz.

SUP Recommendation No. 32

Relating to the Radio Astronomy Service.

NOC Recommendation No. 33

Relating to the Meteorological Aids Service in the Band 27.5 - 28 MHz.

NOC Recommendation No. Spa 8

Relating to the Need to Cease Operations of the Fixed and Mobile Services in the Bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz Allocated to the Radionavigation-Satellite Service.

SUP Recommendation No. Spa2 - 6

Relating to future Frequency Allocation Requirements for the Maritime Mobile-Satellite Service.





REC Mar2 - 11/1

MOD

RECOMMENDATION No. Mar2 - 11

**Relating to the Use of Channels 15 and 17 of Appendix 18  
By On-Board Communication Stations**

The World Maritime Administrative Radio Conference, Geneva, 1974,

*considering*

a) that channels 15 and 17 of Appendix 18 were provided by the World Administrative Radio Conference, Geneva, 1967, for use for internal operational communications on board ships within territorial waters and with an effective radiated power not in excess of 0.1 W, and that this power limit has been raised to 1 watt by the present Conference;

b) that considerable use is made of these channels by a number of administrations;

c) that some administrations have not used these channels for on-board communication because of the shortage of VHF channels for other maritime mobile needs;

d) that, for the same reason, these administrations wish to have the use of these channels for on-board communication discontinued;

e) that the World Administrative Conference, Geneva, 1979, retained the provisions in the table of frequency allocations;

noting

that the CCIR has adopted Recommendation No. 542 and Report 589-1;

*recognizing*

a) that several common channels for on-board communication are necessary internationally to meet world-wide requirements in the future;

b) that there may be a need for frequencies to provide for the use of repeater stations on large vessels, such as container ships, tankers, etc.;

c) that additional experience concerning the application and effectiveness of the UHF channels made available for this purpose by the present Conference may be required;

etc. NOC

MOD

## RECOMMENDATION NO. Spa 7

Relating to the Use of the Band 136 - 137 MHz by the  
Aeronautical Mobile (R) Service

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the modified Table of Frequency Allocations, Geneva, 1979, includes allocations to the aeronautical mobile (R) service on a primary basis and to the fixed and mobile, except aeronautical mobile (R), services on a secondary basis in the band 136 - 137 MHz;
- b) that provision is also made for allocations to the space operation service (space-to-Earth), the meteorological-satellite service (space-to-Earth) and the space research service (space-to-Earth) on a primary basis up to 1 January 1990, and thereafter on a secondary basis, and that the aeronautical mobile (R) service can be introduced on a primary basis only after 1 January 1990, in conformity with the internationally approved plans for that service;
- c) that on that date the aeronautical mobile (R) service may well be subject to interference harmful to the safety of air navigation and that it is of the utmost importance to afford this service protection against interference from stations in the fixed and mobile (except aeronautical mobile (R)) services, the space research service (space-to-Earth), the space operation service (space-to-Earth) and the meteorological-satellite service (space-to-Earth);

recommends

- 1. that Administrations of all Regions operating, or intending to operate, stations in the fixed service, the mobile (except aeronautical mobile (R)) service, the space operation service (space-to-Earth), the meteorological-satellite service (space-to-Earth) and the space research service (space-to-Earth) in the band 136 - 137 MHz after 1 January 1990 take all possible steps to give the required protection to the aeronautical mobile (R) service and to cease the operation of stations of the other services to which the band is allocated on a secondary basis as and when the stations of the aeronautical mobile (R) service come into operation;
- 2. that Administrations notify the International Frequency Registration Board of their plans to bring into operation the aeronautical stations of the aeronautical mobile (R) service;
- 3. that Administrations notify the International Frequency Registration Board, preferably in advance, of the date when stations authorized to operate on a secondary basis will cease operations and that specific reference should be made to this Recommendation;

and requests the International Frequency Registration Board

to publish this information every six months as from 1 January 1985.

ANNEX 3

RECOMMENDATION No. ..

Relating to an Automated UHF Maritime Mobile Radio  
Communication System

The World Administrative Radio Conference, Geneva, 1979,

conscious

- a) of continued growth of world population and associated needs of safe and efficient transportation of foodstuffs and other essential goods;
- b) of the need for a worldwide rapid and efficient economic growth;
- c) that the maritime fleets are increasingly engaged in trade and these fleets are growing substantially;

considering

- a) that the international maritime mobile VHF band (Appendix 18) has become congested in many areas of the world;
- b) that the future requirements for additional UHF radio telephone channels for ship operations, vessel traffic and public correspondence in the maritime mobile service have been estimated to be as many as 200 - 240 duplex channels in some congested areas;
- c) that it is highly desirable for the UHF maritime and other international mobile public correspondence systems to become fully automated to ensure the efficient utilization of the channels and the economic operation of the services, to the benefit of the users;
- d) that standardization is of great importance in international mobile services;
- e) that Administrations may wish to use some or all of the channels designated for maritime use, for other automated mobile services. Examples of such usage are joint or combined radio-communications in ports, waterways and adjacent piers. In other areas where there is no need for mobile services, these channels could be used for other radio services;

noting

- a) CCIR Report 587-1 on this subject in response to Question 23-2/8;
- b) CCIR Decision 30 directing Interim Working Party 8/5 to further study this subject on the basis of Question 23-2/8 and taking into account results of studies in Report 587-1;
- c) IMCO COM Circular 73 stating short range telecommunications requirements of 10 MHz of bandwidth for automated international maritime services;

recommends

that the next competent Administrative Radio Conference :

- designate suitable bands from those allocated worldwide to the mobile service around 900 MHz, with sufficient spectrum for a maritime mobile radiocommunication system including public correspondence.

- identify the means for establishing, as required, regional assignment plans which take into account the worldwide needs of the maritime mobile service and allow for compatibility with other radio services;

invites the CCIR

- to study preferred bands from operational and sharing aspects as a matter of urgency and to issue a Recommendation of a Report prior to the next competent Administrative Radio Conference;

- to study, in consultation with the CCITT, the technical and operational aspects of an integrated maritime and land mobile automated system;

requests the Secretary-General

to communicate this Recommendation to the Intergovernmental Maritime Consultative Organization for consideration and comments.

ANNEX 4

RECOMMENDATION No. ...

Relating to UHF low-power stations for personal  
radio-communications over short distances.

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that there is a growing demand in several countries for personal communications over short distances;
- b) that a very high number of low-power stations already exists mainly in the 27 MHz band;
- c) that the 27 MHz band, as a HF band with long-range propagation characteristics, is not optimal for the use in short-distance communications;
- d) that in many countries existing stations caused significant harmful interference to other services;
- e) that it is highly desirable to harmonize and identify at an early stage, preferably worldwide, the selection of a suitable frequency band in the UHF spectrum and the necessary technical characteristics;

noting

that it is advisable that Administrations which contemplate the possibility of using a small portion of the band around 900 MHz for personal radiocommunications over short distances by means of low-power stations should select and use as far as possible the same frequency band for this purpose;

invites the CCIR

to study and prepare, if possible before the Conference mentioned below, a Recommendation or Report on the basic technical characteristics of such low-power stations (i.e. channel spacing, type of modulation, output power, spurious emission suppression);

recommends

that Administrations should make proposals based on the CCIR studies to the next competent World Administrative Radio Conference;

invites

the next competent World Administrative Radio Conference to make appropriate decisions on this subject.

ANNEXE 5/ANNEX 5/ANEXO 5

WARC 79 : Resultats des travaux du Groupe de travail 5C de la Commission 5 (Attributions)

WARC 79 : Results of the work of Working Group 5C of Committee 5 (Allocations)

WARC 79 : Resultados de los trabajos del Grupo de trabajo 5C de la Comisión 5 (Atribuciones)

Réunions N <sup>os</sup> Meetings Nos Reuniones N <sup>os</sup>	Concernant Table de fréquence Concerning Frequency table Referente Tabla de frecuencia MHz			Docs. DL		Ex-DT No.	Doc. blanc N <sup>o</sup> White Doc. No Doc. blanco N <sup>o</sup>	Rapport N <sup>o</sup> Report No Informe N <sup>o</sup>
				Table	Renvois			
	Reg. 1	Reg. 2	Reg. 3	Table	Footnotes			
	27.5 - 37.75			DL/8		DT/32	213	1
2 & 3	37.5-47	37.5-50	37.5-44	DL/13		DT/42	235	2
3 & 5		50-68	44-68	{ DL/19 DL/13		DT/53	320(Rev.1)	3
3, 4 & 5	68-87.5	68-88	68-87	{ DL/21 DL/26		DT/54 DT/54(Rev.1)	341(Rev.1)	4
3, 5, 6 & 10	47-68			DL/19		DT/43+Corr.1 DT/85	386	5
6, 7, 9, 10 14 & 21	87.5-138	88-138	87-138	{ DL/26 DL/34	DL/53 DL/54	DT/110(Rev.1) DT/122(Rev.2)	409+Corr.1	6
8, 9 & 10	138 - 150.05			{ DL/50 DL/51	DL/74	DT/118	410+Corr.1	7
9 & 11	150.05 - 174			DL/33	DL/64	DT/136	417	8
10, 11, 12 & 19	174 - 235			{ DL/94 DL/150	DL/119	DT/151	638	9
12 & 19	235 - 401			{ DL/76 DL/95	DL/77 DL/96	DT/160	639	10
13 & 20	401 - 420			DL/85	DL/86 DL/126	DT/168	670	11
15, 16 & 20	420 - 470			DL/115	DL/171	DT/198	671	12
16, 17 & 18	470 - 890			{ DL/173 DL/195	DL/172	DT/212	723	13
17, 18, 19 & 20	890 - 960 87.5 - 108			{ DL/177 DL/209	DL/172	DT/217	724	14
21 & 22	Résolutions et c. Resolutions etc. Resoluciones et c.					DT/180 DT/216	726	15

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 727-E

16 November 1979

Original : English

## COMMITTEE 5

### United States of America

#### INFORMATION PAPER

#### ALLOCATION OF THE BAND 400.15 - 403 MHz TO THE METEOROLOGICAL-SATELLITE SERVICE

The band 400.15 - 403 MHz presently allocated to the meteorological-satellite service is either being or planned to be used internationally by the United States, France, the European Space Agency, Japan and the USSR for the transmission of data from terrestrial sensors to both low orbiting and geostationary satellites. The data collected by the satellites are either relayed in real-time or stored on board for relay, on command, to a data collection earth station, where the data is processed and delivered to the user.

These data collection platforms (DCPs) may be located on land, rivers, lakes, ships, buoys, oceans, balloons and aircraft and perform a number of measurements. These measurements may include : temperature, barometric pressure, wind velocity and direction, sea state, atmospheric pressure profiles, plus numerous others (see CCIR Reports 395-3 and 538-1). DCPs are relatively low cost (around \$ 1,000 to \$ 5,000 each) and use transmitters with output powers on the order of 5 to 10 watts to transmit at rates between 100 to 500 bits/second. Transmission may be initiated by an integral timer or in response to the reception from the satellite of an interrogation command in the 460 - 470 MHz band.

DCP position location techniques have also been developed to permit the accurate tracking of ocean buoys, constant pressure atmospheric balloons and aircraft.

The development of DCP technology in the United States was first demonstrated in 1967 using the Application Technology Satellite-3 (ATS-3). A summary of this development activity is given in Annex IV to Report 538-1. The early experiments proved successful and have fostered the development of new applications and operational requirements.

Data collection systems are now operational on the United States SMS/GOES geostationary and TIROS-N low orbiting meteorological-satellite systems. In addition, meteorological-satellite systems operated by other countries also provide data collection service.

Experimental and operational data collection systems provide substantial benefits to all countries. Perhaps one of the best examples is the global weather study programme currently in progress. Called the Global Atmospheric Research Programme (GARP), it is the most comprehensive one-year weather science programme ever undertaken. The first GARP Global Weather Experiment was initiated in December 1978 and will last one year and will produce the most complete record of the world's weather ever assembled. The aims are to increase the global capability for extended range weather forecasting and to develop a significantly improved world-wide weather observation system. GARP is being conducted jointly by the United Nations World Meteorological Organization and the International Council of Scientific Unions; 147 nations are pooling their weather observation capabilities. Information gathering systems include satellites operated by the United States, Japan and the European Space Agency; 50 seagoing merchant and research vessels;





special research aircraft and commercial airlines; hundreds of data-reporting balloons; drifting buoys and moored buoys; automatic and manned land-based weather stations; and a variety of other observational and communications systems. The great flow of information will be processed in many countries, then relayed to data centres in the United States, the USSR and the United Kingdom. The data will be used to develop advanced mathematical models : computerized representations of the atmosphere's composition which serve as the basis for determining what the weather will be like under a given set of conditions.

The benefits to agriculture alone which will result from more accurate and longer range weather forecasting are substantial. Greater crop yields will result from the knowledge of when to plant and when to harvest. Disastrous crop damage may be avoided or significantly lessened by improved weather monitoring, forecasting and farmer alerting. Some experience with the benefits to be gained has been obtained in an area of the United States where citrus is a major year-round crop. Freeze conditions pose a major problem for citrus growers. To prevent crop damage, extensive use is made of grove heaters at costs running to several million dollars per day in Florida alone. Precise timing on when the temperature will go below freezing is essential to initiate the grove heaters and thus save the trees and the crop in cases of long-freeze periods.

Data collection platforms also play a significant role in the development of man's understanding of the earth's resources and environment, and the development of efficient management techniques. Satellites with the facility to receive low power DCP transmissions in the 401 - 403 MHz band are either being planned or have been placed in orbit by several Administrations. These Administrations include the United States, Japan, the European Space Agency and the Union of Soviet Socialist Republics. These satellite systems are described in CCIR Report 395-3.

It is incumbent upon this Conference to ensure, to the extent possible, that adequate spectrum and protection be afforded to this service so that DCP technology may continue to contribute to the solution of some of mankind's most pressing problems : food, energy and the environment.

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# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

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16 November 1979  
Original : English

## COMMITTEE 5

### United States of America

#### INFORMATION PAPER

#### ALLOCATION OF THE BAND 406.0 - 406.1 MHz TO THE MOBILE-SATELLITE SERVICE

The WARC 1971 allocated the band 406.0 - 406.1 MHz on a world-wide basis for the use and development of emergency position-indicating radiobeacon (EPIRB) systems using space techniques. The development of this technology and service is of great interest to a number of Administrations including : the United States of America, USSR, Canada, France, Norway, Australia and Japan.

EPIRBs are low-power transmitters (5 watts maximum) carried on board ships and which are activated in the case of distress. For the protection and saving of human life at sea, it is of vital importance that each case of distress be made known as fast as possible to the rescue organizations ashore. The identity and location of the vessel in distress, as well as the kind of distress, can only be transmitted by radio. Therefore, distress calls from all parts of the world oceans must be received without error, without interference, by rescue organizations even though only low-power distress radio beacons are used.

These systems have been under study by the CCIR (IWP 8/4, Report 602 and Report 761) for some time. Limited experiments to demonstrate the technology have been conducted by several Administrations using both geostationary and low orbiting satellites.

The most comprehensive experimental programme to date for the global evaluation of the use of space techniques for distress alerting, reporting and location is scheduled to begin around the first quarter of 1982. It is a joint programme called COSPAS/SARSAT involving the United States of America, Canada, France and the USSR.

SARSAT is the United States of America, Canada and French contribution to the joint programme. Each country is developing unique components of an instrument package to be placed on board three satellites in the NOAA TIROS-N series of low-altitude (835 km), near polar orbiting meteorological satellites. (1)

COSPAS is the USSR contribution to the joint programme. They are developing a similar instrument package to be placed on two low altitude (1,000 km), near polar orbiting Soviet satellites. (2)

Basically, each of the five satellites will receive emergency locator transmitters (ELTs) and emergency position-indicating radio beacon (EPIRBs) transmission in the 121.5 MHz and 406.0 - 406.1 MHz bands. In addition, the SARSAT instrument package will contain an ELT/EPIRB receiver operating in the 243 MHz band. These low-power transmissions, 75 milliwatts in the case of 121.5 and 243 MHz ELT/EPIRBs and 5 watts in the case of the 406 MHz ELT/EPIRBs, will be received, processed and retransmitted in real-time to a local user terminal (LUT) - a low-cost earth station employing a three metre (SARSAT) or a 2.5 metre (COSPAS) diameter parabolic antenna to receive the satellite transmission in the 1 543 MHz band. In addition, the 406 MHz ELT/EPIRB signals will be processed and stored on board the satellites for later transmission to the ground. It is this on board storage feature that provides global coverage with a minimum number of earth stations.



Position location of the craft in distress is derived from frequency measurements of the doppler-shifted ELT/EPIRB transmissions. The accuracy is a function of the measurement time and the amount of interference. For the 406 MHz ELT/EPIRB transmissions, the frequency measurements are made on board the satellite. A minimum of four minutes measurement time, virtually free from interference, is required to achieve a location accuracy of 2 - 5 km.

To complete the picture, when a distress event is detected at an LUT, the information is forwarded to the appropriate rescue coordination centre to alert and deploy the search and rescue forces.

At the completion of the COSPAS/SARSAT project, the participants will make recommendations for a global operational distress alerting and location satellite system.

The benefits to mankind to be realized from a global operational distress alerting and location satellite system may be measured in terms of lives, property and resources saved.

A recent study examined the benefits to be realized in the United States of America alone from the use of an operational satellite system. The study considered distress incidences to general aviation (private) aircraft in the inland regions; and, to vessels, excluding recreational watercraft, in the maritime regions of the United States of America.

The reduction in lives lost as a result of a distress incident in the general aviation service is primarily the result of reduced distress alerting and location time as illustrated in Figure 1. The average distress alerting and location time using the present system is 48 hours. As a consequence, on the average only 10 % of the distress victims survive. Reducing the distress alerting and location time to eight hours will result in a six-fold increase in the survival rate. The COSPAS/SARSAT project will demonstrate average alerting times of one hour for distress incidents in the continental United States of America and a maximum time of three hours.

Based on 1974 distress incidence statistics for general aviation in the continental United States of America, approximately 38 lives would have been saved through the use of an operational satellite distress alerting and location system. Table 1 summarizes the estimated number of lives which could be saved through the year 2000 assuming the launch of the first satellite in 1981.

Table 1 also provides a summary of the dollars (constant 1976 dollars) saved as a result of the improved distress location accuracy of the satellite system. The improved accuracy results in significantly fewer flying hours for search aircraft to locate the site of the distress.

Similar benefits will accrue within the United States of America maritime region. This same study provided an estimate of the number of lives which would be saved and the saving in operational search costs, and property damage avoided or mitigated as a result of improved salvage possibilities. These estimates are given in Table 1. Not included are : costs associated with diverting commercial and naval vessels for search efforts, benefits resulting from improved distress alerting and location in international, coastal and inland waters.

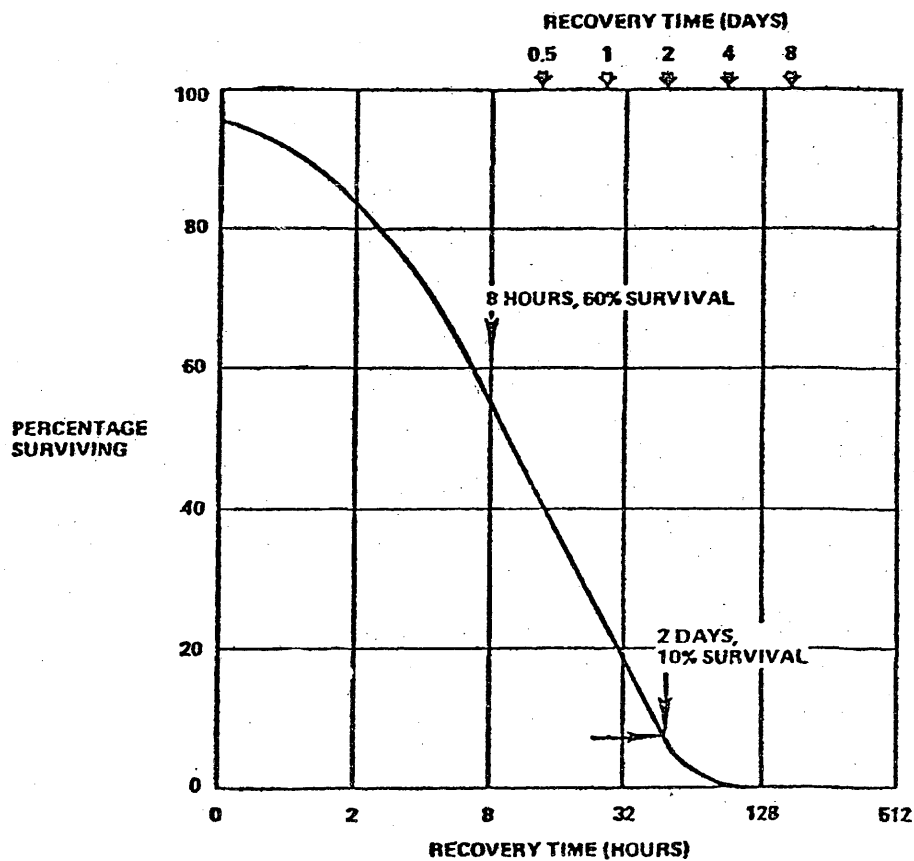
In summary, the mobile-satellite service allocation in the 406.0 - 406.1 MHz band is a vital allocation to the development of advanced distress alerting and location systems using space techniques. It is a vital safety of life service of global proportions : and because of the requirement for sensitive receivers and signal processors on low orbiting and eventually geostationary satellites, it is not feasible to share the frequency band with terrestrial services even on a geographical basis.

The potential benefits in terms of lives saved, reduced operational search costs and property saved for the small case studied are significant. The benefits to mankind will be substantial from a global operational distress ability and location system.



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- (2) Y.G. Zurabov, L.S. Psheliakoy, V.A. Bogdanov, and I.S. Bronitsky, "COSPAS Project - A Satellite-Aided Experimental System for SAR Applications", XXX Congress International Astronautical Federation, Paper IAF-79-A-33, Munich, FRG, 17-22 September 1979.



REF: DOD & NSC DATA GIVEN IN C. MUNDO, L. TAMI & G. LARSON,  
FINAL REPORT PROGRAM PLAN FOR SEARCH & RESCUE ELECTRONICS ALERTING &  
 LOCATING SYSTEM, DOT-TSC-OST-73-42, FEB. 1974.

FIGURE 1

Survival as a function of recovery time

TABLE 1

Annual and cumulative total benefits resulting from  
satellite-assisted SAR system  
(in millions of 1976 dollars)

Year	Lives Saved			Operational Search Costs And Property Saved		
	Inland	Maritime	Total	Inland	Maritime	Total
1977	0	0	0	0	0	0
1978	0	0	0	0	0	0
1979	0	0	0	0	0	0
1980	0	0	0	0	0	0
1981	0	0	0	0	0	0
1982	13.39	4.08	17.44	1.42	1.46	2.88
1983	26.90	8.15	35.05	2.85	2.91	5.76
1984	40.28	12.23	52.51	4.28	4.37	8.65
1985	62.08	16.30	78.38	6.59	5.82	12.41
1986	68.12	16.30	84.42	7.24	5.82	13.06
1987	71.55	16.30	87.85	7.61	5.82	13.43
1988	73.70	16.30	90.00	7.83	5.82	13.65
1989	75.95	16.30	92.25	8.07	5.82	13.89
1990	78.20	16.30	94.50	8.31	5.82	14.13
1991	80.56	16.30	96.86	8.56	5.82	14.38
1992	82.94	16.30	99.24	8.82	5.82	14.64
1993	85.54	16.30	101.84	9.09	5.82	14.91
1994	88.03	16.30	104.33	9.36	5.82	15.18
1995	90.75	16.30	107.05	9.65	5.82	15.47
1996	93.36	16.30	109.66	9.92	5.82	15.74
1997	96.20	16.30	112.50	10.23	5.82	16.05
1998	99.05	16.30	115.35	10.52	5.82	16.34
1999	102.13	16.30	118.43	10.85	5.82	16.67
2000	105.09	16.30	121.39	11.17	5.82	16.99
	1,433.82	285.26	1,719.05	152.37	101.89	254.26

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 729-E

16 November 1979

Original : English

COMMITTEE 7

REPORT OF WORKING GROUP 7 AD HOC 2 TO COMMITTEE 7

Resolution No. Sat-4

1. Working Group 7 ad hoc 2 considered all proposals concerning Resolution No. Sat-4 relating to the annexing to the Radio Regulations of the provisions and associated Plan contained in the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.
2. Participating in the work of the Group were the delegations of Argentina, Brazil, Canada, Cuba, France, Japan, the United Kingdom and Venezuela and a representative of the IFRB.
3. The Working Group unanimously agreed on the texts contained in the Annex to the present report comprising :
  - new Article N13B
  - footnotes to the titles of Articles N11, N12 and N13
  - a new Appendix [ - ].
4. The Working Group agreed that the abrogation of Resolution No. Sat-4 as proposed by France in F/57A/734 should be considered by Committee 7 after the adoption of the new Article N13B and Appendix [ - ] by which the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, have been annexed to the Radio Regulations.
5. Consequences of changed band limits or allocations by Committee 5
  - 5.1 Square brackets have been placed around the frequency bands in the title of Article N13B to draw the attention of Committee 7 to the need to take into account the consequences of decisions of Committee 5 concerning changes to the band limits or allocations concerned.
  - 5.2 This may be done either by adding an appropriate text in Article N13B following RR4650B or by the adoption of a resolution or in some other suitable way.
  - 5.3. In the event Article N13B is modified by Committee 7, there may be consequential adjustments to be made to the band limits mentioned in the footnotes to the titles of Articles N11, N12 and N13.

M. Yoshio UTSUMI  
Chairman of Working Group ad hoc 2

Annex : 1



A N N E X

ADD

ARTICLE N13B

ADD

Coordination, Notification and Recording of Frequencies  
Assignments to Stations of the Broadcasting-Satellite  
Service in the Frequency Bands [11.7 - 12.2 GHz (in Regions 2 and 3)  
and 11.7 - 12.5 GHz (in Region 1)] and to the other Services  
to which these Bands are Allocated, so far as their  
Relationship to the Broadcasting-Satellite Service  
in these Bands is Concerned

ADD 4650B

The provisions and associated Plan for the broadcasting-satellite service in the frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3) and 11.7 - 12.5 GHz (in Region 1) adopted by the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, as contained in Appendix [ ] shall apply to the assignment and use of frequencies by stations of the broadcasting-satellite service in these bands and to the stations of other services to which these bands are allocated so far as their relationship to the broadcasting-satellite service in these bands is concerned.

ARTICLE N11

MOD

Coordination of Frequency Assignments to Stations in a Space  
Radiocommunication Service except Stations in the Broadcasting-  
Satellite Service and to Appropriate Terrestrial Stations<sup>1</sup>

ADD 1

For the coordination of frequency assignments to stations in the broadcasting-satellite service and other services in the frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3) and 11.7 - 12.5 GHz (in Region 1), see also Article N13B.

ARTICLE N12/9

MOD

Notification and Recording in the Master International Frequency  
Register of Frequency Assignments<sup>1</sup> to Terrestrial  
Radiocommunication Stations<sup>2</sup> 2A

ADD 2A

For notification and recording of frequency assignments to terrestrial stations in the frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3) and 11.7 - 12.5 GHz (in Region 1), so far as their relationship to the broadcasting-satellite service in the bands is concerned, see also Article N13B.

ARTICLE N13/9A

MOD

Notification and Recording in the Master  
International Frequency Register of Frequency  
Assignments<sup>1</sup> to Radio Astronomy/, Passive/ and Space  
Radiocommunication Stations except Stations in the  
Broadcasting-Satellite Service<sup>2)</sup>

ADD 2)

For notification and recording of frequency assignments to stations in the broadcasting-satellite service and other services in the frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3) and 11.7 - 12.5 GHz (in Region 1), see also Article N13B.



APPENDIX [^...]

(MOD)

Provisions [for all services] and associated Plan  
for the Broadcasting-Satellite Service in  
frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3)  
and 11.7 - 12.5 GHz (in Region 1)<sup>1)</sup>

(See Article N13B)

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1) The provisions contained in this Appendix entered into force on 1 January 1979 in accordance with Article 15 of the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.



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(MOD)

Provisions [for all services] and associated Plan  
for the Broadcasting-Satellite Service in  
frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3)  
and 11.7 - 12.5 GHz (in Region 1)

## ARTICLE 1

## General definitions

(MOD)

For the purposes of this Appendix the following terms shall have the meanings defined below :

Conference :	World Administrative Radio Conference for the planning of the broadcasting-satellite service in frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3) and 11.7 - 12.5 GHz (in Region 1), called in short World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977;
Plan :	The plan for Regions 1 and 3 and its annexes;
Frequency assignment in accordance with the Plan :	Any frequency assignment which appears in the Plan or for which the procedure of Article 4 of this Appendix has been successfully applied.

## ARTICLE 2

### Frequency Bands

#### this Appendix

(MOD)

2.1 The provisions of ~~these Final Acts~~ apply to the broadcasting-satellite service in the frequency bands between 11.7 and 12.5 GHz in Region 1 and between 11.7 and 12.2 GHz in Regions 2 and 3 and to the other services to which these bands are allocated, so far as their relationship to the broadcasting-satellite service in these bands is concerned.

## ARTICLES 3 - 12

as they appear in the Final Acts of the WARC, Geneva, 1977, except for the following editorial amendments :

ARTICLE 3, the title to read "Execution of the provisions of the associated Plan".

In the following places in lieu of "the Final Acts", read "this Appendix" : 3.1, 3.2, 7.2.5 footnote 1, 7.4.5.1, 12.3.1 and 12.5.

In the following places in lieu of "these Final Acts", read "this Appendix" : 3.3, 4.1, 4.3.14, footnote to 4.3.1.2, 4.3.18, 5.2.1a, 6.3.8a, 8.4, 12.6.

In the following places, Articles and Provisions of the Radio Regulations, Appendices and Resolutions which are cross-referenced by number will need to be given new numbers in the final version :

4.3.1.2	7.1.1	7.4.8.1
4.3.1.4	7.1.4	7.4.8.2
Title Article 6,	7.1.7	7.4.8.3
footnotes 1 & 2	Title Article 7,	7.4.8.4
6.3.13	footnote	7.4.12.1
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6.3.18	7.2.3	12.3
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	7.3.7	12.8
	7.4.1	

(MOD)

## ARTICLE 13

Relationship to Resolution No. Spa2 - 2 of the World  
Administrative Radio Conference for Space  
Telecommunications, Geneva, 1971

(now numbered Resolution No. 7 7)

(MOD)

13.1 The provisions and associated Plan of this Appendix shall be regarded as including a world agreement and associated Plan for Regions 1 and 3 in accordance with resolves 1 of Resolution No. Spa2 - 2 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971, which requires the stations in the broadcasting-satellite service to be established and operated in accordance with such agreements and associated plans.

NOC

ARTICLE 14

Interference

14.1 The Members of the Union shall endeavour to agree on the action required to reduce harmful interference which might be caused by the application of these provisions and the associated Plan.

(MOD)

ARTICLE 15

Period of Validity of the Provisions and Associated Plan

15.1 The provisions and associated Plan have been prepared in order to meet the requirements of the broadcasting-satellite service in the bands concerned for a period of at least fifteen years from 1 January 1979.

15.2 In any event, the provisions and associated Plan shall remain in force until their revision by a competent administrative radio conference convened in accordance with the relevant provisions of the Convention in force.

ANNEXES 1 - 11

as they appear in the Final Acts of the WARC, Geneva, 1977, except for the following editorial amendments :

In Annex 1, paragraphs 1, 3 and 4 and in Annex 10 twice, after "the date or time of entry into force of the Final Acts" add "(1 January 1979)".

In Annex 2, item 11, replace "(watts)" by "(dBW)"  
item 17, replace "(GMT)" by "(UTC)".

In Annex 6, paragraphs 1 and 2 and Annex 8, paragraph 1.2, Note 1, the references to an Article or Provision in the Radio Regulations should be given the new number in the final version.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 730-E  
16 November 1979  
Original : Spanish

## PLENARY MEETING

### REPORT OF COMMITTEE 2 TO THE PLENARY MEETING

#### Credentials

1. Terms of reference of the Committee

The Committee's terms of reference are contained in Document No. 2.

2. Meetings

Committee 2 held two meetings (on 29 September and on 15 November 1979).

The Working Group established by the Committee with the task of examining, pursuant to the provisions of the Convention, the credentials deposited at the Conference, met on 13 and 15 October 1979 (1st meeting) and on 7 and 15 November 1979 (2nd and 3rd meetings).

The Chairman and Vice-Chairman of the Committee and the delegates of the Algerian Democratic and Popular Republic, the Federal Republic of Germany, the Republic of Colombia, the Hungarian People's Republic and Thailand participated in the meetings of the Working Group.

3. Conclusions

The Committee's conclusions, contained in annex, are submitted to the Plenary Meeting for adoption.

A number of delegations have expressed different views on the validity of the credentials deposited by Democratic Kampuchea. The statements made by these delegations are attached to the summary record of the 2nd meeting of Committee 2 (Document No. 725).

4. Final remarks

The Committee recommends to the Plenary Meeting that the Chairman and the Vice-Chairman of Committee 2 should be empowered to examine any credentials received after the date of this Report and to convey their findings to the Plenary Meeting.

C.J. MARTINEZ  
Chairman of Committee 2

Annex : 1



A N N E X

CONCLUSIONS OF COMMITTEE 2  
SUBMITTED TO THE PLENARY MEETING FOR APPROVAL

1. Credentials deposited

1.1 Credentials found to be in order

1.1.1 Credentials from countries which have ratified (or have acceded to) the Convention or to which the provisions of No. 97 of the Convention do not apply.

Afghanistan (Democratic Republic of)  
Albania (Socialist People's Republic of)  
Algeria (Algerian Democratic and Popular Republic)  
Germany (Federal Republic of)  
Angola (People's Republic of)  
Saudi Arabia (Kingdom of)  
Argentine Republic  
Australia  
Austria  
Benin (People's Republic of)  
Bangladesh (People's Republic of)  
Belgium  
Bahrain (State of)  
Byelorussian Soviet Socialist Republic  
Botswana (Republic of)  
Brazil (Federative Republic of)  
Bulgaria (People's Republic of)  
Burundi (Republic of)  
Cameroon (United Republic of)  
Canada  
Cape Verde (Republic of)  
Chile  
China (People's Republic of)  
Cyprus (Republic of)  
Vatican City State  
Colombia (Republic of)  
Congo (People's Republic of the)  
Korea (Republic of)  
Costa Rica  
Ivory Coast (Republic of the)  
Cuba  
Denmark  
Egypt (Arab Republic of)  
El Salvador (Republic of)  
United Arab Emirates  
Ecuador  
Spain  
United States of America  
Ethiopia  
Fiji  
Finland  
France  
Gabon Republic  
Gambia (Republic of the)  
Ghana

Greece  
Guinea (People's Revolutionary Republic of)  
Guinea-Bissau (Republic of)  
Guyana  
Haiti (Republic of)  
Upper Volta (Republic of)  
Honduras (Republic of)  
Hungarian People's Republic  
India (Republic of)  
Indonesia (Republic of)  
Iran (Islamic Republic of)  
Iraq (Republic of)  
Ireland  
Iceland  
Israel (State of)  
Italy  
Jamaica  
Japan  
Jordan (Hashemite Kingdom of)  
Kenya (Republic of)  
Kuwait (State of)  
Lesotho (Kingdom of)  
Lebanon  
Libya (Socialist People's Libyan Arab Jamahiriya)  
Liechtenstein (Principality of)  
Luxembourg  
Madagascar (Democratic Republic of)  
Malaysia  
Malawi  
Mali (Republic of)  
Malta (Republic of)  
Morocco (Kingdom of)  
Mexico  
Monaco  
Mongolian People's Republic  
Mozambique (People's Republic of)  
Nepal  
Niger (Republic of the)  
Nigeria (Federal Republic of)  
Norway  
New-Zealand  
Oman (Sultanate of)  
Uganda (Republic of)  
Pakistan (Islamic Republic of)  
Papua New Guinea  
Paraguay (Republic of)  
Netherlands (Kingdom of the)  
Peru  
Philippines (Republic of the)  
Poland (People's Republic of)  
Portugal  
Qatar (State of)  
Syrian Arab Republic  
German Democratic Republic  
Democratic People's Republic of Korea  
Ukrainian Soviet Socialist Republic  
Roumania (Socialist Republic of)

United Kingdom of Great Britain and Northern Ireland  
Rwanda (Republic of)  
San Marino (Republic of)  
Senegal (Republic of the)  
Singapore (Republic of)  
Somali Democratic Republic  
Sri Lanka (Democratic Socialist Republic of)  
Sweden  
Switzerland (Confederation of)  
Swaziland (Kingdom of)  
Tanzania (United Republic of)  
Czechoslovak Socialist Republic  
Thailand  
Togolese Republic  
Tonga (Kingdom of)  
Tunisia  
Turkey  
Union of Soviet Socialist Republics  
Uruguay (Oriental Republic of)  
Venezuela (Republic of)  
Yemen Arab Republic  
Yemen (People's Democratic Republic of)  
Yugoslavia (Socialist Federal Republic of)  
Zambia (Republic of)

Conclusion : The delegations of these countries are entitled to vote and to sign the Final Acts.

1.1.2 Countries which have not ratified (or which have not acceded to) the Convention or to which the provisions of No. 97 of the Convention apply (see Document No. 145).

Guatemala (Republic of)  
/ Democratic Kampuchea / \*  
- Liberia (Republic of)  
Mauritania (Islamic Republic of)  
Nicaragua  
Sierra Leone  
Sudan (Democratic Republic of the)  
Chad (Republic of the)  
Zaire (Republic of)

Conclusion : The delegations of these countries are not entitled to vote; they are entitled to sign the Final Acts.

\* See page 1, paragraph 3.



2. Provisional credentials deposited

The provisional credentials deposited by the delegations of the following countries were found to be in order.

These credentials are from countries which have ratified (or have acceded to) the Convention or to which the provisions of No. 97 of the Convention do not apply.

Bolivia (Republic of)

Panama (Republic of)

Conclusion : The delegations of these countries are entitled to vote; they are not entitled to sign the Final Acts.

3. Delegations which have not deposited credentials

Central African Republic

Comores (Federal and Islamic Republic of the)

Djibouti (Republic of)

Dominican Republic

Maldives (Republic of)

Mauritius

Nauru (Republic of)

Conclusion : The delegations of these countries are not entitled to vote; they are not entitled to sign the Final Acts.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 731(Rev.1)-E

19 November 1979

Original : English

## COMMITTEE 5

### TWENTY-NINTH AND FINAL REPORT OF WORKING GROUP 5D TO COMMITTEE 5

#### (ALLOCATIONS)

Subject : Frequency bands 4 200 - 4 990 MHz, 11.7 - 12.75 GHz, 14.5 - 15.35 GHz, 15.7 - 17.7 GHz, allocations to the fixed-satellite service for feeder links of the maritime mobile satellite service, draft Resolutions and Recommendations.

1. Frequency bands between 4 200 and 4 990 MHz

All proposals relating to these bands were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 1.

2. The delegation of the Federal Republic of Germany reserved the right to come back in Committee 5 to footnote 3748/383 depending on the decision on feeder links of the maritime mobile-satellite service.

3. Frequency band between 11.7 and 12.75 GHz

All proposals relating to these bands were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 2 and the draft Resolution Relating to the Convening of a Regional Administrative Radio Conference for the Detailed Planning of the Broadcasting-Satellite Service in the 12 GHz Band and Associated Up-links in Region 2 as given in Annex 3.

4. On this Resolution, the delegations of Colombia and Ecuador maintain the reservation expressed in the Final Protocol of the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

5. The Working Group decided to forward without discussions the attached note as given in Annex 4 outlining the areas of interregional problems and considerations for the extensions of provisions of Final Acts of WARC-BS 1977 Conference. The delegation of Australia will prepare in consultation with the delegation of USSR appropriate draft Resolutions pertaining to Region 3 allocations for FSS and BSS in the band 12.2 - 12.5 GHz for consideration by Committee 5.

6. The delegations of the Federal Republic of Germany, France, the United Kingdom and the USSR reserved the right to come back in Committee 5 to footnotes 3787/405BC, 3787A, 3787F and to subject contained in Annexes 3 and 4.

7. The delegations of the United Kingdom and the USSR reserved the right to come back to provision 3788/405BD in Committee 5.

8. The delegation of the USSR opposed to allocate the band 12.2 - 12.5 GHz to broadcasting-satellite and fixed-satellite services in Region 3, because it is in contradiction with the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, and reserved the right to come back to this allocation in Committee 5. The delegations of Benin, France and the United Kingdom expressed their view to come back in Committee 5 to the same allocation.



9. Frequency band between 14.5 and 15.35 GHz

All proposals relating to this band were considered, and the Working Group decided unanimously to recommend the adoption of the revised Table and the revised provisions as given in Annex 5.

10. The discussions and the results thereof on allocations to the fixed-satellite service for the feeder link of the broadcasting-satellite service in the bands 10.7 - 11.7 GHz, 14.5 - 15.35 GHz, and 17.3 - 18.1 GHz are contained in the twenty-sixth report of Working Group 5D to Committee 5.

11. The allocation to the space research service as well as the footnote provisions in the band 14.5 - 15.35 GHz depend on the allocation to the fixed-satellite service for the feeder link.

12. Frequency bands between 15.7 and 17.7 GHz

All proposals relating to these bands were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 6.

13. Feeder links for the maritime mobile-satellite service

The Working Group discussed the proposals relating to allocations to the fixed-satellite service for feeder links of the maritime mobile-satellite service and decided by majority to recommend the adoption of the provision as given below :

"In the band  $[x, y]$  MHz allocated to the fixed-satellite service, Administrations are urged to give preference to feeder links for the satellites of the maritime mobile service over other links of the fixed-satellite service".

Show of cards of delegations was taken to indicate a choice for frequency bands  $[x, y]$ . The choice so indicated is as follows :

(Earth-to-space) 6 405 - 6 425 MHz }  
(space-to-Earth) 4 175 - 4 200 MHz } 16 delegations

(Earth-to-space) 5 850 - 5 870 MHz }  
(space-to-Earth) 3 400 - 3 425 MHz } 18 delegations

14. The delegations of Bulgaria, the German Democratic Republic and the USSR reserved the right to come back to the allocations to feeder links of the maritime mobile-satellite service in Committee 5.

15. The Working Group decided by majority to recommend the adoption of the draft Resolution as given in Annex 7.

16. The delegation of the Federal Republic of Germany reserved the right to come back to the Resolution in Annex 7 in Committee 5.

17. The Working Group decided unanimously to recommend the adoption of draft Resolutions and Recommendations as given in Annex 8.

Dr. B.S. RAO  
Chairman of Working Group 5D



A N N E X 1

MHz  
4 200 - 4 990

Allocation to Services		
Region 1	Region 2	Region 3
4 200 - 4 400	AERONAUTICAL RADIONAVIGATION 3743/379A 3743A 3744/381 3748/383	
4 400 - 4 500	FIXED MOBILE	
4 500 - 4 800	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 3748B	
4 800 - 4 990	FIXED MOBILE Radio Astronomy 3746A 3746B 3680D	

ADD 3743A

Use of the band 4 200 - 4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the Earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).

MOD 3744/381

Additional allocation : in China and the Philippines, the band 4 200 - 4 400 MHz is also allocated to the fixed service on a secondary basis.

SUP 3686/352A (in the band 4 200 - 4 400 MHz)

- MOD 3743/379A                   The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of  $\pm 2$  MHz of these frequencies and shall be subject to agreement obtained under the procedure set forth in Article N13A.
- SUP 3745/382
- MOD 3748/383                   Additional allocation : in the Federal Republic of Germany, Denmark, Norway and Sweden, the band 4 200 - 4 210 MHz is also allocated to the fixed service on a secondary basis.
- ADD 3748B                   Alternative allocation : in the Federal Republic of Germany, Denmark, Spain, Greece, Italy, Norway, Netherlands and the United Kingdom, the band 4 500 - 4 800 MHz is allocated to fixed and mobile services on a primary basis. Such use shall not impose power flux-density limitations on fixed-satellite service greater than those given in provision No. 6064/47ONM.
- SUP 3531/233B               (in the band 4 700 - 4 990 MHz)
- SUP 3697/354
- ADD 3680D                   The bands 1 370 - 1 400 MHz, 2 640 - 2 655 MHz, 4 950 - 4 990 MHz, 6 725 - 7 250 MHz and 15.2 - 15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis.
- ADD 3746A                   In the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz the allocation to the mobile service is restricted to mobile except aeronautical mobile service.
- ADD 3746B                   In Argentina, Australia and Canada, the allocation of the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz to the radio astronomy service is on a primary basis. In making assignments to stations of other services to which the bands are allocated, Administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).

## A N N E X 2

GHz  
11.7 - 12.75

Region 1	Region 2	Region 3
11.7 - 12.5 FIXED BROADCASTING BROADCASTING-SATELLITE Mobile except aeronautical mobile	11.7 - 12.1 FIXED FIXED-SATELLITE (Space-to-Earth) Mobile except aeronautical mobile 3787/405BC [ 3787A_7	11.7 - 12.2 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 3785/405BA
	12.1 - 12.3 FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 3787/405BC 3787B 3787C 3787D 3787E	12.2 - 12.5 FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE
3785/405BA	12.3 - 12.7 FIXED	
12.5 - 12.75 FIXED-SATELLITE (Space-to-Earth) (Earth-to-space)	MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 3787/405BC 3787D 3787E [ 3787F_7	12.5 - 12.75 FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE except aeronautical mobile
3788/405BD 3789/405BE	12.7 - 12.75 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile	

- MOD 3785/405BA. In the band 11.7 - 12.2 GHz in Region 3 and in the band 11.7 - 12.5 GHz in Region 1, existing and future fixed, fixed-satellite, mobile and broadcasting services shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the decisions of the appropriate broadcasting frequency assignment planning conference (see Resolution No. Spa2 - 2) and this requirement shall be taken into account in the decisions of that conference.
- SUP 3786/405BB
- MOD 3787/405BC The use of the band 11.7 - 12.7 GHz in Region 2 by the broadcasting-satellite and fixed-satellite services is limited to domestic and sub-regional systems and is subject to previous agreement between the Administrations concerned and those having services, operating or planned in accordance with the Table, which may be affected (see Articles N11, N13, N13A and Resolution No. Spa2 - 3).
- ADD 3787A In Region 2, in the band 11.7 - 12.1 GHz, transponders on space stations in the fixed-satellite service may be used additionally for transmissions in the broadcasting-satellite service, provided that such transmissions do not have a maximum e.i.r.p. greater than 53 dBW per television channel and their use does not cause greater interference or require more protection than the coordinated fixed-satellite service frequency assignments. With respect to the space services this band shall be used principally for the fixed-satellite service. The upper limit of this band shall be in accordance with the decisions of the 1983 RARC (see footnote 3787B).
- ADD 3787B The 1983 Regional Administrative Radio Conference for Region 2 will divide the band 12.1 - 12.3 GHz in two sub-bands and will allocate the lower sub-band to the fixed-satellite service and the upper sub-band to the broadcasting-satellite, broadcasting, mobile (except aeronautical mobile) and fixed services, all services on a primary basis.
- ADD 3787C Additional allocation : in Brazil, Peru and the United States of America, the band 12.1 - 12.3 GHz is also allocated to the fixed service on a primary basis.
- ADD 3787D In Region 2 in the band 12.1 - 12.7 GHz existing and future terrestrial radiocommunication services shall not cause harmful interference to the space services operating in accordance with the broadcasting-satellite Plan to be prepared at the 1983 RARC, and shall not impose restrictions on the elaboration of such a Plan. The lower limit of this band shall be in accordance with the decisions of the 1983 RARC (see footnote 3787B).
- ADD 3787E In the band 12.1 - 12.7 GHz, the Region 2 space services existing or planned before the 1983 RARC shall not impose restrictions on the elaboration of the Plan for the broadcasting-satellite service in Region 2 and shall be operated under the conditions set forth by that conference.
- ADD 3787F In Region 2, in the band 12.3 - 12.7 GHz, BSS channels made available in the 1983 Planning Conference may also be used for transmissions in the fixed-satellite service provided that such transmissions do not cause more interference or require more interference protection than the broadcasting-satellite service transmissions operating in accordance with the 1983 Plan. With respect to the space services, this band shall be used principally for the broadcasting-satellite service. The lower limit of this band shall be in accordance with the decisions of the 1983 RARC (see footnote 3787B).

MOD 3788/405BD .

Additional allocation : in Algeria, Austria, Bulgaria, Cameroon, Congo, the Ivory Coast, Egypt, United Arab Emirates, Gabon, Ghana, Guinea, Hungary, Iraq, Israel, Jordan, Kuwait, Libya, Mali, Niger, Poland, Qatar, Syria, the German Democratic Republic, Roumania, Senegal, Sudan, Czechoslovakia, Togo and the USSR, the band 12.5 - 12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. / However, the band is allocated to these services only on a secondary basis in relation to the fixed-satellite service operating in countries in Region 1 other than those mentioned in this footnote. \_/

MOD 3789/405BE

Additional allocation : in the Federal Republic of Germany, Belgium, Denmark, Spain, Ethiopia, Finland, France, Greece, Kenya, Liechtenstein, Luxembourg, Monaco, Norway, Uganda, the Netherlands, Portugal, Sweden, Switzerland, Tanzania and Tunisia, the band 12.5 - 12.75 GHz is also allocated to the fixed service and mobile, except aeronautical mobile, service on a secondary basis.



A N N E X 3

RESOLUTION No. [AA]

Relating to the Convening of a Regional Administrative  
Radio Conference for the Detailed Planning of the  
Broadcasting-Satellite Service in the 12 GHz Band  
and Associated Up-links in Region 2

The World Administrative Radio Conference, Geneva, 1979,

noting

- a) that the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, adopted a Plan for the assignment of frequencies and orbital positions for the broadcasting-satellite service in the 12 GHz band for Regions 1 and 3;
- b) that the 1977 Conference adopted interim provisions pending the establishment of a similar plan for Region 2;
- c) that the Administrative Council [at its ... session, in Resolution ...] subsequently decided that the Region 2 Administrative Radio Conference for the Broadcasting-Satellite Service will be convened in 1983;
- d) that the present Conference has adopted changes to the Table of Frequency Allocations that greatly affect the conditions on which the planning of the broadcasting-satellite service in the 12 GHz band by Region 2 will be based;

considering

- a) that Annexes 8 and 9 of the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977 contain technical data and sharing criteria used in establishing the provisions and the associated Plan;
- b) that advantage should be taken of technological advances resulting from experiments carried out on broadcasting satellites since 1977;
- c) that advantage should also be taken of recent studies by the CCIR;
- d) that with respect to space services the present conference has allocated the band 12.3 - 12.7 GHz to the broadcasting-satellite service, and the band 12.1 - 12.3 GHz to the fixed-satellite service and the broadcasting-satellite service in accordance with the terms of No. 3787B of the Radio Regulations;
- e) that the present Conference, has designated the band [ ] GHz for use as up-link frequencies to broadcasting satellites;
- f) that there are significant advantages to planning the up-links together with the down-links of 12 GHz broadcasting-satellite systems;

recognizing

- a) that arc segmentation is no longer required in the band 11.7 - 12.1 GHz and will not be required in the band 12.1 - 12.3 GHz following the 1983 Regional Administrative Radio Conference;
- b) that systems of the fixed-satellite service in the band 11.7 - 12.2 GHz shall not impose restrictions on the preparation of a Region 2 broadcasting-satellite Plan, but that such systems developed by the time of the 1983 Regional Administrative Radio Conference, which are in accordance with the provisions of the Final Acts of the 1971 Space Conference and the 1977 World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service, should be taken into account in the decisions of the 1983 Regional Administrative Radio Conference;

resolves

1. that a Regional Administrative Radio Conference (RARC) be held no later than in 1983 to :
  - 1.1 divide the band 12.1 - 12.3 GHz in two sub-bands and to allocate the lower sub-band to the fixed-satellite service and the upper sub-band to the broadcasting-satellite, broadcasting, mobile (except aeronautical mobile), and fixed services, all services on a primary basis (see No. 3787B of the Radio Regulations);
  - 1.2 draw up detailed frequency assignments and orbital positions plan for the broadcasting-satellite service for Region 2 in the band 12.3 - 12.7 GHz and in that portion of the band 12.1 - 12.3 GHz which it shall allocate to the broadcasting-satellite service;
  - 1.3 plan up-links in a part of the band    GHz, of a bandwidth equal to the total bandwidth allocated to the broadcasting-satellite service for the down-link in the 12 GHz band. However, Administrations may use broadcasting-satellite up-links in frequency bands other than those planned provided that such use does not necessitate any changes in the Plan;
  - 1.4 establish procedures to govern the use of the bands specified in paragraph 1.2 of this Resolution by the broadcasting-satellite service and, as necessary, procedures for the corresponding up-links;
2. that planning shall take into account the pertinent parts of the Final Acts of the World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service, Geneva, 1977, in particular those contained in Annexes 4 and 5, as modified by the present Conference. In considering Annexes 6, 7 and 8 account should be taken of the decisions of the present Conference, the latest CCIR Recommendations and technological advances;
3. that the Plan shall provide for the detailed assignment of the orbital positions and frequency channels available, ensuring that the broadcasting-satellite service requirements submitted by the various Administrations are met in an equitable manner satisfactory to all the countries concerned. It should be laid down as a matter of principle that each Administration in the Region should be guaranteed a minimum number of channels (4) for the operation of the broadcasting-satellite service. Above this minimum, the special characteristics of the countries (size, time zones, language differences, etc.) shall be taken into account;

4. that all Administrations in Region 2 shall submit their broadcasting-satellite service requirements to the IFRB not later than one year before the start of the regional administrative radio conference responsible for planning this service in Region 2. Each Administration may update these requirements as it considers necessary. "Requirements" are understood to include the number and boundaries of service areas and the number of channels requested for each of them. Six months before the deadline for submitting requirements, the IFRB shall remind Administrations of the need to submit them by means of a circular letter and/or telegram;
5. that planning shall be based on individual reception, but each Administration may use the reception system which best meets its requirements (individual or community reception, or both);
6. that, in planning, it shall be borne in mind that systems should be designed with a view to reducing to a minimum, technical differences and incompatibilities with the systems of other Regions;
7. [that the Plan be consistent with the inter-regional considerations specified in the Final Acts of the World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service, Geneva, 1977;]

invites the Administrative Council

to make preparations for convening the said Regional Administrative Radio Conference using the provisions of this Resolution as a basis for the agenda of the Conference;

invites the CCIR

to carry out the necessary studies with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Regional Conference;

invites the IFRB

1. to request all Administrations in Region 2 to submit their broadcasting-satellite service requirements in accordance with "resolves" 4 above;
2. to assemble the information submitted by Administrations in a form permitting a comparative study thereof and to communicate it to the Secretary-General for publication and despatch to Administrations not later than nine months prior to the said Regional Administrative Radio Conference.

A N N E X 4

INTER-REGIONAL SHARING CONSIDERATIONS FOR  
THE REGION 2 TABLE OF ALLOCATIONS IN  
THE BAND 11.7 - 12.7 GHz

1.1 All of the services appearing in the Region 2 Table of Allocations for the 11.7 - 12.7 GHz band in Document No. 584 (Rev. 1) are presently contained in the band 11.7 - 12.2 GHz, as adopted at the 1971 WARC-SP. The Region 2 services in the band 11.7 - 12.2 GHz were considered by the 1977 WARC-BS and inter-regional coordination procedures and sharing criteria are contained in the Final Acts of that Conference.

1.2 With the exception of the case described in paragraph 2.4 below, all of the potential types of interference paths that exist in the proposed Region 2 Table of Allocations for the band 11.7 - 12.7 GHz already are contained in the 11.7 - 12.2 GHz band as considered by the 1977 WARC-BS. Accordingly, inter-regional sharing problems can be resolved by appropriately adjusting the inter-regional coordination procedures and sharing criteria for the various Region 2 services contained in the Final Acts of the 1977 WARC-BS to apply to the band limits of the proposed Region 2 Table of Allocations for the band 11.7 - 12.2 GHz.

2.1 In the band 11.7 - 12.1 GHz, certain services (mobile except aeronautical mobile, broadcasting, and broadcasting-satellite) are deleted from the Region 2 Table of Allocations, and no new services are added to the Region 1 and 3 Tables. Accordingly, this band is already covered by the Final Acts of the 1977 WARC-BS, and presents fewer inter-regional interfaces than presently exist.

2.2 In the band 12.1 - 12.3 GHz, the only change in the Region 2 Table is to add the fixed-satellite and broadcasting-satellite services to the 12.2 - 12.3 GHz portion of the band, pending a final decision by the 1983 Region 2 Conference (see footnote ADD 3787B). This situation can be adequately covered by extending the fixed-satellite procedures of Article 7 and criteria of Annex 4, to the band 11.7 - 12.3 GHz, and applying the broadcasting-satellite procedures (Resolution Spa2 - 3 or Resolution Sat-5 pending the adoption of the Region 2 Plan; and Article 4 and Annex 4 after the adoption of the Region 2 Plan), to the band 12.1 - 12.3 GHz.

2.3 In the band 12.3 - 12.7 GHz, the broadcasting-satellite service is added to the Region 2 Table of Allocations. Pending the adoption of the Region 2 Plan, the provisions of Resolution Spa2 - 3 or Resolution Sat-5 would apply<sup>1)</sup> with respect to the broadcasting-satellite service in the other Regions. After the adoption of a Region 2 Plan, Article 4 and Annex 4 would apply with the appropriate changes of band limits of the Region 2 Plan. Similarly, the band limits of Article 6 and Annex 3, and the provisions of Article 9 and Annex 5 of the 1977 Final Acts can be modified to cover interference between the terrestrial services and the broadcasting-satellite service. Finally, the provisions of Article 7 and Annex 4 governing the coordination of Region 2 fixed-satellite downlinks can also be applied to cover the coordination of fixed-satellite downlinks of other Regions with the Region 2 broadcasting-satellite Plan.

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1) Attention is also drawn to footnote 1 to Section 4.3.1.2 of the 1977 Final Acts which provides that "The Region 2 plan adopted at a future regional administrative radio conference shall not degrade the protection afforded to the frequency assignments in the Plan below the limits specified in these Final Acts".

2.4 The new interference path that arises from the change in the Region 2 Table of Allocations is that resulting from the bi-directional fixed-satellite allocation in Region 1 for the band 12.5 - 12.7 GHz. Specifically, the interference path is from the Region 2 broadcasting-satellite transmitter into the Region 1 fixed-satellite receiver in the band 12.5 - 12.7 GHz. The proposed revision of Appendix 29 (Document No. 629) covers the case of such bi-directional use, and is appropriate in this case to determine when coordination is required since the interfered-with space station is in the fixed-satellite service. Protection can therefore be afforded to Region 1 receiving space stations from modifications to the Region 2 Plan by applying the procedures of N11 and N13 for receiving space stations with respect to assignments contained in the Plan and previous modifications.<sup>1)</sup>

3. No special procedures are needed with respect to footnotes ADD 3787A and ADD 3787F in the Region 2 Table of Allocations. In the case of ADD 3787A in the band 11.7 - 12.1 GHz allocated in the Table to the fixed-satellite service, such transponders can be used for broadcasting-satellite service only if they do not cause greater interference or require more protection than the fixed-satellite frequency assignments. Any inter-regional problems are therefore adequately covered by the procedures for the fixed-satellite service in this band. Similarly, in the case of ADD 3787F in the band 12.3 - 12.7 GHz, broadcasting-satellite channels in the Region 2 Plan can be used for fixed-satellite service only if they do not cause more interference or require more interference protection than the 1983 Plan. Any inter-regional problems are therefore adequately covered by the Article 4 procedures for modifying the Region 2 Plan.

4. Coordination procedures within the terrestrial services, between the terrestrial services and the fixed-satellite service, and within the fixed-satellite service are already adequately covered by N11 and N12.

5. The Appendix lists the specific considerations for the extension of the provisions of the Final Acts of the 1977 WARC-BS needed to cover the inter-regional interface conditions described above.

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1) Prior to the entry into force of the Region 2 Plan, the procedures of Resolution Spa2 - 3 or Resolution Sat-5, or N11 and N13, as appropriate, are applicable.

Appendix

Considerations for the extension of the  
provisions of the Final Acts of the  
1977 WARC-Satellite Broadcasting

Article 4

4.3.1.4

Change "11.7 - 12.2 GHz" to "11.7 - 12.3 GHz"

Article 6

Title

Change the phrase "in the Bands 11.7 - 12.2 GHz (in Regions 2 and 3)" to "in the Bands 12.1 - 12.7 GHz (in Region 2) and 11.7 - 12.2 GHz (in Region 3)".

Article 7

Title

Change the band limits from "11.7 - 12.2 GHz (in Region 2)" to "11.7 - 12.3 GHz (in Region 2) and 12.5 - 12.7 GHz (in Region 1)<sup>2</sup>".

Add Note 2

<sup>2</sup>The provisions of this Article are not applicable to Region 1 transmitting space stations until the entry into force of the Region 2 Plan for the broadcasting-satellite service. Protection to Region 1 receiving space stations in the fixed-satellite service will be afforded from modifications to the Region 2 Plan after its entry into force by means of the procedures of N11 and N13 applied to the frequency assignments contained in the Region 2 Plan and modifications to be taken into account for coordination with effect from the date of receipt by the Board in accordance with the procedure for modifying the Region 2 Plan.

Article 9

Title

Change the band limits "11.7 and 12.2 GHz" to "12.1 and 12.7 GHz".

Annex 1

Paragraph 2

Change the band limits from "11.7 - 12.2 GHz" to "12.1 - 12.5 GHz"

Paragraph 4

Change the band limits from "11.7 - 12.2 GHz" to "11.7 - 12.3 GHz"

Annex 3

Title

Change the phrase "in the Band 11.7 - 12.2 GHz (in Regions 2 and 3)" to "in the Band 12.1 - 12.7 GHz (in Region 2) and 11.7 - 12.2 GHz (in Region 3)".

1.1

Change the phrase "11.7 - 12.2 GHz (12.5 GHz in Region 1)" to "11.7 - 12.2 GHz (Region 3), 11.7 - 12.5 GHz (Region 1) and 12.1 - 12.7 GHz (Region 2)".

Annex 5

Title

Change the band limits from "11.7 - 12.2 GHz" to "12.1 - 12.7 GHz".

A N N E X 5

GHz  
14.5 - 15.35

Region 1	Region 2	Region 3
14.5 - 15.35	FIXED	
	MOBILE	
	[ Space research ]	
	[ 3796/408B ] [ 3680D ]	

MOD 3796/408B

[ The band 14.4 - 15.35 GHz may also be used, on a secondary basis, for space-to-Earth transmissions in the space research service, subject to agreement between the Administrations concerned and those having services, operating in accordance with the Table, which may be affected. ]

SUP 3797/408C

ADD 3680D

[ The bands 1 370 - 1 400 MHz, 2 640 - 2 655 MHz, 4 950 - 4 990 MHz, and 15.2 - 15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis. ]



A N N E X 6

GHz  
15.7 - 17.7

Region 1	Region 2	Region 3
15.7 - 16.6	RADIOLOCATION 3794F	
16.6 - 17.1	RADIOLOCATION Space research (Deep space) (Earth-to-space) 3794F	
17.1 - 17.2	RADIOLOCATION 3794F	
17.2 - 17.3	RADIOLOCATION Space research (active) Earth exploration-satellite (active) 3794F	
17.3 - 17.7	[ Radiolocation ] 3794G	

SUP 3792/407

SUP 3794/408 (Only in the band 15.7 - 17.7 GHz)

ADD 3794F Additional allocation : in Algeria, Saudi Arabia, Costa Rica, Finland, Guatemala, India, Indonesia, Iran, Nepal, Pakistan, Sweden, Thailand, and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

ADD 3794G Additional allocation : in Algeria, Saudi Arabia, Costa Rica, Finland, Guatemala, India, Indonesia, Iran, Nepal, Pakistan, Sweden, Thailand, and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis.

A N N E X 7

RESOLUTION No. 7AB

Relating to Broadcasting-Satellite Service (Sound) in the  
Frequency Range 0.5 GHz to 2 GHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that several Administrations have made proposals concerning frequency allocations for broadcasting-satellite service (sound) in the range 0.5 GHz - 2 GHz;
- b) that the frequency bands presently allocated to broadcasting-satellite service do not provide the possibility of individual reception of sound programmes by portable receivers and receivers installed in automobiles;
- c) that the introduction of broadcasting-satellite service (sound) in the range 0.5 GHz - 2 GHz is technically feasible and will afford the possibility of individual reception with portable and automobile receivers;
- d) that simulated experiments have confirmed certain postulations made in theoretical studies, however, no working system has yet been demonstrated;
- e) that further studies are necessary before the implementation of operational systems;
- f) that CCIR has initiated studies concerning this service in accordance with Study Programme 34B/10;
- g) that the appropriate frequency range for the service is limited at the lower end to 0.5 GHz (because of increasing manmade noise and transmit antenna size with decreasing frequency) and at the upper end to 2 GHz (because of decreasing effective area of the receive antenna with increasing frequency);
- h) that because of the high PFD requirement, sharing with terrestrial services seems extremely difficult;

noting

- a) that there are proposals by Administrations for the frequency range 1 429 - 1 525 MHz;
- b) that the radio astronomy service has an allocation in the lower adjacent band and that for that reason the lower part of the band 1 429 - 1 525 MHz may not be considered for an allocation to broadcasting-satellite service (sound);
- c) that in the experimental phase a bandwidth of a few hundred kHz would suffice;

resolves

1. that Administrations should be encouraged to carry out experiments with broadcasting-satellite service (sound) within the band 0.5 - 2 GHz, in appropriately placed narrow segments, subject to agreement of Administrations concerned. One area where such a segment may be placed is the band 1 429 - 1 525 MHz;
2. that CCIR should continue and expedite studies relating to the technical characteristics of a satellite sound broadcasting system for individual reception by portable and automobile receivers, the feasibility of sharing with terrestrial services, and the appropriate sharing criteria;
3. that the next World Administrative Radio Conference dealing with space radiocommunication services in general or with any specific space radiocommunication service should be authorized to consider the results of various studies and to take appropriate decisions regarding the allocation of a suitable frequency band.
4. that the afore-mentioned Conference should also develop appropriate procedures for protection, and if necessary re-accommodation in other bands, of assignments of terrestrial services which may be affected.

1.

A N N E X 8

RESOLUTION No. /AC/

Relating to Frequency Provisions for Development and  
Future Implementation of Ship Movement Telemetry,  
Telecommand and Data Exchange Systems

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the need to specify radio frequencies that may be used by the maritime mobile service on a worldwide basis for ship movement requirements using digital automated data exchange, telemetry and telecommand techniques;
- b) the developments now in progress in different portions of the spectrum which will require common frequency bands in the future for efficient frequency utilization;
- c) the importance of these short range systems in the safe and efficient operations of ships;
- d) the advantages to port authorities for safe and efficient port management and operations;

noting

- a) the findings of the Special Preparatory Meeting of the CCIR that frequencies in the general area of 10 GHz appeared satisfactory for short range automated systems of this nature;
- b) that further operational and technical information is needed in deciding the most effective frequency utilization and sharing criteria;

resolves

- a) that the next competent World Administrative Radio Conference should review possible frequency provisions in the light of additional studies;
- b) that the CCIR should examine and advise on bandwidths and data formats in coordination with Administrations developing and testing these digital transmission systems;

requests the Secretary-General

to refer this Resolution to the Intergovernmental Maritime Consultative Organization (IMCO) inviting it to define the operational requirement for data exchange with ships using digital transmission techniques, and to make appropriate recommendations to assist Administrations in preparation for a future conference.

2.

RESOLUTION No. /AD/

Relating to the Use for the Radionavigation Service of the Bands  
2 900 - 3 100 MHz, 5 470 - 5 650 MHz,  
9 200 - 9 300 MHz, 9 300 - 9 500 MHz, and 9 500 - 9 800 MHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the need to specify appropriate radio frequencies for adding transponders in a complementary role in the radionavigation bands 2 900 - 3 100, 5 470 - 5 650, and 9 300 - 9 500 MHz or adjacent thereto;
- b) the growing demands already being made on the frequency allocations for the radionavigation service in the bands utilized for aeronautical and maritime radionavigation arising from :

- i) the increasing number of shipborne radars which is reinforced by the demands for compulsory carriage on an international basis;
  - ii) the increasing need for navigational aids and transponders working with primary radars;
  - iii) the need for the increasing utilization of this band by stations in the aeronautical radionavigation service noting that compulsory carriage is also demanded on an international basis;
- c) the increase in harmful interference occurring in the 9 300 - 9 500 MHz band due to these factors;
- d) that these radar applications have important safety considerations;

noting

- a) the Recommendations in Rec-12 and Mar2 - 4;
- b) the conclusions of the Special Preparatory Meeting of the CCIR;
- c) the need for additional operational and technical information in deciding the most effective frequency utilization;

resolves

1. that the next competent World Administrative Radio Conference should :
  - i) review footnotes to these radionavigation bands and make such changes as deemed appropriate in the light of additional studies;
  - ii) prepare regulatory recommendations as appropriate;
2. that the CCIR should continue to consider the technical factors and make Recommendations;

invites

1. the Administrative Council to ensure that radionavigation matters of concern to the mobile services are included in the agenda of the next competent mobile conference;
2. Administrations to study the use of these bands by the radionavigation services, and to submit proposals for their efficient utilization;

requests the Secretary General to refer this Resolution to the IMCO and ICAO inviting their urgent consideration of the operational requirements for the maritime and aeronautical radionavigation services using these frequency bands, and to make appropriate recommendations to assist Administrations in their preparation for the conference.

3.

RESOLUTION No. 7 AE 7

Relating to the Transmission of  
Electric Power from a Spacecraft Using Radio Frequencies

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that it may now be technically feasible to convert some portions of the sun's radiation into electric power on board a spacecraft and to transmit that power to earth by means of radio transmissions and that such power could augment the world's energy resources;
- b) that the possibility of such high power radiation may adversely affect the propagation of radio waves for other services through the ionosphere;

recognizing

- a) that it would be necessary to ensure that the radio transmission of electric power from space did not give rise to harmful interference to radiocommunication services;
- b) that an assessment needs to be made of any likely ecological and biological effects of radio transmissions of power from space, including in particular to aircraft passing through such beams;

noting

that the SPM report to the World Administrative Radio Conference, Geneva, 1979, recognized the technical feasibility of a solar power satellite and considered 2 450 MHz as an appropriate frequency for experimentation leading towards the development of radio transmission of power from space;

noting also

the provisions of Article 3 of the Radio Regulations referring to the obligations on Administrations not to cause harmful interference to radiocommunication services operating in accordance with the Regulations;

requests

the CCIR to undertake appropriate studies on all aspects of the effects of such radio transmissions of power from space on radiocommunication services and to recommend as appropriate the technical parameters for such transmission of power by radio and to report the results of its studies to the Administrative Council;

invites .

the Administrative Council : 1) to review the CCIR Reports and Recommendations referred to in requests, and 2) in light of this and other relevant information concerning the state of the technology, including pertinent information on ecological and biological implications to place on the agenda of a suitable World Administrative Radio Conference an item which will enable that Conference to decide upon all the necessary provisions for the radio transmission of power from space.



4.

RESOLUTION No. Sat - 8

Covered by new Resolution AA(in Annex 3)

**[Relating to the preparation for an administrative  
radio conference for the  
detailed planning of the space services in the frequency  
band 11.7-12.2 GHz in Region 2**

The World Broadcasting-Satellite Administrative Radio Conference,  
Geneva, 1977.

*considering*

- a) that a regional administrative radio conference is to be held not later than 1982 for the detailed planning of the space services in the frequency band 11.7-12.2 GHz in Region 2;
- b) that the technical criteria and procedures adopted at this Conference, the 1979 World Administrative Radio Conference and the latest CCIR Recommendations will be used in the interim period;
- c) that a considerable amount of technical information will be required to ensure the success of this regional conference;

*invites the CCIR*

to carry out such additional studies as are necessary to ensure timely provision of the technical information likely to be required as a basis for the work of the regional conference.]

5.

RECOMMENDATION No. Sat - 8

Covered by new Resolution AA(in Annex 3)

**Relating to the convening of a regional administrative radio conference for the detailed planning of the space services in the frequency band 11.7-12.2 GHz in Region 2**

The World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977,

*noting*

- a) that the detailed requirements of all administrations in Region 2 for the broadcasting-satellite service in the frequency band 11.7-12.2 GHz are not yet known;
- b) that, in view of the large demands expected for the other services with which this band is shared, there is a need to ensure that this frequency band and the geostationary orbit are used as efficiently as possible;
- c) that a future regional administrative radio conference for the detailed planning of space services in the frequency band 11.7-12.2 GHz would be able to take advantage of experiments now being carried out, of further technological advances, and of additional studies by the CCIR;

*considering*

the provisions adopted by this Conference to govern the implementation of space services in the frequency band 11.7-12.2 GHz pending the establishment of a detailed plan for Region 2;

*recommends*

- 1. that a regional administrative radio conference be held not later than 1982 for the purpose of carrying out detailed planning for the broadcasting-satellite and fixed-satellite services in Region 2, in accordance with 2., 3., 4., 5. and 6. below;
- 2. that the said regional administrative radio conference draw up a detailed plan for the orbit/spectrum resource available for the broadcasting-satellite services in the 11.7-12.2 GHz band. The plan shall provide for the detailed assignment of the orbital positions and frequency channels available, ensuring that the broadcasting-satellite service requirements submitted by the various administrations are met in an equitable manner satisfactory to all the countries concerned. It should be laid down as a matter of principle that each administration in the Region should be guaranteed a minimum number of channels (4) for the operation of the broadcasting-satellite service. Above this minimum, the special characteristics of the countries (size, time zones, language differences, etc.) shall be taken into account;

3. that planning be based on individual reception, but each administration may use the reception system which best meets its requirements, namely, individual or community reception, or both. Account shall also be taken of the decisions of the 1977 and 1979 World Administrative Radio Conferences and of the latest CCIR Recommendations in the case of parameters covered by its studies and research;
4. that, when planning the broadcasting-satellite service, it be borne in mind that systems should be designed with a view to reducing to a minimum technical differences and incompatibilities with the systems of other Regions;
5. that the conference also take into account the need to make equitable provision for the requirements of the fixed-satellite service to which this frequency band is also allocated in Region 2;
6. that in drafting the above-mentioned detailed plan, account also be taken of the terrestrial radio services sharing the same band;

*invites the Administrative Council*

to make preparations for convening the said regional administrative radio conference using the provisions of this Recommendation as a basis for the agenda and the terms of reference of the conference.

**RECOMMENDATION No. 12**

6.

**Relating to the Use of the Band 9 300-9 500 MHz**

**The Administrative Radio Conference, Geneva, 1959,**

*noting*

- a)* that there are in existence two main classes of airborne weather radar, using the bands 5 350-5 460 MHz and 9 300-9 500 MHz respectively ;
- b)* that there is in existence a very considerable number of shipborne radars, the majority in the band 9 300-9 500 MHz ;
- c)* that there are also ground-based radars of the maritime and aeronautical radionavigation services and of the meteorological service in the band 9 300-9 500 MHz ;
- d)* that in the band 5 350-5 460 MHz airborne radars have the exclusive use of the sole primary allocation which is to the aeronautical radionavigation service ;
- e)* that in the bands 2 900-3 100 MHz and 5 470-5 650 MHz shipborne radars have the use of the sole primary allocation to the radionavigation service and the maritime radionavigation service respectively, which they share only with land-based radars ;
- f)* that it has proved necessary to allocate the band 9 300-9 500 MHz on an equality basis to both the aeronautical and the maritime radionavigation services ;
- g)* that in the band 9 300 to 9 320 MHz for the maritime radionavigation service, the use of shipborne radars is no longer permitted with a view to facilitating development of fixed-frequency radar beacons in this band ;
- h)* that in the band 9 320 to 9 500 MHz for the maritime radionavigation service, the use of fixed-frequency radar beacons on land or at sea is not permitted.

*considering*

- a) that it is of the utmost importance to ensure that harmful interference is not caused to radionavigation services providing a safety of life function ;
- b) that the operating conditions of a safety of life service should be uniform throughout the world ;
- c) that an uncoordinated increase in the use of the band 9 300-9 500 MHz can only lead to an increase in the probability of harmful interference between the aeronautical and maritime radionavigation services ;

*recommends*

- 1. that administrations, the International Civil Aviation Organization and the Inter-Governmental Maritime Consultative Organization study this matter at the earliest opportunity ; and especially
- 2. that they determine whether, and to what extent, interference which is recognized to be technically possible between the two services becomes harmful in operational circumstances ;
- 3. that they investigate, in the event that it is established that there may be harmful interference between the two services, the possibility of reducing such interference by technical, operational and procedural means, including the principle that new equipments should always be of the highest technical standard ;

*invites*

administrations, the International Civil Aviation Organization and the Inter-Governmental Maritime Consultative Organization to communicate to the Union the results of their studies together with their views and proposals resulting therefrom.

7.

RECOMMENDATION No. Spa2 - 2

**Relating to the preferred Frequency  
Bands for Tropospheric Scatter Systems**

The World Administrative Radio Conference for Space Telecommunications (Geneva, 1971),

*considering*

the technical and operational difficulties pointed out by the C.C.I.R., particularly in the Report of the Special Joint Meeting (Geneva, 1971) in bands shared by tropospheric scatter systems and space systems;

*recognizing, however,*

that administrations will wish to continue to use tropospheric scatter systems in order to satisfy certain telecommunication requirements;

*noting*

that the proliferation of such systems in all frequency bands, particularly those shared with space systems, will only serve to aggravate an already difficult situation;

*requests*

that the C.C.I.R. urgently study the radio-frequency requirements for tropospheric scatter systems and recommend the preferred radio frequencies for such systems;

*invites the Administrative Council*

to arrange that a future World Administrative Radio Conference consider which frequency bands of the fixed service shall be preferably used by new tropospheric scatter systems, taking into account the allocations to the space radiocommunication services.

8.

RECOMMENDATION No. Mar2 - 14

Relating to the Frequency Requirements for  
Shipborne Transponders<sup>1</sup>

The World Maritime Administrative Radio Conference, Geneva, 1974,

*considering*

- a) that merchant ships of the world are increasing in size and speed;
- b) that every year a significant number of collisions occur involving merchant vessels with resultant loss of life and property and that collisions have a high potential for endangering the natural environment;
- c) that there is a need to correlate radar targets with vessels making VHF radiotelephone transmissions;
- d) that studies and experiments have shown that shipborne transponders can enhance and supplement radar target images as compared with normal radar images;
- e) that current studies and experimentation relating to shipborne transponders indicate that development of equipment can be expected in the near future which will offer adequate radar image enhancement and target identification and, possibly, data transfer capabilities;
- f) that such shipborne transponders may require protection from interference;
- g) that the selection of the frequency bands and other parameters for these transponders should be coordinated with other users of the radio frequency spectrum whose operations might be affected;

*requests the C.C.I.R.*

to recommend, after consultation with appropriate international organizations, the most suitable order of frequencies and bandwidth required for this purpose, and the technical parameters to be met by such devices taking into account electromagnetic compatibility with other services having allocations in the same frequency band;

*invites*

administrations and the Inter-Governmental Maritime Consultative Organization to continue to evaluate the operational benefits which could result from the widespread use of transponders on ships and to consider whether there would be advantage in adopting an internationally approved system for future implementation;

*recommends*

that, pending further technical and operational developments and evaluation, administrations be prepared at the next competent World Administrative Radio Conference to make the necessary provisions for the use of such devices.

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<sup>1</sup> A receiver-transmitter which emits a signal automatically when it receives the proper interrogation.

RECOMMENDATION No. Sat - 1

9.

**Relating to up-links for the broadcasting-satellite service**

The World Broadcasting-Satellite Administrative Radio Conference,  
Geneva, 1977,

*considering*

- a) that, according to the definition given in No. 84AG of the Radio Regulations, the fixed-satellite service includes Earth-to-space links for the broadcasting-satellite service;
- b) that there is an imbalance between the width of the bands allocated to Earth-to-space links and those allocated to space-to-Earth links in the fixed-satellite and broadcasting-satellite services between 10 and 15 GHz;
- c) that, in consequence, the Earth-to-space capacity may be insufficient to meet future demands for space-to-Earth links for the broadcasting-satellite and fixed-satellite services;
- d) that, due to interference considerations, space stations in both services may be subject to severe up-link constraints;
- e) that Recommendation No. Sat - 5 invites the CCIR to continue the studies on up-links for the broadcasting-satellite service;

*invite administrations*

to estimate their future technical requirements for such links for the purpose of the studies mentioned in e) above, and to forward them to the appropriate CCIR Study Groups and to the Special Joint Meeting of CCIR Study Groups to be held in preparation for the 1979 World Administrative Radio Conference.



10.

RECOMMENDATION No. [AB]

Relating to the Use of the Band 1330-1400 MHz

by the Radio Astronomy Service

The World Administrative Radio Conference, Geneva, 1979

considering that

- a) the observations of the radio emissions from neutral hydrogen atoms within the band 1330-1400 MHz are of prime importance in the understanding of the structure of distant galaxies, and subsequently of the evolution of the universe;
- b) recognition has been given to the radio astronomy service in the band 1330-1400 MHz within the Table of Frequency Allocations;
- c) the radio astronomy service is devoted to the reception of extremely low-level electromagnetic radiations of extra-terrestrial origin, and needs therefore to be protected from radiations of man-made origin, to the maximum degree practicable;
- d) the ability of the radio astronomy service to share frequency bands with other radio services is limited;

recommends that

- 1. administrations, when preparing for the next competent Administrative Radio Conference, should consider the question of making provisions in the 1330-1400 MHz band that will provide the radio astronomy service increased protection from services that radiate;
- 2. administrations when drawing up frequency assignment plans should bear in mind radio astronomy observations being carried out in the band 1330-1400 MHz.

11.

RECOMMENDATION No. [BB]

Relating to Use of the Bands 1 400 - 1 727 MHz,  
101 - 120 and 197 - 220 GHz for Search for Extraterrestrial  
Intelligence

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that it is of special importance to mankind to determine the existence of extraterrestrial civilizations;
- b) that the probability to detect a radiation of extraterrestrial civilization is at maximum in the bands 1 400 - 1 727 MHz, 101 - 120 GHz and 197 - 220 GHz because these bands contain the spectral lines of basic physical interest and are related to the universal phenomena;
- c) that in the bands, mentioned in considering b), there is a probability to detect radiation of extraterrestrial civilizations with a maximum signal-to-noise ratio;
- d) that recognition has been given to the search for extraterrestrial civilizations in the bands 1 400 - 1 727 MHz, 101 - 120 GHz and 197 - 220 GHz within the Table of Frequency Allocations;
- e) that the attempt to recognize signals from extraterrestrial civilizations requires the reception of extremely low-level radiations and such reception needs therefore to be protected from radiations of man-made origin, to the maximum degree practicable;
- f) that the ability of reception of radiations of extraterrestrial civilization to share frequency bands with active radio services is limited;

recommends

that Administrations when preparing for the next competent Administrative Radio Conference, should consider the desirability of making provisions so as to provide a controlled environment suitable for reception of extraterrestrial radiations in the 1 400 - 1 727 MHz, 101 - 120 and 197 - 220 GHz bands;

invites

organizations concerned with the search for extraterrestrial civilizations to take into account the following :

- 1. the relevant provisions of the Radio Regulations;
- 2. the need to maintain close coordination with their national Administrations on matters of frequency usage;
- 3. the need to select, for observations, the location of receiving facilities that are as remote as possible from sources of radio interference;
- 4. the appropriate Reports and Recommendations of the CCIR.

12. Proposal for the Allocation of Bands to ESS Up-links

Present position

No frequency is at present allocated to ESS up-links in the Table of Frequency Allocations.

Proposal

1. In the Table of Frequency Allocations, a bandwidth of 1 200 MHz at a frequency close to 14 GHz should be allocated to up-links in the broadcasting-satellite service.

2. Use of the band allocated should be in conformity with an internationally approved plan of allocations for all Regions. For the preparation of this plan, an administrative conference should be convened as soon as possible after the end of WARC-79.

Reasons : 1) With regard to the bandwidth at present allocated to the satellite service, the bandwidth for the up-link is consistently much smaller than that for the down-link. It may therefore be expected that the bands for the up-links will be completely saturated long before the Allocation Plan prepared at the WARC-BS-12 GHz (Geneva, 1977) has become fully operative.

2) If the Plan prepared at the WARC-BS-12 GHz (Geneva, 1977) is to be carried out, adequate allocations also for up-links are essential.

3) The bandwidth required for up-links is greater than that for down-links, particularly because :

a) it would be impractical to place the earth station in the transmission centre;

b) in most cases more than one earth station will be required for each programme service;

c) in practice, many countries will wish to use mobile earth stations for the up-link.

4) The CCIR Special Preparatory Meeting (SPM) (Geneva, 1978) found that a bandwidth 1 to 1½ times that of the down-link is required for the up-link (Doc. XP/1107-E).

5) Complex arrangements to reduce requirements to less than 1½ times the allocation for the down-link are regarded as impracticable.

6) For practical reasons, the band for the up-link must also be adequately separated from that of the down-link. It is further essential that the band should not be in too high a frequency range, because attenuation, particularly in the Tropical Zone, would be too great.

7) In view of the foregoing, it is estimated that the most suitable band would be around 14 GHz.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 731-E  
17 November 1979  
Original : English

## COMMITTEE 5

### TWENTY-NINTH AND FINAL REPORT OF WORKING GROUP 5D TO COMMITTEE 5

#### (ALLOCATIONS)

Subject : Frequency bands 4 200 - 4 990 MHz, 11.7 - 12.75 GHz, 14.5 - 15.35 GHz, 15.7 - 17.7 GHz, allocations to the fixed-satellite service for feeder links of the maritime mobile satellite service, draft Resolutions and Recommendations.

1. Frequency bands between 4 200 and 4 990 MHz

All proposals relating to these bands were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 1.

2. The delegation of the Federal Republic of Germany reserved the right to come back in Committee 5 to footnote 3748/383 depending on the decision on feeder links of the maritime mobile-satellite service.

3. Frequency band between 11.7 and 12.75 GHz

All proposals relating to these bands were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 2 and the draft Resolution Relating to the Convening of a Regional Administrative Radio Conference for the Detailed Planning of the Broadcasting-Satellite Service in the 12 GHz Band and Associated Up-links in Region 2 as given in Annex 3.

4. On this Resolution, the delegations of Colombia and Ecuador maintain the reservation expressed in the Final Protocol of the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

5. The Working Group decided to forward without discussions the attached note as given in Annex 4 outlining the areas of interregional problems and considerations for the extensions of provisions of Final Acts of WARC-BS 1977 Conference. The delegation of Australia will prepare in consultation with the delegation of USSR appropriate draft Resolutions pertaining to Region 3 allocations for FSS and BCS in the band 12.2 - 12.5 GHz for consideration by Committee 5.

6. The delegations of the Federal Republic of Germany, France, the United Kingdom and the USSR reserved the right to come back in Committee 5 to footnotes 3787/405BC, 3787A, 3787F and to subject contained in Annexes 3 and 4.

7. The delegations of the United Kingdom and the USSR reserved the right to come back to provision 3788/405BD in Committee 5.

8. The delegation of the USSR opposed to allocate the band 12.2 - 12.5 GHz to broadcasting-satellite and fixed-satellite services in Region 3, because it is in contradiction with the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, and reserved the right to come back to this allocation in Committee 5. The delegations of Benin, France and the United Kingdom expressed their view to come back in Committee 5 to the same allocation.



9. Frequency band between 14.5 and 15.35 GHz

All proposals relating to this band were considered, and the Working Group decided unanimously to recommend the adoption of the revised Table and the revised provisions as given in Annex 5.

10. The discussions and the results thereof on allocations to the fixed-satellite service for the feeder link of the broadcasting-satellite service in the bands 10.7 - 11.7 GHz; 14.5 - 15.35 GHz, and 17.3 - 18.1 GHz are contained in the twenty-sixth report of Working Group 5D to Committee 5.

11. The allocation to the space research service as well as the footnote provisions in the band 14.5 - 15.35 GHz depend on the allocation to the fixed-satellite service for the feeder link.

12. Frequency bands between 15.7 and 17.7 GHz

All proposals relating to these bands were considered, and the Working Group decided by majority to recommend the adoption of the revised Table and the revised provisions as given in Annex 6.

13. Feeder links for the maritime mobile-satellite service

The Working Group discussed the proposals relating to allocations to the fixed-satellite service for feeder links of the maritime mobile-satellite service and decided by majority to recommend the adoption of the provision as given below :

"In the band  $[x, y]$  MHz allocated to the fixed-satellite service, Administrations are urged to give preference to feeder links for the satellites of the maritime mobile service over other links of the fixed-satellite service".

Show of cards of delegations was taken to indicate a choice for frequency bands  $[x, y]$ . The choice so indicated is as follows :

(Earth-to-space) 6 405 - 6 425 MHz	} 16 delegations
(space-to-Earth) 4 175 - 4 200 MHz	

(Earth-to-space) 5 850 - 5 870 MHz	} 18 delegations
(space-to-Earth) 3 400 - 3 425 MHz	

14. The delegations of Bulgaria, the German Democratic Republic and the USSR reserved the right to come back to the allocations to feeder links of the maritime mobile-satellite service in Committee 5.

15. The Working Group decided by majority to recommend the adoption of the draft Resolution as given in Annex 7.

16. The delegation of the Federal Republic of Germany reserved the right to come back to the Resolution in Annex 7 in Committee 5.

17. The Working Group decided unanimously to recommend the adoption of draft Resolutions and Recommendations as given in Annex 8.

Dr. B.S. RAO  
Chairman of Working Group 5D

Annexes : 8



A N N E X 1

MHz  
4 200 - 4 990

Allocation to Services		
Region 1	Region 2	Region 3
4 200 - 4 400	AERONAUTICAL RADIONAVIGATION 3743/379A 3743A 3744/381 3748/383	
4 400 - 4 500	FIXED MOBILE	
4 500 - 4 700	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 3748B	
4 700 - 4 800	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 3748B	
4 800 - 4 990	FIXED MOBILE Radio Astronomy 3746A 3746B 3680D	

- ADD 3743A Use of the band 4 200 - 4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the Earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).
- MOD 3744/381 Additional allocation : in China and the Philippines, the band 4 200 - 4 400 MHz is also allocated to the fixed service on a secondary basis.
- SUP 3686/352A (in the band 4 200 - 4 400 MHz)

- MOD 3743/379A                      The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of  $\pm 2$  MHz of these frequencies and shall be subject to agreement obtained under the procedure set forth in Article N13A.
- SUP 3745/382
- MOD 3748/383                      Additional allocation : in the Federal Republic of Germany, Denmark, Norway and Sweden, the band 4 200 - 4 210 MHz is also allocated to the fixed service on a secondary basis.
- ADD 3748B                          Alternative allocation : in the Federal Republic of Germany, Denmark, Spain, Greece, Italy, Norway, Netherlands and the United Kingdom, the band 4 500 - 4 800 MHz is allocated to fixed and mobile services on a primary basis. Such use shall not impose power flux-density limitations on fixed-satellite service greater than those given in provision No. 6064/470NM.
- SUP 3531/233B                      (in the band 4 700 - 4 990 MHz)
- SUP 3697/354
- ADD 3680D                          The bands 1 370 - 1 400 MHz, 2 640 - 2 655 MHz, 4 950 - 4 990 MHz, 6 725 - 7 250 MHz and 15.2 - 15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis.
- ADD 3746A                          In the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz the allocation to the mobile service is restricted to mobile except aeronautical mobile service.
- ADD 3746B                          In Argentina, Australia and Canada, the allocation of the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz to the radio astronomy service is on a primary basis. In making assignments to stations of other services to which the bands are allocated, Administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).

A N N E X 2

GHz  
11.7 - 12.75

Region 1	Region 2	Region 3
11.7 - 12.5  FIXED  BROADCASTING  BROADCASTING-SATELLITE  Mobile except aeronautical mobile  3785/405BA	11.7 - 12.1  FIXED  FIXED-SATELLITE (space-to-Earth)  Mobile except aeronautical mobile  3787/405BC [ 3787A ]	11.7 - 12.2  FIXED  MOBILE except aeronautical mobile  BROADCASTING  BROADCASTING-SATELLITE  3785/405BA
	12.1 - 12.3  FIXED-SATELLITE (space-to-Earth)  BROADCASTING-SATELLITE  MOBILE except aeronautical mobile  FIXED  BROADCASTING  3787/405BC 3787B 3787C 3787D 3787E	12.2 - 12.5  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile  BROADCASTING  BROADCASTING-SATELLITE
	12.3 - 12.7  FIXED	
12.5 - 12.75  FIXED-SATELLITE (space-to-Earth) (Earth-to-space)        3788/405BD 3789/405BE	MOBILE except aeronautical mobile  BROADCASTING-SATELLITE  BROADCASTING  3787/405BC 3787D 3787E 3787F	12.5 - 12.75  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile
	12.7 - 12.75  FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE except aeronautical mobile	



- MOD 3785/405BA In the band 11.7 - 12.2 GHz in Region 3 and in the band 11.7 - 12.5 GHz in Region 1, existing and future fixed, fixed-satellite, mobile and broadcasting services shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the decisions of the appropriate broadcasting frequency assignment planning conference (see Resolution No. Spa2 - 2) and this requirement shall be taken into account in the decisions of that conference.
- SUP 3786/405BB
- MOD 3787/405BC The use of the band 11.7 - 12.7 GHz in Region 2 by the broadcasting-satellite and fixed-satellite services is limited to domestic and sub-regional systems and is subject to previous agreement between the Administrations concerned and those having services, operating or planned in accordance with the Table, which may be affected (see Articles N11, N13, N13A and Resolution No. Spa2 - 3).
- ADD 3787A In Region 2, in the band 11.7 - 12.1 GHz, transponders on space stations in the fixed-satellite service may be used additionally for transmissions in the broadcasting-satellite service, provided that such transmissions do not have a maximum e.i.r.p. greater than 53 dBW per television channel and do not cause greater interference or require more protection than the coordinated fixed-satellite service frequency assignments. With respect to the space services this band shall be used principally for the fixed-satellite service. The upper limit of this band shall be in accordance with the decisions of the 1983 RARC (see footnote 3787B).
- ADD 3787B The 1983 RARC will divide the band 12.1 - 12.3 GHz in two sub-bands and will allocate the lower sub-band to the fixed-satellite service and the upper sub-band to the broadcasting-satellite, broadcasting, mobile (except aeronautical mobile) and fixed services, all services on a primary basis.
- ADD 3787C Additional allocation : in Brazil, Peru and the United States of America, the band 12.1 - 12.3 GHz is also allocated to the fixed service on a primary basis.
- ADD 3787D In the band 12.1 - 12.7 GHz existing and future terrestrial radiocommunication services shall not cause harmful interference to the space services operating in accordance with the broadcasting-satellite Plan to be prepared at the 1983 RARC, and shall not impose restrictions on the elaboration of such a Plan. The lower limit of this band shall be in accordance with the decisions of the 1983 RARC (see footnote 3787B).
- ADD 3787E In the band 12.1 - 12.7 GHz, the Region 2 space services existing or planned before the 1983 RARC shall not impose restrictions on the elaboration of the Plan for the broadcasting-satellite service in Region 2 and shall be operated under the conditions set forth by such conference.
- ADD 3787F In Region 2, in the band 12.3 - 12.7 GHz, BSS channels made available in the 1983 Planning Conference may also be used for transmissions in the fixed-satellite service provided that such transmissions do not cause more interference or require more interference protection than the broadcasting-satellite service transmissions operating in accordance with the 1983 Plan. With respect to the space services, this band shall be used principally for the broadcasting-satellite service. The lower limit of this band shall be in accordance with the decisions of the 1983 RARC (see footnote 3787B).

MOD 3788/405BD

Additional allocation : in Algeria, Austria, Bulgaria, Cameroon, Congo, the Ivory Coast, Egypt, United Arab Emirates, Gabon, Ghana, Guinea, Hungary, Iraq, Israel, Jordan, Kuwait, Libya, Mali, Niger, Poland, Syria, Qatar, the German Democratic Republic, Roumania, Senegal, Sudan, Czechoslovakia, Togo and the USSR, the band 12.5 - 12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. / However, the band is allocated to these services only on a secondary basis in relation to the fixed-satellite service operating in countries in Region 1 other than those mentioned in this footnote. \_/

MOD 3789/405BE

Additional allocation : in Belgium, Denmark, Spain, Ethiopia, Finland, France, Greece, Kenya, Liechtenstein, Luxembourg, Monaco, Norway, Uganda, the Netherlands, Portugal, the Federal Republic of Germany, Sweden, Switzerland, Tanzania and Tunisia, the band 12.5 - 12.75 GHz is also allocated to the fixed service and mobile, except aeronautical mobile, service on a secondary basis.

A N N E X 3

RESOLUTION No. [AA]

Relating to the Convening of a Regional Administrative  
Radio Conference for the Detailed Planning of the  
Broadcasting-Satellite Service in the 12 GHz Band  
and Associated Up-links in Region 2

The World Administrative Radio Conference, Geneva, 1979,

noting

- a) that the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, adopted a Plan for the allocation of frequencies and orbits for the broadcasting-satellite service in the 12 GHz band for Regions 1 and 3;
- b) that the 1977 Conference adopted interim provisions pending the establishment of a similar plan for Region 2;
- c) that the Administrative Council [at its ... session, in Resolution ...] subsequently decided that the RARC-BS will be convened in 1983;
- d) that the present Conference has adopted changes to the Table of Frequency Allocations that greatly affect the conditions on which the planning of the broadcasting-satellite service in the 12 GHz band by Region 2 will be based;

considering

- a) that Annexes 8 and 9 of the Final Acts of the World Administrative Radio Conference, 1977 contain technical data and sharing criteria used in establishing the provisions and associated Plan;
- b) that advantage should be taken of technological advances resulting from experiments carried out on broadcasting satellites since 1977;
- c) that advantage should also be taken of recent studies by the CCIR;
- d) that with respect to space services the World Administrative Radio Conference, Geneva, 1979 has allocated the band 12.3 - 12.7 GHz to the broadcasting-satellite service, and the band 12.1 - 12.3 GHz to the fixed-satellite service and broadcasting-satellite service in accordance with the terms of footnote 3787B of the Radio Regulations;
- e) that the said Conference, has designated the band [ ] GHz for use as up-link frequencies to broadcasting satellites;
- f) that there are significant advantages to planning the up-links together with the down-links of 12 GHz broadcasting-satellite systems;

recognizing

- a) that arc segmentation is no longer required in the band 11.7 - 12.1 GHz and will not be required in the band 12.1 - 12.3 GHz following the 1983 Regional Administrative Radio Conference;
- b) that systems of the fixed-satellite service in the band 11.7 - 12.2 GHz shall not impose restrictions on the preparation of a Region 2 broadcasting-satellite Plan, but that such systems developed by the time of the 1983 Regional Administrative Radio Conference, if in accordance with the provisions of the Final Acts of the 1971 Space Conference and the 1977 World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service, should be taken into account in the decisions of the 1983 Regional Administrative Radio Conference;

resolves

- that a Regional Administrative Radio Conference (RARC) be held no later than 1983 to :
  - 1.1 divide the band 12.1 - 12.3 GHz in two sub-bands and to allocate the lower sub-band to the fixed-satellite service and the upper sub-band to the broadcasting-satellite, broadcasting, mobile (except aeronautical mobile), and fixed services, all services on a primary basis (see footnote 3787B of the Radio Regulations);
  - 1.2 draw up a detailed orbit and frequency plan for the broadcasting-satellite service for Region 2 in the bands 12.3 - 12.7 GHz and that portion of 12.1 - 12.3 GHz allocated by the 1983 Regional Administrative Radio Conference to the broadcasting-satellite service;
  - 1.3 plan up-links in a part of the band [     ] GHz, of a bandwidth equal to the total bandwidth allocated to the broadcasting-satellite service for the down-link in the 12 GHz band. However, Administrations may use broadcasting-satellite up-links in frequency bands other than those planned provided that such use does not necessitate any changes in the Plan;
  - 1.4 establish procedures to govern the use of the bands specified in paragraph 1.2 of this Resolution by the broadcasting-satellite service, and, as necessary, procedures for the corresponding up-links;
- 2. that planning shall take into account the pertinent parts of the Final Acts of the World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service, Geneva, 1977, in particular those contained in Annexes 4, 5, considering the changes made by the present Conference. In considering Annexes 6, 7, 8 account should be taken of the decision of the present Conference, the latest CCIR Recommendations and technological advances;
- 3. that the Plan shall provide for the detailed assignment of the orbital positions and frequency channels available, ensuring that the broadcasting-satellite service requirements submitted by the various Administrations are met in an equitable manner satisfactory to all the countries concerned. It should be laid down as a matter of principle that each Administration in the Region should be guaranteed a minimum number of channels (4) for the operation of the broadcasting-satellite service. Above this minimum, the special characteristics of the countries (size, time zones, language differences, etc.) shall be taken into account;

4. that all Administrations in Region 2 shall submit their broadcasting-satellite service requirements to the IFRB not later than one year before the start of the regional administrative radio conference responsible for planning this service in Region 2. Each Administration may update these requirements as it considers necessary. "Requirements" are understood to include the number and boundaries of service areas and the number of channels requested for each of them. Six months before the deadline for submitting requirements, the IFRB shall remind Administrations of the need to submit them by means of a circular letter and/or telegram;
5. that planning shall be based on individual reception, but each Administration may use the reception system which best meets its requirements (individual or community reception, or both);
6. that, in planning, it shall be borne in mind that systems should be designed with a view to reducing, to a minimum, technical differences and incompatibilities with the systems of other Regions;
7. [ that the Plan be consistent with the inter-regional considerations specified in the Final Acts of the World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service, Geneva, 1977; ]

invites the Administrative Council

to make preparations for convening the said Regional Administrative Radio Conference using the provisions of this Resolution as a basis for the agenda of the Conference;

invites the CCIR

to carry out the necessary studies with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Regional Conference;

invites the IFRB

1. to request all Administrations in Region 2 to submit their broadcasting-satellite service requirements in accordance with "resolves" 4 above;
2. to assemble the information submitted by Administrations in a form permitting a comparative study thereof and to communicate it to the Secretary-General for publication and despatch to Administrations not later than nine months prior to the said Regional Administrative Radio Conference.

A N N E X 4

INTER-REGIONAL SHARING CONSIDERATIONS FOR  
THE REGION 2 TABLE OF ALLOCATIONS IN  
THE BAND 11.7 - 12.7 GHz

1.1 All of the services appearing in the Region 2 Table of Allocations for the 11.7 - 12.7 GHz band in Document No. 584(Rev.1) are presently contained in the band 11.7 - 12.2 GHz, as adopted at the 1971 WARC-SP. The Region 2 services in the band 11.7 - 12.2 GHz were considered by the 1977 WARC-BS and inter-regional coordination procedures and sharing criteria are contained in the Final Acts of that Conference.

1.2 With the exception of the case described in paragraph 2.4 below, all of the potential types of interference paths that exist in the proposed Region 2 Table of Allocations for the band 11.7 - 12.7 GHz already are contained in the 11.7 - 12.2 GHz band as considered by the 1977 WARC-BS. Accordingly, inter-regional sharing problems can be resolved by appropriately adjusting the inter-regional coordination procedures and sharing criteria for the various Region 2 services contained in the Final Acts of the 1977 WARC-BS to apply to the band limits of the proposed Region 2 Table of Allocations for the band 11.7 - 12.2 GHz.

2.1 In the band 11.7 - 12.1 GHz, certain services (mobile except aeronautical mobile, broadcasting, and broadcasting-satellite) are deleted from the Region 2 Table of Allocations, and no new services are added to the Region 1 and 3 Tables. Accordingly, this band is already covered by the Final Acts of the 1977 WARC-BS, and presents fewer inter-regional interfaces than presently exist.

2.2 In the band 12.1 - 12.3 GHz, the only change in the Region 2 Table is to add the fixed-satellite and broadcasting-satellite services to the 12.2 - 12.3 GHz portion of the band, pending a final decision by the 1983 Region 2 Conference (see footnote ADD 3787B). This situation can be adequately covered by extending the fixed-satellite procedures of Article 7 and criteria of Annex 4, to the band 11.7 - 12.3 GHz, and applying the broadcasting-satellite procedures (Resolution Spa2 - 3 or Resolution Sat-5 pending the adoption of the Region 2 Plan; and Article 4 and Annex 4 after the adoption of the Region 2 Plan), to the band 12.1 - 12.3 GHz.

2.3 In the band 12.3 - 12.7 GHz, the broadcasting-satellite service is added to the Region 2 Table of Allocations. Pending the adoption of the Region 2 Plan, the provisions of Resolution Spa2 - 3 or Resolution Sat-5 would apply<sup>1)</sup> with respect to the broadcasting-satellite service in the other Regions. After the adoption of a Region 2 Plan, Article 4 and Annex 4 would apply with the appropriate changes of band limits of the Region 2 Plan. Similarly, the band limits of Article 6 and Annex 3, and the provisions of Article 9 and Annex 5 of the 1977 Final Acts can be modified to cover interference between the terrestrial services and the broadcasting-satellite service. Finally, the provisions of Article 7 and Annex 4 governing the coordination of Region 2 fixed-satellite downlinks can also be applied to cover the coordination of fixed-satellite downlinks of other Regions with the Region 2 broadcasting-satellite Plan.

- 1) Attention is also drawn to footnote 1 to Section 4.3.1.2 of the 1977 Final Acts which provides that "The Region 2 plan adopted at a future regional administrative radio conference shall not degrade the protection afforded to the frequency assignments in the Plan below the limits specified in these Final Acts".

2.4 The new interference path that arises from the change in the Region 2 Table of Allocations is that resulting from the bi-directional fixed-satellite allocation in Region 1 for the band 12.5 - 12.7 GHz. Specifically, the interference path is from the Region 2 broadcasting-satellite transmitter into the Region 1 fixed-satellite receiver in the band 12.5 - 12.7 GHz. The proposed revision of Appendix 29 (Document No. 629) covers the case of such bi-directional use, and is appropriate in this case to determine when coordination is required since the interfered-with space station is in the fixed-satellite service. Protection can therefore be afforded to Region 1 receiving space stations from modifications to the Region 2 Plan by applying the procedures of N11 and N13 for receiving space stations with respect to assignments contained in the Plan and previous modifications.<sup>1)</sup>

3. No special procedures are needed with respect to footnotes ADD 3787A and ADD 3787F in the Region 2 Table of Allocations. In the case of ADD 3787A in the band 11.7 - 12.1 GHz allocated in the Table to the fixed-satellite service, such transponders can be used for broadcasting-satellite service only if they do not cause greater interference or require more protection than the fixed-satellite frequency assignments. Any inter-regional problems are therefore adequately covered by the procedures for the fixed-satellite service in this band. Similarly, in the case of ADD 3787F in the band 12.3 - 12.7 GHz, broadcasting-satellite channels in the Region 2 Plan can be used for fixed-satellite service only if they do not cause more interference or require more interference protection than the 1983 Plan. Any inter-regional problems are therefore adequately covered by the Article 4 procedures for modifying the Region 2 Plan.

4. Coordination procedures within the terrestrial services, between the terrestrial services and the fixed-satellite service, and within the fixed-satellite service are already adequately covered by N11 and N12.

5. The Appendix lists the specific considerations for the extension of the provisions of the Final Acts of the 1977 WARC-BS needed to cover the inter-regional interface conditions described above.

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1) Prior to the entry into force of the Region 2 Plan, the procedures of Resolution Spa2 - 3 or Resolution Sat-5, or N11 and N13, as appropriate, are applicable.

Appendix

Considerations for the extension of the  
provisions of the Final Acts of the  
1977 WARC-Satellite Broadcasting

Article 4

4.3.1.4

Change "11.7 - 12.2 GHz" to "11.7 - 12.3 GHz"

Article 6

Title

Change the phrase "in the Bands 11.7 - 12.2 GHz (in Regions 2 and 3)" to "in the Bands 12.1 - 12.7 GHz (in Region 2) and 11.7 - 12.2 GHz (in Region 3)".

Article 7

Title

Change the band limits from "11.7 - 12.2 GHz (in Region 2)" to "11.7 - 12.3 GHz (in Region 2) and 12.5 - 12.7 GHz (in Region 1)<sup>2</sup>".

Add Note 2

<sup>2</sup>The provisions of this Article are not applicable to Region 1 transmitting space stations until the entry into force of the Region 2 Plan for the broadcasting-satellite service. Protection to Region 1 receiving space stations in the fixed-satellite service will be afforded from modifications to the Region 2 Plan after its entry into force by means of the procedures of N11 and N13 applied to the frequency assignments contained in the Region 2 Plan and modifications to be taken into account for coordination with effect from the date of receipt by the Board in accordance with the procedure for modifying the Region 2 Plan.

Article 9

Title

Change the band limits "11.7 and 12.2 GHz" to "12.1 and 12.7 GHz".

Annex 1

Paragraph 2

Change the band limits from "11.7 - 12.2 GHz" to "12.1 - 12.5 GHz"

Paragraph 4

Change the band limits from "11.7 - 12.2 GHz" to "11.7 - 12.3 GHz"



Annex 3

Title

Change the phrase "in the Band 11.7 - 12.2 GHz (in Regions 2 and 3)" to "in the Band 12.1 - 12.7 GHz (in Region 2) and 11.7 - 12.2 GHz (in Region 3)".

1.1

Change the phrase "11.7 - 12.2 GHz (12.5 GHz in Region 1)" to "11.7 - 12.2 GHz (Region 3), 11.7 - 12.5 GHz (Region 1) and 12.1 - 12.7 GHz (Region 2)".

Annex 5

Title

Change the band limits from "11.7 - 12.2 GHz" to "12.1 - 12.7 GHz".

A N N E X 5

GHz  
14.5 - 15.35

Region 1	Region 2	Region 3
14.5 - 15.35	FIXED	
	MOBILE	
	[ Space research ]	
	[ 3796/408B ] [ 3680D ]	

MOD 3796/408B

[ The band 14.4 - 15.35 GHz may also be used, on a secondary basis, for space-to-Earth transmissions in the space research service, subject to agreement between the Administrations concerned and those having services, operating in accordance with the Table, which may be affected. ]

SUP 3797/408C

ADD 3680D

[ The bands 1 370 - 1 400 MHz, 2 640 - 2 655 MHz, 4 950 - 4 990 MHz, and 15.2 - 15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis. ]

A N N E X . 6

GHz  
15.7 - 17.7

Region 1	Region 2	Region 3
15.7 - 16.6	RADIOLOCATION 3794F	
16.6 - 17.1	RADIOLOCATION Space research (Deep space) (Earth-to-space) 3794F	
17.1 - 17.2	RADIOLOCATION 3794F	
17.2 - 17.3	RADIOLOCATION Space research (active) Earth exploration-satellite (active) 3794F	
17.3 - 17.7	[ Radiolocation ] 3794G	

SUP 3792/407

SUP 3794/408 (Only in the band 15.7 - 17.7 GHz)

ADD 3794F Additional allocation : in Algeria, Saudi Arabia, Costa Rica, Finland, Guatemala, India, Indonesia, Iran, Nepal, Pakistan, Sweden, Thailand, and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

ADD 3794G Additional allocation : in Algeria, Saudi Arabia, Costa Rica, Finland, Guatemala, India, Indonesia, Iran, Nepal, Pakistan, Sweden, Thailand, and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis.

A N N E X 7

RESOLUTION No.

Relating to Broadcasting-Satellite (Sound) in the  
Frequency Range 0.5 GHz to 2.0 GHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that several Administrations have made proposals concerning frequency allocations for broadcasting-satellite service (sound) in the range 0.5 GHz - 2.0 GHz;
- b) that the frequency bands presently allocated to broadcasting-satellite service do not provide the possibility of individual reception of sound programmes by portable receivers and receivers installed in automobiles;
- c) that the introduction of broadcasting-satellite service (sound) in the range 0.5 GHz - 2.0 GHz is technically feasible and will afford the possibility of individual reception with portable and automobile receivers;
- d) that simulated experiments have confirmed certain postulations made in theoretical studies;
- e) that, however, no working system has yet been actually demonstrated;
- f) that further studies are necessary before the implementation of operational systems;
- g) that CCIR has initiated studies concerning this service in accordance with Study Programme 34B/10;
- h) that the appropriate frequency range for the service is limited at the lower end to 0.5 GHz (because of increasing manmade noise and transmit antenna size with decreasing frequency) and at the upper end to 2.0 GHz (because of decreasing effective area of the receive antenna with increasing frequency);
- i) that because of the high PFD requirement, sharing with terrestrial services seems extremely difficult;

noting

- a) that there are proposals by Administrations in the frequency range 1 429 - 1 525 MHz;
- b) that the radio astronomy service has an allocation in the lower adjacent band and that for that reason the lower part of the band 1 429 - 1 525 MHz may not be considered for such an allocation;
- c) that in the experimental phase a bandwidth of a few hundred kHz would suffice;

resolves

1. that Administrations should be encouraged to carry out experiments with broadcasting-satellite service (sound) within the band 0.5 - 2 GHz, in appropriately placed narrow segments, subject to agreement of Administrations concerned. One area where such a segment may be placed is the band 1 429 - 1 525 MHz;
2. that CCIR should continue and expedite studies relating to the technical characteristics of a satellite sound broadcasting system for individual reception by portable and automobile receivers, the feasibility of sharing with terrestrial services, and the appropriate sharing criteria;
3. that the next World Administrative Radio Conference dealing with space radiocommunication services in general or with any specific space radiocommunication service should be authorized to consider the results of various studies and to take appropriate decisions regarding the allocation of a suitable frequency band.
4. that the afore-mentioned Conference should also develop appropriate procedures for protection, and if necessary re-accommodation in other bands, of assignments of terrestrial services which may be affected.

1.

A N N E X 8

RESOLUTION No.

Relating to Frequency Provisions for Development and  
Future Implementation of Ship Movement Telemetry,  
Telecommand and Data Exchange Systems

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the need to specify radio frequencies that may be used by the maritime mobile service on a worldwide basis for ship movement requirements using digital automated data exchange, telemetry and telecommand techniques;
- b) the developments now in progress in different portions of the spectrum which will require common frequency bands in the future for efficient frequency utilization;
- c) the importance of these short range systems in the safe and efficient operations of ships;
- d) the advantages to port authorities for safe and efficient port management and operations;

noting

- a) the findings of the Special Preparatory Meeting of the CCIR that frequencies in the general area of 10 GHz appeared satisfactory for short range automated systems of this nature, and
- b) that further operational and technical information is needed in deciding the most effective frequency utilization and sharing criteria;

resolves

- a) that the next competent World Administrative Radio Conference should review possible frequency provisions in the light of additional studies;
- b) that the CCIR should examine and advise on bandwidths and data formats in coordination with Administrations developing and testing these digital transmission systems;

requests the Secretary-General

to refer this Resolution to the Intergovernmental Maritime Consultative Organization (IMCO) inviting it to define the operational requirement for data exchange with ships using digital transmission techniques, and to make appropriate recommendations to assist Administrations in preparation for a future conference.

2.

RESOLUTION No. /AD/

Relating to the Use for Radionavigation of the Bands  
2 900 - 3 100 MHz, 5 470 - 5 650 MHz,  
9 200 - 9 300 MHz, 9 300 - 9 500 MHz, and 9 500 - 9 800 MHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the need to specify appropriate radio frequencies for adding transponders in a complementary role in the radionavigation bands 2 900 - 3 100, 5 470 - 5 650, and 9 300 - 9 500 MHz or adjacent thereto;
- b) the growing demands already being made on the frequency allocations for the radionavigation service in the bands utilized for aeronautical and maritime radionavigation arising from :
  - i) the increasing number of shipborne radars which is reinforced by the demands for compulsory carriage on an international basis;
  - ii) the increasing need for navigational aids and transponders working with primary radars;
  - iii) the need for the increasing utilization of this band by stations in the aeronautical radionavigation service noting that compulsory carriage is also demanded on an international basis;
- c) the increase in harmful interference occurring in the 9 300 - 9 500 MHz band due to these factors;
- d) that these radar applications have important safety considerations;

noting

- a) the Recommendations in Rec-12 and Mar2 - 4;
- b) the conclusions of the Special Preparatory Meeting of the CCIR;
- c) the need for additional operational and technical information in deciding the most effective frequency utilization;

resolves

1. that the next competent World Administrative Radio Conference should :
  - i) review footnotes to these radionavigation bands and make such changes as deemed appropriate in the light of additional studies;
  - ii) prepare regulatory recommendations as appropriate;
2. that the CCIR should continue to consider the technical factors and make recommendations;

invites

1. the Administrative Council to ensure that radionavigation matters of concern to the mobile services are included in the agenda of the next competent mobile conference;
2. Administrations to study the use of these bands by the radionavigation services, and to submit proposals for their efficient and effective utilization;

requests the Secretary General to refer this Resolution to the IMCO and ICAO inviting their urgent consideration of the operational requirements for the maritime and aeronautical radionavigation services using these frequency bands, and to make appropriate recommendations to assist Administrations in their preparation for the conference.



3.

RESOLUTION No. 7 AE 7

Relating to the Transmission of  
Electric Power from a Spacecraft Using Radio Frequencies

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that it may now be technically feasible to convert some portions of the sun's radiation into electric power on board a spacecraft and to transmit that power to earth by means of radio transmissions and that such power could augment the world's energy resources;
- b) that the possibility of such high power radiation may adversely affect the propagation of radio waves for other services through the ionosphere;

recognizing

that it would be necessary to ensure that the radio transmission of electric power from space did not give rise to harmful interference to radiocommunication services;

that an assessment needs to be made of any likely ecological and biological effects of radio transmissions of power from space, including in particular to aircraft passing through such beams;

noting

that the SPM report to the World Administrative Radio Conference, Geneva, 1979, recognized the technical feasibility of a solar power satellite and considered 2 450 MHz as an appropriate frequency for experimentation leading towards the development of radio transmission of power from space;

noting also

the provisions of Article 3 of the Radio Regulations referring to the obligations on Administrations not to cause harmful interference to radiocommunication services operating in accordance with the Regulations;

requests

the CCIR to undertake appropriate studies on all aspects of the effects of such radio transmissions of power from space on radiocommunication services and to recommend as appropriate the technical parameters for such transmission of power by radio and to report the results of its studies to the Administrative Council;

resolves

1. to request the CCIR to review the CCIR Reports and Recommendations referred to in requests, and
2. to invite the Administrative Council, in light of this and other relevant information concerning the state of the technology, including pertinent information on ecological and biological implications to place on the agenda of a suitable World Administrative Radio Conference an item which will enable that Conference to decide upon all the necessary provisions for the radio transmission of power from space.

4.

**RESOLUTION No. Sat - 8**

Covered by new Resolution AA(in Annex 3)

**[Relating to the preparation for an administrative  
radio conference for the  
detailed planning of the space services in the frequency  
band 11.7-12.2 GHz in Region 2**

**The World Broadcasting-Satellite Administrative Radio Conference,  
Geneva, 1977.**

***considering***

- a)*** that a regional administrative radio conference is to be held not later than 1982 for the detailed planning of the space services in the frequency band 11.7-12.2 GHz in Region 2;
- b)*** that the technical criteria and procedures adopted at this Conference, the 1979 World Administrative Radio Conference and the latest CCIR Recommendations will be used in the interim period;
- c)*** that a considerable amount of technical information will be required to ensure the success of this regional conference;

***invites the CCIR***

**to carry out such additional studies as are necessary to ensure timely provision of the technical information likely to be required as a basis for the work of the regional conference.]**

5.

**RECOMMENDATION No. Sat - 8**

Covered by new Resolution AA(in Annex 3)

**Relating to the convening of a regional administrative radio conference for the detailed planning of the space services in the frequency band 11.7-12.2 GHz in Region 2**

The World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977,

*noting*

- a) that the detailed requirements of all administrations in Region 2 for the broadcasting-satellite service in the frequency band 11.7-12.2 GHz are not yet known;
- b) that, in view of the large demands expected for the other services with which this band is shared, there is a need to ensure that this frequency band and the geostationary orbit are used as efficiently as possible;
- c) that a future regional administrative radio conference for the detailed planning of space services in the frequency band 11.7-12.2 GHz would be able to take advantage of experiments now being carried out, of further technological advances, and of additional studies by the CCIR;

*considering*

the provisions adopted by this Conference to govern the implementation of space services in the frequency band 11.7-12.2 GHz pending the establishment of a detailed plan for Region 2;

*recommends*

1. that a regional administrative radio conference be held not later than 1982 for the purpose of carrying out detailed planning for the broadcasting-satellite and fixed-satellite services in Region 2, in accordance with 2., 3., 4., 5. and 6. below;
2. that the said regional administrative radio conference draw up a detailed plan for the orbit/spectrum resource available for the broadcasting-satellite services in the 11.7-12.2 GHz band. The plan shall provide for the detailed assignment of the orbital positions and frequency channels available, ensuring that the broadcasting-satellite service requirements submitted by the various administrations are met in an equitable manner satisfactory to all the countries concerned. It should be laid down as a matter of principle that each administration in the Region should be guaranteed a minimum number of channels (4) for the operation of the broadcasting-satellite service. Above this minimum, the special characteristics of the countries (size, time zones, language differences, etc.) shall be taken into account;

3. that planning be based on individual reception, but each administration may use the reception system which best meets its requirements, namely, individual or community reception, or both. Account shall also be taken of the decisions of the 1977 and 1979 World Administrative Radio Conferences and of the latest CCIR Recommendations in the case of parameters covered by its studies and research;
4. that, when planning the broadcasting-satellite service, it be borne in mind that systems should be designed with a view to reducing to a minimum technical differences and incompatibilities with the systems of other Regions;
5. that the conference also take into account the need to make equitable provision for the requirements of the fixed-satellite service to which this frequency band is also allocated in Region 2;
6. that in drafting the above-mentioned detailed plan, account also be taken of the terrestrial radio services sharing the same band;

*invites the Administrative Council*

to make preparations for convening the said regional administrative radio conference using the provisions of this Recommendation as a basis for the agenda and the terms of reference of the conference

**RECOMMENDATION No. 12**

6.

**Relating to the Use of the Band 9 300-9 500 MHz**

**The Administrative Radio Conference, Geneva, 1959.**

*noting*

- a) that there are in existence two main classes of airborne weather radar, using the bands 5 350-5 460 MHz and 9 300-9 500 MHz respectively;
- b) that there is in existence a very considerable number of shipborne radars, the majority in the band 9 300-9 500 MHz;
- c) that there are also ground-based radars of the maritime and aeronautical radionavigation services and of the meteorological service in the band 9 300-9 500 MHz;
- d) that in the band 5 350-5 460 MHz airborne radars have the exclusive use of the sole primary allocation which is to the aeronautical radionavigation service;
- e) that in the bands 2 900-3 100 MHz and 5 470-5 650 MHz shipborne radars have the use of the sole primary allocation to the radionavigation service and the maritime radionavigation service respectively, which they share only with land-based radars;
- f) that it has proved necessary to allocate the band 9 300-9 500 MHz on an equality basis to both the aeronautical and the maritime radionavigation services;
- g) that in the band 9 300 to 9 320 MHz for the maritime radionavigation service, the use of shipborne radars is no longer permitted with a view to facilitating development of fixed-frequency radar beacons in this band;
- h) that in the band 9 320 to 9 500 MHz in the maritime radionavigation service, the use of fixed-frequency radar beacons on land or at sea is not permitted.

*considering*

- a) that it is of the utmost importance to ensure that harmful interference is not caused to radionavigation services providing a safety of life function ;
- b) that the operating conditions of a safety of life service should be uniform throughout the world ;
- c) that an uncoordinated increase in the use of the band 9 300-9 500 MHz can only lead to an increase in the probability of harmful interference between the aeronautical and maritime radionavigation services ;

*recommends*

- 1. that administrations, the International Civil Aviation Organization and the Inter-Governmental Maritime Consultative Organization study this matter at the earliest opportunity ; and especially
- 2. that they determine whether, and to what extent, interference which is recognized to be technically possible between the two services becomes harmful in operational circumstances ;
- 3. that they investigate, in the event that it is established that there may be harmful interference between the two services, the possibility of reducing such interference by technical, operational and procedural means, including the principle that new equipments should always be of the highest technical standard ;

*invites*

administrations, the International Civil Aviation Organization and the Inter-Governmental Maritime Consultative Organization to communicate to the Union the results of their studies together with their views and proposals resulting therefrom.

7.

RECOMMENDATION No. Spa2 - 2

**Relating to the preferred Frequency  
Bands for Tropospheric Scatter Systems**

The World Administrative Radio Conference for Space Telecommunications (Geneva, 1971),

*considering*

the technical and operational difficulties pointed out by the C.C.I.R., particularly in the Report of the Special Joint Meeting (Geneva, 1971) in bands shared by tropospheric scatter systems and space systems;

*recognizing, however,*

that administrations will wish to continue to use tropospheric scatter systems in order to satisfy certain telecommunication requirements;

*noting*

that the proliferation of such systems in all frequency bands, particularly those shared with space systems, will only serve to aggravate an already difficult situation;

*requests*

that the C.C.I.R. urgently study the radio-frequency requirements for tropospheric scatter systems and recommend the preferred radio frequencies for such systems;

*invites the Administrative Council*

to arrange that a future World Administrative Radio Conference consider which frequency bands of the fixed service shall be preferably used by new tropospheric scatter systems, taking into account the allocations to the space radiocommunication services.



8.

RECOMMENDATION No. Mar2 - 14

Relating to the Frequency Requirements for  
Shipborne Transponders<sup>1</sup>

The World Maritime Administrative Radio Conference, Geneva, 1974,

*considering*

- a) that merchant ships of the world are increasing in size and speed;
- b) that every year a significant number of collisions occur involving merchant vessels with resultant loss of life and property and that collisions have a high potential for endangering the natural environment;
- c) that there is a need to correlate radar targets with vessels making VHF radiotelephone transmissions;
- d) that studies and experiments have shown that shipborne transponders can enhance and supplement radar target images as compared with normal radar images;
- e) that current studies and experimentation relating to shipborne transponders indicate that development of equipment can be expected in the near future which will offer adequate radar image enhancement and target identification and, possibly, data transfer capabilities;
- f) that such shipborne transponders may require protection from interference;
- g) that the selection of the frequency bands and other parameters for these transponders should be coordinated with other users of the radio frequency spectrum whose operations might be affected;

*requests the C.C.I.R.*

to recommend, after consultation with appropriate international organizations, the most suitable order of frequencies and bandwidth required for this purpose, and the technical parameters to be met by such devices taking into account electromagnetic compatibility with other services having allocations in the same frequency band;

*invites*

administrations and the Inter-Governmental Maritime Consultative Organization to continue to evaluate the operational benefits which could result from the widespread use of transponders on ships and to consider whether there would be advantage in adopting an internationally approved system for future implementation;

*recommends*

that, pending further technical and operational developments and evaluation, administrations be prepared at the next competent World Administrative Radio Conference to make the necessary provisions for the use of such devices.

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<sup>1</sup> A receiver-transmitter which emits a signal automatically when it receives the proper interrogation.

RECOMMENDATION No. Sat - 1

9.

**Relating to up-links for the broadcasting-satellite service**

The World Broadcasting-Satellite Administrative Radio Conference,  
Geneva, 1977,

*considering*

- a) that, according to the definition given in No. 84AG of the Radio Regulations, the fixed-satellite service includes Earth-to-space links for the broadcasting-satellite service;
- b) that there is an imbalance between the width of the bands allocated to Earth-to-space links and those allocated to space-to-Earth links in the fixed-satellite and broadcasting-satellite services between 10 and 15 GHz;
- c) that, in consequence, the Earth-to-space capacity may be insufficient to meet future demands for space-to-Earth links for the broadcasting-satellite and fixed-satellite services;
- d) that, due to interference considerations, space stations in both services may be subject to severe up-link constraints;
- e) that Recommendation No. Sat - 5 invites the CCIR to continue the studies on up-links for the broadcasting-satellite service;

*invite administrations*

to estimate their future technical requirements for such links for the purpose of the studies mentioned in e) above, and to forward them to the appropriate CCIR Study Groups and to the Special Joint Meeting of CCIR Study Groups to be held in preparation for the 1979 World Administrative Radio Conference.

10.

RECOMMENDATION No. [AB]

Relating to the Use of the Band 1330-1400 MHz

by the Radio Astronomy Service

The World Administrative Radio Conference, Geneva, 1979

considering that

- a) the observations of the radio emissions from neutral hydrogen atoms within the band 1330-1400 MHz are of prime importance in the understanding of the structure of distant galaxies, and subsequently of the evolution of the universe;
- b) recognition has been given to the radio astronomy service in the band 1330-1400 MHz within the Table of Frequency Allocations;
- c) the radio astronomy service is devoted to the reception of extremely low-level electromagnetic radiations of extra-terrestrial origin, and needs therefore to be protected from radiations of man-made origin, to the maximum degree practicable;
- d) the ability of the radio astronomy service to share frequency bands with other radio services is limited;

recommends that

- 1. administrations, when preparing for the next competent Administrative Radio Conference, should consider the question of making provisions in the 1330-1400 MHz band that will provide the radio astronomy service increased protection from services that radiate;
- 2. administrations when drawing up frequency assignment plans should bear in mind radio astronomy observations being carried out in the band 1330-1400 MHz.

11.

## RECOMMENDATION No. [BB]

Relating to Use of the Bands 1 400 - 1 727 MHz,  
101 - 120 and 197 - 220 GHz for Search for Extraterrestrial  
Intelligence

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that it is of special importance to humankind to determine the existence of extraterrestrial civilizations;
- b) that the probability to detect a radiation of extraterrestrial civilization is at maximum in the bands 1 400 - 1 727 MHz, 101 - 120 GHz and 197 - 220 GHz because these bands contain the spectral lines of basic physical interest and are related to the universal phenomena;
- c) that in the bands, mentioned in considering b), there is a probability to detect radiation of extraterrestrial civilizations with a maximum signal-to-noise ratio;
- d) that recognition has been given to the search for extraterrestrial civilizations in the bands 1 400 - 1 727 MHz, 101 - 120 GHz and 197 - 220 GHz within the Table of Frequency Allocations;
- e) that the attempt to recognize signals from extraterrestrial civilizations requires the reception of extremely low-level radiations and such reception needs therefore to be protected from radiations of man-made origin, to the maximum degree practicable;
- f) that the ability of reception of radiations of extraterrestrial civilization to share frequency bands with active radio services is limited;

recommends

that Administrations when preparing for the next competent Administrative Radio Conference, should consider the desirability of making provisions so as to provide a controlled environment suitable for reception of extraterrestrial radiations in the 1 400 - 1 727 MHz, 101 - 120 and 197 - 220 GHz bands;

invites

organizations concerned with the search for extraterrestrial civilizations to take into account the following :

- 1. the relevant provisions of the Radio Regulations;
- 2. the need to maintain close coordination with their national Administrations on matters of frequency usage;
- 3. the need to select, for observations, the location of receiving facilities that are as remote as possible from sources of radio interference;
- 4. the appropriate Reports and Recommendations of the CCIR.

12.

Proposal for the Allocation of Bands to ESS Up-links

Present position

No frequency is at present allocated to ESS up-links in the Table of Frequency Allocations.

Proposal

1. In the Table of Frequency Allocations, a bandwidth of 1 200 MHz at a frequency close to 14 GHz should be allocated to up-links in the broadcasting-satellite service.

2. Use of the band allocated should be in conformity with an internationally approved plan of allocations for all Regions. For the preparation of this plan, an administrative conference should be convened as soon as possible after the end of WARC-79.

Reasons : 1) With regard to the bandwidth at present allocated to the satellite service, the width for the up-link is consistently much smaller than that for the down-link. It may therefore be expected that the bands for the up-links will be completely saturated long before the Allocation Plan prepared at the WARC-BS-12 GHz (Geneva, 1977) has become fully operative.

2) If the Plan prepared at the WARC-BS-12 GHz (Geneva, 1977) is to be carried out, adequate allocations also for up-links are essential.

3) The bandwidth required for up-links is greater than that for down-links, particularly because :

- a) it would be impractical to place the earth station in the transmission centre;
- b) in most cases more than one earth station will be required for each programme service;
- c) in practice, many countries will wish to use mobile earth stations for the up-link.

4) The CCIR Special Preparatory Meeting (SPM) (Geneva, 1978) found that a bandwidth 1 to 1½ times that of the down-link is required for the up-link (Doc. XP/1107-E).

5) Complex arrangements to reduce requirements to less than 1½ times the allocation for the down-link are regarded as impracticable.

6) For practical reasons, the band for the up-link must also be adequately separated from that of the down-link to. It is further essential that the band should not be in too high a frequency range, because attenuation, particularly in the Tropical Zone, would be too great.

7) In view of the foregoing, it is estimated that the most suitable band would be around 14 GHz.

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**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 732-E

17 November 1979

Original : Spanish

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Note by the Secretary-General

PARAGUAY

TRANSFER OF POWERS

As the delegation of Paraguay is obliged to leave the Conference, it has given the delegation of Uruguay the power to represent it at the Conference.

M. MILI

Secretary-General



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 733(Rev.1)-E  
21 November 1979  
Original : English

COMMITTEE 5

## **NOTE FROM THE CHAIRMAN OF COMMITTEE 6 TO THE CHAIRMAN OF COMMITTEE 5**

In reply to the request from Committee 5 contained in Document No. 312, I wish to inform you that procedures to cover the re-allocation of displaced assignments, as a consequence of changes in allocations in the Table of Frequency Allocations, are under consideration within Committee 6. They consist in a procedure for reviewing entries in the Master Register in the frequency bands allocated to the Fixed Service between 3000 and 27 500 kHz and a transitional procedure for selection and approval of replacement assignments to fixed stations in those bands.

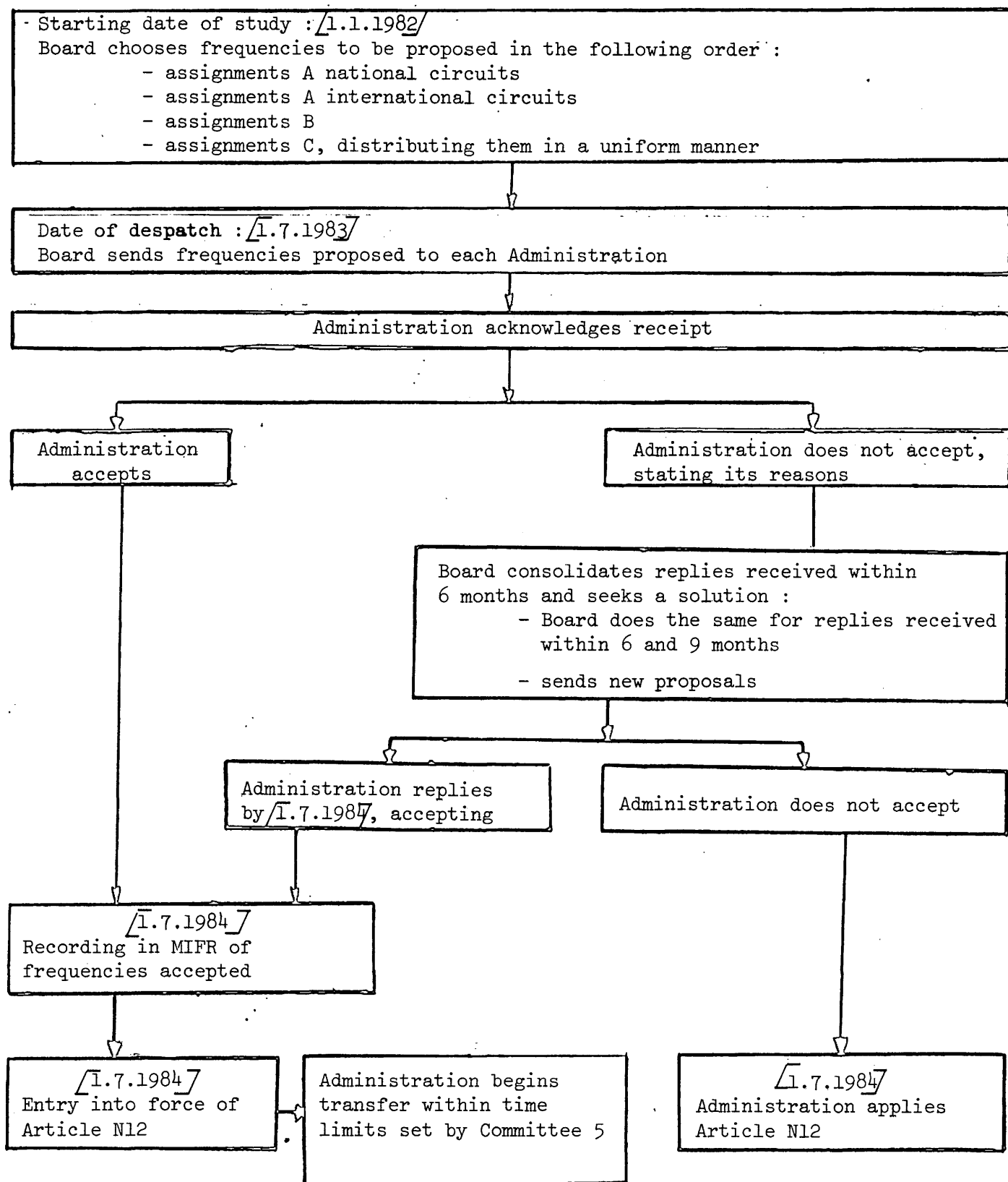
The drafts are contained in Document No. 705. A flow chart illustrating the transitional procedure is contained in Document No. DL/239, a copy of which is annexed. In Corr. 1 to Document No. 655 (Rev. 1) there is a draft time-table for the application of the procedures.

Dr. M. JOACHIM  
Chairman of Committee 6

Annex : 1



A N N E X





**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 733-E

19 November 1979

Original: English

COMMITTEE 5

NOTE FROM THE CHAIRMAN OF COMMITTEE 6  
TO THE CHAIRMAN OF COMMITTEE 5

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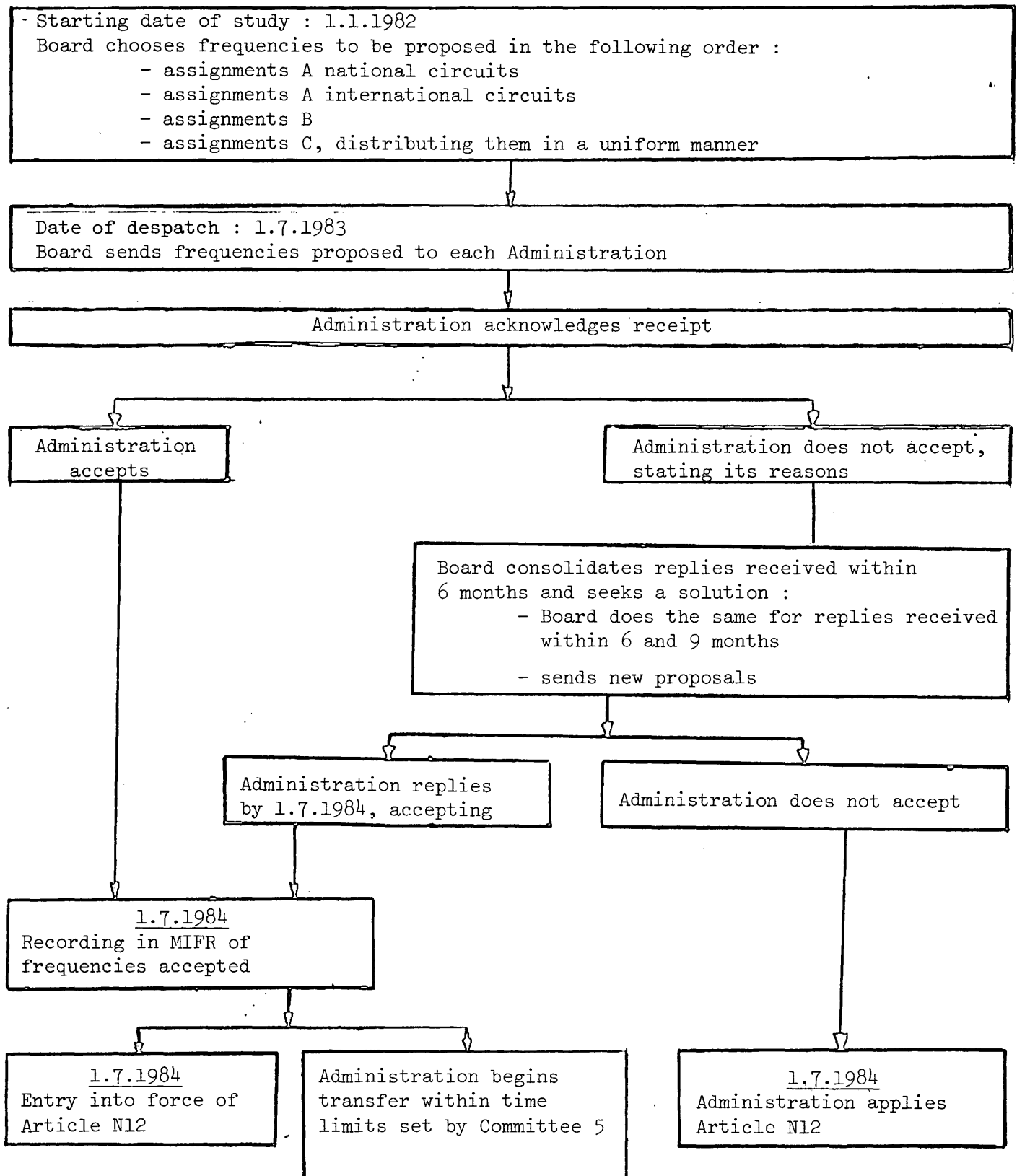
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Dr. M. JOACHIM  
Chairman of Committee 6

Annex : 1



A N N E X



INTERNATIONAL TELECOMMUNICATION UNION

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 734-E

17 November 1979

Original : French

## COMMITTEE 6

### NOTE FROM THE CHAIRMAN OF COMMITTEE 6

During consideration of the Fifth Report of Working Group 6A relating to Article N13 and contained in Document No. 550, it was agreed that a proposed amendment to No. 4648 made by the delegate of Qatar should be submitted to Committee 6 after discussion between the delegate of Qatar and the representative of the IFRB.

Following these discussions, the following text is proposed to Committee 6 :

MOD 4648

§ 31. The technical standards of the Board shall be based upon the relevant provisions of these Regulations and the Appendices thereto, the decisions of Administrative Conferences of the Union, as appropriate, the Recommendations of the CCIR, the state of the radio art and the development of new transmission techniques, account being taken of exceptional propagation conditions which may prevail in certain regions (for example, particularly pronounced ducting).

Dr. M. JOACHIM  
Chairman of Committee 6



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 735-E

17 November 1979

Original : English

## WORKING GROUP 6A

### REPORT BY WORKING GROUP 6A3 TO WORKING GROUP 6A

#### Appendix 1

1. Working Group 6A3 considered all proposals concerning Section E of Appendix 1 and, except as noted in paragraph 2 below, unanimously agreed to submit the attached texts to Working Group 6A for consideration.

2. Indication of seconds (and the alternative) when specifying geographical co-ordinates (Columns 4c, 9a and 9b)

The delegation of the USSR reserved its position and right to revert to this question in Working Group 6A, if it still so desires.

3. As requested by the Group, Sections A, B and C have been added by the Chairman together with a suggested text for Section D.

A.M. CORRADO  
Chairman of Working Group 6A3

Annex : 1



## A N N E X

## APPENDIX 1

(See Article N12/9)

(MOD)

**Section A. Basic Characteristics to be Furnished for Notification  
under No. 4280/486 of the Radio Regulations**

NOC	Column 1	Assigned frequency.
NOC	Column 2c	Date of putting into use.
NOC	Column 3	Call sign (Identification).
NOC		<i>This is not a basic characteristic for stations referred to in No. 5339.1/735.1.</i>
NOC	Column 4a	Name of the transmitting station.
(MOD)	Column 4b	Country or geographical area in which the transmitting station is located.
NOC	Column 4c	Longitude and latitude of the transmitter site.
MOD	Column 5a	Name of the receiving station.
MOD		<i>This is not a basic characteristic for broadcasting, land, radionavigation land, radiolocation land or / standard frequency / stations, or for ground-based stations in the meteorological aids service.</i>
MOD	Column 5b	Country or geographical area in which the receiving station is located.
		<i>This is not a basic characteristics for broadcasting, land, radionavigation land, radiolocation land or / standard frequency / stations, or for ground-based stations in the meteorological aids service.</i>

Note : The / \_ / around standard frequency is to remind Committee 6 or 9 to verify if  
this term is modified by this Conference.



APL Section A (cont.)

- ADD            Column 5c    Longitude and latitude of the site of the receiving station.
- This is not a basic characteristic for broadcasting, land, radionavigation land, radiolocation land or standard frequency stations, or for ground-based stations in the meteorological aids service.
- ADD            Column 5d    Locality or area(s) of the receiving stations.
- This is a basic characteristic only for broadcasting, land, radionavigation land, radiolocation land and standard frequency stations.
- ADD            Columns 5e and 5f to be used only if the area is not adequately defined in Column 5d.
- ADD            Column 5e    Longitude and latitude of the centre of the circular receiving area.
- This is a basic characteristic only for land, radionavigation land, radiolocation land and / standard frequency / stations.
- ADD            Column 5f    Nominal radius (km) of the circular receiving area.
- This is a basic characteristic only for land, radionavigation land, radiolocation land and / standard frequency / stations.
- NOC            Column 6      Class of station and nature of service.
- NOC            Column 7a    Class of emission, necessary bandwidth and description of transmission.
- ADD            Column 7b    / Class of operation of the assignment.
- This is a basic characteristic only for the assignments to stations of the fixed service in the frequency bands allocated to this service between 3 000 kHz and 27 500 kHz. /
- MOD            Column 8      Power (in dBW).
- NOC            Column 9a    Azimuth of maximum radiation.

Note 1 / standard frequency /, see previous page.

Note 2 Column 7b is placed between square brackets awaiting the results of Working Group 6A1 on a related portion of Article N12/9 (No. 4983A).

AP1 Section A (cont.)

ADD	Column 9b	Elevation angle of maximum directivity.  <u>This is a basic characteristic</u> only for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and shall be provided to an accuracy of one tenth of a degree.
MOD	Column 9c [ex-Col. 9b]	Angular width of radiation main lobe.  This is <u>not</u> a basic characteristic if Column 9j is completed.
ADD	Column 9d	Polarization.  <u>This is a basic characteristic</u> only for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and for broadcasting stations in the VHF/UHF bands in the African and European broadcasting areas.
ADD	Column 9e	Height of antenna (metres) for a simple vertical antenna.  <u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Regions 1 and 3.
ADD	Column 9f	Maximum effective height of the antenna.  <u>This is a basic characteristic</u> for broadcasting stations in the VHF/UHF bands in the African and European broadcasting areas and is defined in the Final Acts of these Conferences.  <u>This is a basic characteristic</u> for terrestrial stations operating in the bands above 1 GHz that are shared between space and terrestrial services and shall be indicated in metres above mean sea level.
MOD	Column 9g [ex-Col. 9c]	Maximum antenna gain (isotropic, relative to a short vertical antenna or relative to a half-wave dipole, as appropriate).  This is <u>not</u> a basic characteristic if the effective radiated power or the e.i.r.p. is notified in Column 8 or if the Column 9j data are supplied.
ADD	Column 9h	Azimuths defining the sectors of limited radiation in degrees (clockwise) from True North.  <u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Regions 1 and 3.

AP1 Section A (cont.)

ADD	Column 9i	Maximum agreed radiation in the sectors  <u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Regions 1 and 3.
ADD	Column 9j	Type of antenna (see CCIR Book "Antenna Diagrams")  This is <u>not</u> a basic characteristic if the Columns 9c and 9g data are supplied.
ADD	Column 10b	Regular hours of operation of the frequency assignment (UTC)
MOD	Column 11	Coordination with other Administrations  <u>This is a basic characteristic</u> for the bands and services concerned.

Supplementary information:

MOD	a)	In any case where there are one or more <u>reference frequencies</u> in a particular transmission (e.g. in the case of (a) the frequency of the reduced carrier in an independent or single sideband emission, and (b) the frequencies of the sound and vision carriers in a television emission), such reference frequencies shall be supplied;
NOC	b)	any coordination required by No. 4160/492A;
NOC	c)	the name of any administration with which an agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.

---

AP1 Section B. Basic Characteristics to be Furnished for Notification  
under No. 4281/487 of the Regulations

NOC	Column 1	Assigned frequency.
NOC	Column 2c	Date of putting into use.



## AP1 Section B (cont.)

MOD	Column 4a	The letter " M ".
(MOD)	Column 4b	The country or geographical area in which the transmitting mobile station is located.
MOD	Column 4c	The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.
ADD	Column 4d	The nominal radius (in km) of the circular transmitting area.
ADD	Column 4e	Indicate a standard defined area using the symbols contained in standard references, e.g. MWARA, RDARA, geographical zones etc. (See also the preface to the International Frequency List.)
ADD	Column 5a	Name of the receiving land station.
ADD	Column 5b	Country or geographical area in which the receiving station is located.
ADD	Column 5c	Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.
NOC	Column 6	Class of mobile stations and nature of service.
NOC	Column 7 a	Class of emission of mobile stations and necessary bandwidth and description of transmission.
(MOD)	Column 8	Power (in dBW)
ADD	Column 10b	Regular hours of operation of the frequency assignment (UTC).

NOC

## Supplementary information:

- a) any co-ordination required by No. 4160/492A;
  - b) the name of any administration with which an agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.
-

AP1    **Section C.    Basic Characteristics to be Furnished for Notification  
under No. 4284/490 of the Regulations**

NOC	<b>Column 1</b>	<b>Assigned frequency.</b>
NOC	<b>Column 2c</b>	<b>Date of putting into use.</b>
(MOD)	<b>Column 4b</b>	Country or geographical area in which the transmitting station is located.
ADD		For the remainder of Column 4 complete either 4e alone, or 4c and 4d.
ADD	<b>Column 4c</b>	The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.
ADD	<b>Column 4d</b>	The nominal radius (in km) of the circular transmitting area.
ADD	<b>Column 4e</b>	Indicate a standard defined area using the symbols appearing in the preface to the International Frequency List.
NOC	<b>Column 6</b>	<b>Class of station and nature of service.</b>
NOC	<b>Column 7</b>	<b>Class of emission, necessary bandwidth and description of transmission.</b>
(MOD)	<b>Column 8</b>	<b>Power (in dBW).</b>
ADD	<b>Column 10b</b>	Regular hours of operation of the frequency assignment (UTC).

NOC

**Supplementary information:**

- a) any co-ordination required by No. 4160/492A;
  - b) the name of any administration with which an agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.
-

MOD

AP1 Section D. Form of Notice

The Board shall develop and keep up to date a form of notice to meet fully the statutory provisions of this Appendix and related decisions of future conferences.

---

AP1 Section E. General Instructions

NOC

1. A separate notice shall be sent to the International Frequency Registration Board for notifying :

- Each new frequency assignment,
- Any change in the characteristics of a frequency assignment recorded in the Master International Frequency Register (hereinafter called the *Master Register*),
- Any total deletion of a frequency assignment recorded in the Master Register.

ADD

1bis. When a frequency assignment is used by a station to perform different services, a separate notice shall be submitted for each class of service (e.g. FA, FB, FC, FX, etc.)

NOC

2. Frequencies prescribed by these Regulations for common use, such as 500 kHz or 2 182 kHz should not be notified (see No. 488).

NOC

3. Separate entries, in Columns 5a to 10, should be made for the various characteristics when they do not apply to the assignment as a whole, for instance when the class of emission or the power differ according to the localities or areas of reception.

NOC

4. When submitting notices for television broadcasting stations in Region 1, separate notices shall be submitted for the sound and vision channels. In such cases, the notice shall relate to the sound and vision carrier frequencies.

AP1 Section E (cont.)

NOC

**I. General Notes**

- (a) The name of the notifying administration should be indicated.
- (b) Indicate in this box by the letter "X" when the notice reflects :
  - the first use of a frequency by a station,
  - or
  - the first use of an additional frequency by a station.
- (c) Indicate in this box by the letter "X" when the notice reflects a change in the characteristics of a frequency assignment recorded in the Master Register.
  - (1) In the case where existing particulars (including the frequency) are changed, the new characteristics in the appropriate place should be underlined ; the original characteristics which have been changed should be shown in brackets underneath or at the side.
  - (2) In the case where the change is an addition to existing particulars, the additional characteristics should be shown in the appropriate place and should be underlined.
  - (3) In the case where the change is a cancellation of a particular characteristic or characteristics, this should be shown in the appropriate place by a dash and, underneath or at the side, the characteristics which have been cancelled should be shown in brackets.
- (d) Indicate in this box by the letter "X" when the notice reflects a deletion of an assignment, in all of its notified characteristics.
- (e) The serial number of the notice and the date on which the notice is sent to the Board shall be shown here.

**II. Notes Concerning Information to be Entered in the Notice  
Pertaining to Specific Columns of the Master Register**

NOC

*Column 1* Assigned frequency

AP1 Section E.II (cont.)

1) 2) 3)

MOD 1. Indicate the assigned frequency as defined in Article 1, in kHz up to 28 000 kHz inclusive, in MHz above 28 000 kHz to 10 500 MHz inclusive, and in GHz above 10 500 MHz.

NOC 2. *This information is a basic characteristic.*

NOC *Column 2c* Date of putting into use

1. In the case of a new assignment, insert the date (actual or foreseen, as appropriate) of putting the frequency assignment into use.

MOD 2. Whenever the assignment is changed in any of its basic characteristics, as defined in this Appendix except in the case of a change in Columns 3 or 4a or 10a or 11, then the date to be indicated shall be that of the latest change (actual or foreseen, as appropriate).

NOC 3. *This information is a basic characteristic.*

NOC *Column 3* Call sign (Identification)

1. Indicate the call sign or other identification used in accordance with Article N23/19.

2. *This information is a basic characteristic*, except for stations referred to in Nos. 490 and 735.1 or when the frequency assignment is used for reception in the circumstances described in No. 487.

---

NOC 1) For television broadcasting stations in Region 1, the frequencies to be notified are those of the sound and vision carriers.

ADD 2) For the radiotelephone maritime mobile service see No. 8045/445A.

ADD 3) For the Aeronautical Mobile (R) Service, see Appendix 27 Aer 2 revised paragraph 27/72.

## AP1 Section E.II (cont.)

MOD            *Column 4*    Particulars of the transmitting station

ADD            When the frequency assignment is used in the circumstances described in No. 4280/486, the basic characteristics to be provided in Column 4 are as follows :

Column 4a    Indicate the name of the locality by which the transmitting station is known or in which it is situated.

(MOD)        Column 4b    Indicate the country or geographical area in which the station is located. Symbols from the Preface to the International Frequency List shall be used.

MOD            Column 4c    Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the transmitter site. For frequency assignments above 1 000 MHz (1 GHz) in the bands shared between terrestrial radiocommunication and space radiocommunication services, indicate the geographical coordinates (longitude and latitude in degrees, minutes and seconds with an accuracy of one tenth of a minute) or, as an alternative, indicate the longitude and latitude in degrees and minutes and, in Column 9a, the azimuth of maximum directivity of the antenna to an accuracy of one tenth of a degree.

When the frequency assignment is used for reception in the circumstances described in No. 4281/487, the basic characteristics to be provided in Column 4 are as follows :

MOD            Column 4a    The letter "M".

(MOD)        Column 4b    The country or geographical area in which the transmitting mobile station is located. If the station is not located within a country, indicate the country responsible. Symbols from the Preface to the International Frequency List shall be used.

MOD            Column 4c    The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.

ADD            Column 4d    The nominal radius (in km) of the circular transmitting area.

AP1 Section E.II (cont.)

- ADD                      Column 4e      Indicate a standard defined area using the symbols contained in standard references, e.g. MWARA, RDARA, geographical zones etc. (see also the Preface to the International Frequency List).
- ADD                      When the frequency assignment is used in the circumstances in No. 4284/490, the basic characteristics to be provided in Column 4 are as follows :
- ADD                      Column 4b      Indicate the country or geographical area in which the station is located. Symbols from the Preface to the International Frequency List shall be used.
- ADD                      For the remainder of Column 4 complete either 4e alone, or 4c and 4d.
- ADD                      Column 4c      The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.
- ADD                      Column 4d      The nominal radius (in km) of the circular transmitting area.
- ADD                      Column 4e      Indicate a standard defined area using the symbols appearing in the Preface to the International Frequency List.
- ADD                      Column 5       Particulars of the receiving station.
- ADD                      When the frequency assignment is used in the circumstances in No. 4280/486, the basic characteristics to be provided in Column 5 are as follows :
- ADD                      Column 5a      Name of the receiving station. Indicate the name of the locality by which the receiving station is known or in which it is situated.
- ADD                      1. For reception points in the fixed service, it is necessary to notify only sufficient stations to define the reception area, provided that that area is well defined and sufficiently small to make it easy to forecast the conditions of the use of the frequency from the propagation point of view.
- ADD                      2. However, for broadcasting, land, radionavigation land, radiolocation land and / standard frequency / stations, and ground-based stations in the meteorological aids service, it is not necessary to indicate any information in this column.

---

/ standard frequency / stations : the new term should be inserted.

AP1 Section E.II (cont.)

ADD Column 5b Country or geographical area in which the receiving station is located. Symbols from the Preface to the International Frequency List shall be used.

ADD However, for broadcasting, land, radionavigation land and / standard frequency / stations, and ground-based stations in the meteorological aids service, it is not necessary to indicate any information in this column.

ADD Column 5c Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.

ADD However, for broadcasting, land, radiolocation land or / standard frequency / stations, or for ground-based stations in the meteorological aids service, it is not necessary to indicate any information in this column.

ADD Column 5d Locality or area(s) of the receiving station(s).

1. For broadcasting stations, the area of reception shall be indicated. Each area should be expressed either
  - as interior (INTR),
  - or the symbol designating a country(ies) or geographical area(s) (Preface to the International Frequency List),
  - or one of the geographical zones appearing on the map annexed to the present Appendix. In the event the area of reception cannot be defined in the above manner Columns 5e and 5f shall be completed.

This is not a basic characteristic for broadcasting stations in the LF/MF or VHF/UHF bands unless specified in a relevant Regional Agreement.

2. For land, radionavigation land, radiolocation land, / standard frequency / stations, and ground-based stations in the meteorological aids service, indicate an area only if it is standardly described. If the area of reception is not standardly defined describe the area in Columns 5e and 5f.

ADD Column 5e Longitude and latitude of the centre of the circular receiving area.

1. Indicate the geographical coordinates (in degrees and minutes).
2. This column is not to be used if the area of reception is adequately defined in Column 5d : If this column is used a corresponding entry must be made in Column 5f.



AP1 Section E.II (cont.)

ADD Column 5f Nominal radius of the circular receiving area.

1. Indicate the radius (in km) of the circular receiving area.
2. This column is not to be used if the area of reception is adequately defined in Column 5d. If this column is used a corresponding entry is required in Column 5e.

ADD When the frequency assignment is used in the circumstances in No. 4281/487, the basic characteristics to be provided in Column 5 are as follows :

ADD Column 5a Name of the receiving station. Indicate the name of the locality by which the receiving station is known or in which it is situated.

ADD Column 5b Country or geographical area in which the receiving station is located. Symbols from the Preface to the International Frequency List shall be used.

ADD Column 5c Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.

ADD When the frequency assignment is used in the circumstances in No. 4284/490, no entry is required in Column 5.

NOC **Column 6** Class of station and nature of service

1. Indicate the class of station and nature of service performed, using the symbols shown in Appendix [10.]
2. When the frequency assignment is used for reception in the circumstances described in No. [487,] the class of station and nature of service applicable to the mobile stations should be indicated.
3. *This information is a basic characteristic.*

MOD Column 7 Class of emission and class of operation

AP1 Section E.II (cont.)

NOC      *Column 7a*    Class of emission, necessary bandwidth and description of transmission.

1. Indicate, for each locality or area of reception shown in Column 5a, the class of emission, necessary bandwidth and description of transmission, in accordance with Article[2] and Appendix[5.]
2. When the frequency assignment is used for reception in the circumstances described in No.[487,] the particulars to be indicated are those applicable to the mobile stations.
3. *This information is a basic characteristic.*

ADD      Column 7b [ ] Class of operation of the assignment

This is a basic characteristic. For the assignments to stations of the fixed service in the frequency bands allocated to this service between 3 000 kHz and 27 500 kHz, indicate the class of operation of the assignment by the symbols A, B or C, as follows :

Symbol A    An assignment for a regular operational use which is not provided by another means of telecommunication or for a service of particular importance for example, safety services, the Red Cross, Red Crescent, Red Lion and Sun, Interpol, United Nations, etc.;

Symbol B    An assignment for a link for which there is another means of telecommunication;

Symbol C    An assignment for occasional use on a reserve basis and not requiring protection from harmful interference.]

AP1 Section E.II (cont.)

**Column 8** Power (in dBW)

- |     |  |
|-----|--|
| MOD | 1. The power supplied to the antenna transmission line shall be notified as follows, according to the class of emission and shall be provided in dBW :   |
| NOC | a) Carrier power $[P_c]$ for $[A3]$ sound broadcasting (see $[No. 97]$ );  |
| NOC | b) Mean power $[P_m]$ for other amplitude modulated emissions using unkeyed full carrier, and for all frequency modulated emissions (see No. $[96]$ );   |
| NOC | c) Peak envelope power $[P_p]$ for all classes of emission other than those referred to in a) or b), including $[A5]$ television (vision) (see No. $[95]$ ).   |
| MOD | 2. In the bands above 28 000 kHz which are not allocated on a shared basis to the space radiocommunication and terrestrial services, except for notices referred to in No. $[490]$ , the power notified shall be the effective radiated power (see No. $[98]$ ).   |
| ADD | 2A. In the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services, the equivalent isotropically radiated power (e.i.r.p.) shall be notified.  |
| MOD | 3. The appropriate symbol $[P_c, P_m]$ or $[P_p]$ shall follow the indication of the value of the power. In cases where the effective radiated power is notified, this symbol shall be followed by the letter "e". In cases where the e.i.r.p. is notified, this symbol shall be followed by the letter "i". |
| MOD | 4. The power normally used to each locality or area of reception shall be indicated.   |
| NOC | 5. When the frequency assignment is used for reception in the circumstances described in No. $[487]$ , the power of the mobile stations should be indicated. If not all of the stations use the same power, the highest power should be indicated.   |

AP1 Section E.II (cont.)

NOC 6. *This information is a basic characteristic.*

NOC **Column 9** Transmitting antenna characteristics

**Column 9a** Azimuth of maximum radiation

1. If a directive transmitting antenna is used, indicate the azimuth of maximum radiation of the transmitting antenna in degrees (clockwise) from True North.
2. If a transmitting antenna with non-directional characteristics is used, insert "ND" in this column.

ADD 2A. For frequency assignments above 1 GHz in the bands shared between terrestrial radiocommunication and space radio-communication services, the azimuth shall be provided to an accuracy of one tenth of a degree in those cases where the required accuracy in the geographical coordinates (to a tenth of a minute) has not been specified in Column 4c.

3. *This information is a basic characteristic, except for stations referred to in No. [499] or when the frequency assignment is used for reception in the circumstances described in No. [487].*

ADD **Column 9b** Elevation angle of maximum directivity

This is a basic characteristic for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and shall be provided to an accuracy of one tenth of a degree.

MOD **Columns 9c and 9g**

If the radiation characteristics of the antenna concerned differ from those recommended by the CCIR, Columns 9c and 9g should be notified. Where the radiation characteristics are to be found in the CCIR Book "Antenna Diagrams" indicate an appropriate reference in Column 9j.

## AP1 Section E.II (cont.)

MOD	Column 9c [ex Column 9b]	<p>Angular width of radiation main lobe</p> <p>The total angle in the horizontal plane, in degrees, within which the power radiated in any direction does not fall more than 3 dB below the power radiated in the direction of maximum radiation, should be indicated.</p>
ADD	Column 9d	<p>Polarization</p> <p><u>This is a basic characteristic</u> for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and for broadcasting stations in the VHF/UHF bands in the African and European broadcasting areas.</p>
ADD	Column 9e	<p>Height of antenna (metres) for a simple vertical antenna</p> <p><u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Regions 1 and 3.</p>
ADD	Column 9f	<p>Maximum effective height of the antenna</p> <p><u>This is a basic characteristic</u> for broadcasting stations in the VHF/UHF bands in the African and European Broadcasting Areas and is defined in the Final Acts of these Conferences.</p> <p><u>This is a basic characteristic</u> for terrestrial stations operating in the bands above 1 GHz that are shared between space and terrestrial services and shall be indicated in metres above mean sea level.</p>
MOD	Column 9g [ex Column 9c]	<p>Maximum antenna gain (isotropic, relative to a short vertical antenna or relative to a half-wave dipole, as appropriate).</p> <ol style="list-style-type: none"> <li>1. The relative gain of the antenna in the direction of maximum radiation for the assigned frequency should be indicated (see No. [101]).</li> <li>2. This is not a basic characteristic if the effective radiated power or the e.i.r.p. is notified in Column 8.</li> </ol>

AP1 Section E.II (cont.)

ADD	Column 9h	<p>Azimuths defining the sectors of limited radiation in degrees (clockwise) from True North</p> <ol style="list-style-type: none"><li>1. Indicate the azimuths defining the sectors of limited radiation in degrees (clockwise) from True North.</li><li>2. <u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Regions 1 and 3.</li></ol>
ADD	Column 9i	<p>Maximum agreed radiation in the sectors</p> <ol style="list-style-type: none"><li>1. Indicate the maximum agreed radiation in the sector, in dB relative to a c.m.f. of 300 V or an e.m.r.p. of 1 kW determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses.</li><li>2. <u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Regions 1 and 3.</li></ol>
ADD	Column 9j	<p>Type of antenna (see CCIR book "Antenna Diagrams")</p> <p>Indicate the appropriate reference from the CCIR book "Antenna Diagrams". See Columns 9c and 9g above.</p>
MOD	Column 10	<p>Hours of operation</p>
MOD	Column 10a	<p>Maximum hours of operation of the circuit to each locality or area (UTC)</p>
NOC		<ol style="list-style-type: none"><li>1. When the frequency assignment is used for reception in the circumstances described in No. [487] the maximum hours of operation are those relating to the mobile stations.</li></ol>
NOC		<ol style="list-style-type: none"><li>2. As complementary information, indicate by the letter "I" any part of the period during which the operation of the circuit is intermittent.</li></ol>
MOD		<ol style="list-style-type: none"><li>3. This information is <u>not</u> a basic characteristic.</li></ol>
ADD	Column 10b	<p>Regular hours of operation of the frequency assignment (UTC).</p> <ol style="list-style-type: none"><li>1. If known indicate the regular hours of operation of the frequency assignment in UTC. Otherwise indicate the hours of operation as day service (HJ), night service (HN), or transition period service (HT).</li><li>2. <u>This is a basic characteristic.</u></li></ol>

AP1 Section E.II (cont.)

MOD                      Column 11      Coordination with other Administrations

1. Identify the country or geographical area with which coordination has been successfully completed and indicate the provision (RR No., Regional Agreement, or other arrangement) requiring such coordination.
2. This is a basic characteristic for the bands and services concerned.

NOC

**Column 12a** Operating Administration or Company \*

*This information is not a basic characteristic, but it is recommended it be supplied in cases where the same agency operates in more than one country.*

NOC

**Column 12b** Postal and telegraphic address of the administration responsible for the station \*

1. The addresses required are those to which communication should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of the circuit (see Article [15])
2. This information is not a basic characteristic.

*Supplementary Information*

NOC

Any supplementary information supplied by the administration should be indicated within the frame provided on the notice.

NOC

1. If the assignment is made in application of a regional or service agreement, the relevant agreement shall be indicated in the appropriate place; otherwise, insert the indication "Nil".

NOC

2. Indicate after the symbol COORD/---- the name of any administration with which co-ordination has been effected for the use of the frequency; if no co-ordination has been effected, the indication "Nil" should be inserted. In the case of a notification under No. 490 in a frequency band above 28 000 kHz, the area or areas of the actual agreed use to which the co-ordination refers should be indicated.

---

\* Where this information already appears in the Preface to the International Frequency List, the appropriate reference number or letter may be used.

API Section E.II (cont.)

NOC

3. In any case where there are one or more reference frequencies in a particular transmission (e.g. in the case of *a*) the frequency of the reduced carrier in an independent or single-sideband emission, and *b*) the frequencies of the sound and vision carriers in a television emission), such reference frequencies shall be supplied. In the case of television broadcasting stations in Region 1, each notice shall include, as supplementary information, both the frequency of the other carrier and the assigned frequency.

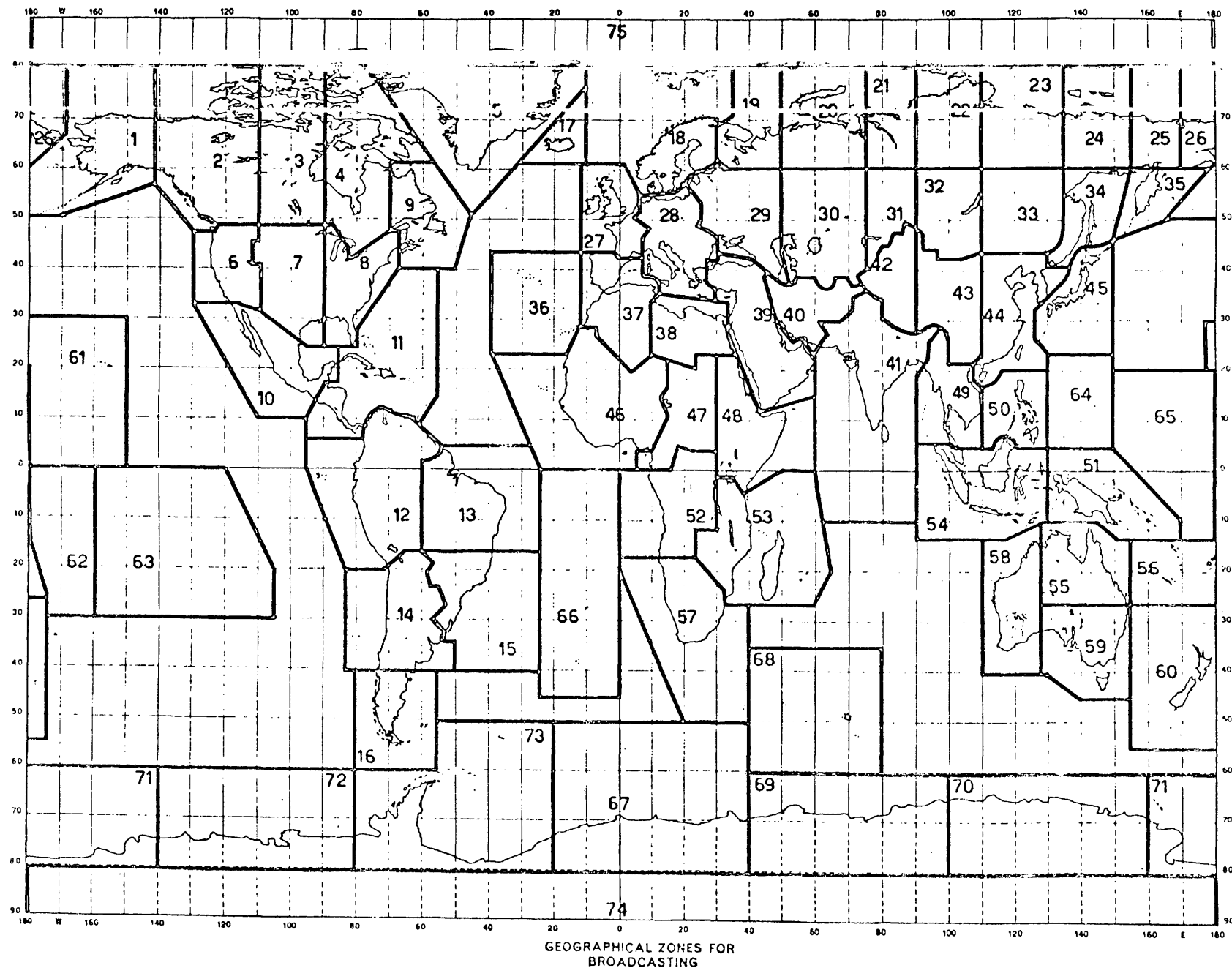
NOC

4. Any other information which the administration considers to be relevant should be indicated, such as, for example, an indication that the assignment concerned would be operating in accordance with No. [115] of these Regulations, or information concerning the use of the notified frequency if such use is restricted or if the frequency is not used during all the time which is possible according to propagation conditions.

NOC

5. *Only the information specified in paragraph 3 above is a basic characteristic ; it is recommended, however, that the information under paragraph 1 above be supplied. However, in the case of stations in the fixed or mobile service referred to in No. [492A] the name of any administration with which co-ordination of the use of the frequency has been sought and the name of any administration with which such co-ordination has been effected are basic characteristics.*





# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Corrigendum No. 1 to  
Document No. 736-E  
20 November 1979  
Original : French

## WORKING GROUP 6A

Replace paragraphs f), g) and h) in Resolution No. ... annexed to Document No. 736 by the following paragraph and renumber paragraph i) accordingly.

.....

"f) that it is necessary to introduce in the relevant procedures contained in the existing Radio Regulations additional provisions for transitional application during the interim period between / the entry into force of the Final Acts of the present Conference / and the entry into force of the Final Acts of the Conference referred to in paragraph e)."

Delete the operative part beginning "further invites" in Resolution No. ... annexed to Document No. 736.

Insert in the operative part beginning "resolves" in the same Resolution the following paragraph 1.5 :

"resolves

.....

1.5 that, when the provisions in paragraphs 1 to 1.4 above are applied, the information contained in Appendices 1A and 1B to the Radio Regulations shall be supplemented as indicated in Annex 1 to this Resolution."



**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 736-E

18 November 1979

Original: English

WORKING GROUP 6A

NOTE FROM THE CHAIRMAN OF WORKING GROUP 6A

Following the discussion on Document No. 663 during the twenty-second meeting of Working Group 6A and at the request of the Chairman of that Working Group, a small drafting group composed of delegates of China, France and Jordan has drafted the text of a new Resolution which is annexed hereto, for consideration by the Working Group.

J.K. BJÖRNSJÖ

Chairman of Working Group 6A

Annex : 1



A N N E X

RESOLUTION No. ...

On the Period of Validity of Frequency Assignments to Space Stations

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that rational and efficient use must be made of the frequency spectrum and the geostationary satellite orbit and that account should be taken of the provisions of Resolution No. Spa2 - 1 relating to the use by all countries, with equal rights, of frequency bands for space radiocommunication services;
- b) that limiting the period of validity of frequency assignments to space stations is a concept which could promote the attainment of these objectives;
- c) that amortizing the considerable investments made in connection with the development of space radiocommunications is a particularly heavy burden for all Administrations and that these investments should be spread over a predetermined period;
- d) that efforts should be made, through regulatory measures, to encourage Administrations in a position to do so to develop techniques designed to improve the utilization of the frequency spectrum and the geostationary orbit with a view to increasing the total radiocommunication facilities available to the world community;
- e) that a World Space Radiocommunication Conference is due to meet around 1984 to deal with the use of the geostationary satellite orbit and the planning of the space services using this orbit;
- f) that it would be advantageous to include the regulatory measures referred to in paragraph d) above in the Radio Regulations;
- g) that the tasks of the conference referred to in paragraph e) should not be complicated through the adoption of definitive decisions but that it should on the contrary be provided with experimental results based on the transitional application of regulations covering the interim period between [the entry into force of the Final Acts of the present Conference] and the conference referred to in paragraph e);
- h) that regulations based on the concept mentioned in paragraph b) might be necessary after the future space conference either for all space radiocommunication services or at least for those which have not been specially dealt with by the said conference;
- i) that, to guarantee the value of the experience gained in applying the new concept of limiting the period of validity of an assignment in space radiocommunications, it is not desirable to impose on Administrations a statutory period identical in all cases but that on the contrary



Administrations should be left to propose the period of validity themselves in the light of their requirements and of the common interest;

resolves

1. that as from [the entry into force of the Final Acts of the present Conference] [1 March 1980] frequency assignments to space radiocommunication stations located on the geostationary satellite orbit shall be dealt with as follows :

1.1 a frequency assignment to a space station<sup>1)</sup> on a geostationary satellite shall be deemed definitively discontinued after the expiry of the period of operation shown on the assignment notice, reckoned from the date on which the assignment was brought into service. This period shall be limited to the period for which the satellite network was designed. The Board shall then invite the notifying Administration to take steps to cancel the assignment. If the Board receives no reply within ninety days following the expiry of the period of operation, the entry of the assignment in the Master Register shall be cancelled;

1.2 if a notifying Administration which wishes to extend the period of operation originally shown on the assignment notice of a frequency assignment of an existing space station<sup>1)</sup> informs the Board accordingly more than three years before the expiry of the period in question and if all other basic characteristics of that assignment remain unchanged, the Board shall amend as requested the period of operation originally recorded in the Master Register and publish that information in a special section of the weekly circular;

1.3 if, at least three years before the expiry of the period of operation recorded in the Master Register of a frequency assignment of an existing space station<sup>1)</sup>, an Administration initiates the coordination procedure specified in No. 4114/639AJ to bring into service a new space station using the same assigned frequency and the same orbital position but with different technical characteristics, and if the Board finds after the notification that the new assignment conforms with the provisions of No. 4587/639BM and does not increase, in relation to the preceding assignment, the probability of interference to the detriment of a frequency assignment recorded in the Master Register or involved in the coordination procedure, the new assignment shall be given a favourable finding and shall be entered in the Master Register with the notification date of the preceding assignment;

1.4 a notifying Administration which wishes to modify a basic characteristic of a frequency assignment of a space station<sup>1)</sup> recorded in the Master Register shall initiate, in any case other than those covered by Nos. 4642B and 4642C, the appropriate modification procedure in accordance with Nos. 4619/639CS to 4622/639CV;

---

1) The expression "space station" may apply to more than one satellite provided that only one satellite is in operation at any particular moment and that the stations installed on board successive satellites have identical basic characteristics.

invites the World Space Radiocommunication Conference provided for in Resolution No. ...

to take note of the initial results obtained in implementing the present Resolution, to examine this Resolution within the more general framework of the rearrangement of the regulatory procedures and to decide whether the text of the Resolution should be incorporated in the Radio Regulations;

further invites Administrations which have to apply the provisions of paragraphs 1 to 4 of the operative part of this Resolution

to complete the information appearing in Appendices 1A and 1B of the Radio Regulations as indicated in Annex 1 to the present Resolution.

Editorial note : in the light of the provisions adopted, it will be necessary to make consequential editorial amendments at the appropriate places in Article N13 and Appendices 1A and 1B in order to refer to the provisions of the present Resolution.

Annex 1  
(to Resolution No. ...)

ADDITIONAL INFORMATION TO BE SUPPLIED UNDER APPENDICES 1A AND 1B

APPENDIX 1A

Section D. Basic Characteristics to be Furnished in Notices  
Relating to Frequencies used by Space Stations for Transmitting

NOC           Item 3

ADD           Item 3 bis : Period of operation

Indicate the proposed period of operation of the space station. This period shall be limited to the period for which the satellite network is designed. During that period, replacement satellites may be used, provided that the technical characteristics of the frequency assignment remain unchanged.

Section E. Basic Characteristics to be Furnished in Notices  
Relating to Frequencies to be Received by Space Stations

NOC           Item 3

ADD           Item 3 bis

Indicate the proposed period of operation of the space station. This period shall be limited to the period for which the satellite network is designed. During that period, replacement satellites may be used, provided that the technical characteristics of the frequency assignment remain unchanged.

APPENDIX 1B

Section B. General Characteristics to be  
Furnished for a Satellite Network

NOC           Item 1

NOC           Item 2

ADD           Item 2 bis : Period of operation

Indicate the proposed period of operation of the space station(s) of the satellite network. This period shall be limited to the period for which the satellite network is designed. During that period, replacement satellites may be used, provided that the technical characteristics of the frequency assignments remain unchanged.

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WORLD ADMINISTRATIVE  
RADIO CONFERENCE

(Geneva, 1979)

Document No. 737-E  
17 November 1979  
Original : EnglishPLENARY MEETINGState of Bahrain and United Arab Emirates

## PROPOSALS FOR THE WORK OF THE CONFERENCE

BHR/ UAE/737/1	MOD	3780/402	Add BHR and UAE to this footnote.
BHR/ UAE/737/2	ADD	3783B	Add BHR and UAE to this footnote.
BHR/ UAE/737/3	MOD	3784/405B	Add BHR and UAE to this footnote.
BHR/ UAE/737/4	ADD	3794D	Add BHR and UAE to this footnote.
BHR/ UAE/737/5	ADD	3795C	Add BHR and UAE to this footnote.
BHR/ UAE/737/6	ADD	3698A	Add BHR and UAE to this footnote.
BHR/ UAE/737/7	MOD	3757/389	Add BHR and UAE to this footnote.
BHR/ UAE/737/8	MOD	3799/409C	Add BHR and UAE to this footnote.
BHR/ UAE/737/9	ADD	3815B	Add BHR and UAE to this footnote.
BHR/ UAE/737/10	ADD	3816F	Add BHR and UAE to this footnote.

Reasons : To maintain existing requirements and to facilitate future regional frequency assignments. However, with respect to those bands above 40 GHz there are no immediate requirements, at present, but it is expected that there will be some in the future as a result of technological development of radiocommunication equipment.





# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 738-E

17 November 1979

Original : English

## PLENARY MEETING

### State of Kuwait

#### PROPOSALS FOR THE WORK OF THE CONFERENCE

KWT/738/1	MOD 3780/402	Add KWT to this footnote.
KWT/738/2	ADD 3783B	Add KWT to this footnote.
KWT/738/3	MOD 3757/389	Add KWT to this footnote.
KWT/738/4	MOD 3799/409C	Add KWT to this footnote.
KWT/738/5	ADD 3815B	Add KWT to this footnote.
KWT/738/6	ADD 3816F	Add KWT to this footnote.
KWT/738/7	ADD 3795C	Add KWT to this footnote.

Reasons : To maintain existing requirements and to facilitate future regional frequency assignments. However, with respect to those bands above 40 GHz there are no immediate requirements at present, but it is expected that there will be some in the future as a result of technological development of radiocommunication equipment.



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Corrigendum No. 2 to  
Document No. 739  
21 November 1979

**E**

B.19

PLENARY MEETING

## **19th SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING**

Page B.19-15

Replace the text of Article N28/7 by the following:



[[

f3

[[

[3]

[ ]

ADD 6218A

(2A) The carrier power of the transmitter operating in this service in the bands listed in No. 6218/425 shall not exceed 50 kW.

NOC 6219 426

(3) Within the Tropical Zone, the broadcasting service has priority over the other services with which it shares the bands listed in No. 6218/425.

NOC 6220 427

(4) However, in that part of Libya north of parallel 30° North the broadcasting service in the bands listed in No. 6218/425 has equal rights to operate with other services in the Tropical Zone with which it shares these bands.

NOC 6221 428

(5) The broadcasting service operating inside the Tropical Zone, and other services operating outside the Zone, are subject to the provisions of No. 3282/117.

NOC

## Section II. Broadcasting-Satellite Service

NOC 6222 428A  
Spa2

§ 3. In devising the characteristics of a space station in the broadcasting-satellite service, all technical means available shall be used to reduce, to the maximum extent practicable, the radiation over the territory of other countries unless an agreement has been previously reached with such countries.

6223  
to  
6322

NOT allocated.

INTERNATIONAL TELECOMMUNICATION UNION

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Corrigendum No. 1 to  
Document No. 739  
20 November 1979

**E**

B.19

PLENARY MEETING

**19th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

(concerns the French and Spanish texts only)



**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 739  
19 November 1979**E**

B.19

PLENARY MEETING**19th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.5	606 + 605	Art. 5; 6; 7 (3414 to 3450) Art. 8; 28; 47 Appendix 24 Resolution No. 6 Recommendations No. Aer2 - 6; Aer2 - 9 Art. 5 (No. 3281 and 3281A)
C.5	668 + 669	

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 18 pages



NOC

## CHAPTER NIII

## Frequencies

## ARTICLE N5/3

NOC

## General Rules for the Assignment and Use of Frequencies

ADD 3276A

§ 0. Members shall endeavour to limit the number of frequencies and the spectrum space used to the minimum essential to provide in a satisfactory manner the necessary services. To that end they shall endeavour to apply the latest technical advances as soon as possible (CONV.) 1.

ADD 3276A.1

1 No. 130 of the International Telecommunications Convention, Malaga-Torremolinos, 1973.

MOD 3277 113

§ 1. Members undertake that in assigning frequencies to stations which are capable of causing harmful interference to the services rendered by the stations of another country, such assignments are to be made in accordance with the Table of Frequency Allocations and other provisions of these Regulations.

NOC 3278 114  
Spa

§ 2. Any new assignment or any change of frequency or other basic characteristic of an existing assignment (see Appendix 1 or Appendix 1A) shall be made in such a way as to avoid causing harmful interference to services rendered by stations using frequencies assigned in accordance with the Table of Frequency Allocations in this Chapter and the other provisions of these Regulations, the characteristics of which assignments are recorded in the Master International Frequency Register.

MOD 3279 115

§ 3. Administrations of the Members shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations given in this Chapter or the other provisions of these Regulations, except on the express condition that harmful interference shall not be caused to services carried on by stations operating in accordance with the provisions of the Convention and of these Regulations.

NOC 3280 116

§ 4. The frequency assigned to a station of a given service shall be separated from the limits of the band allocated to this service in such a way that, taking account of the frequency band assigned to a station, no harmful interference is caused to services to which frequency bands immediately adjoining are allocated.

NOC	3281	116A Spa	§ 5. For the purpose of resolving cases of harmful interference, the radio astronomy service shall be treated as a radiocommunication service. However, protection from services in other bands shall be afforded the radio astronomy service only to the extent that such services are afforded protection from each other.
ADD	3281A		§ 5A. For the purpose of resolving cases of harmful interference the space research (passive) service and the earth exploration-satellite (passive) service shall be afforded protection from different services in other bands only to the extent that these different services are protected from each other.
MOD	3282	117	§ 6. Where, in adjacent Regions or sub-Regions, a band of frequencies is allocated to different services of the same category (see Sections I and II of Article N7/5), the basic principle is the equality of right to operate. Accordingly, the stations of each service in one Region or sub-Region must operate so as not to cause harmful interference to services in the other Regions or sub-Regions.
ADD	3283		§ 6A. No provision of these Regulations prevents the use by a station in distress of any means of radiocommunication at its disposal to attract attention, make known its condition and location, and obtain assistance.
ADD	3284		§ 6B. No provision of these Regulations prevents the use by a station, in the exceptional circumstances described in No. 3283, of any means of radiocommunication at its disposal to assist a station in distress.
	3285 to 3307		NOT allocated.



## ARTICLE N6/4

NOC

## Special Agreements

- MOD 3308 118 § 1. Two or more Members of the Union may, under the provisions for special arrangements in Article 31 of the Convention, conclude special agreements regarding the sub-allocation of bands of frequencies to the appropriate services of the participating countries.
- MOD 3309 119 § 2. Two or more Members of the Union may, under the provisions for special arrangements in Article 31 of the Convention, conclude special agreements, as a result of a Conference to which all those Members of the Union concerned have been invited, regarding the assignment of frequencies to those of their stations which participate in one or more specific services within the frequency bands allocated to these services by Article N7/5, either below 5 060 kHz or above 27 500 kHz, but not between those limits.
- MOD 3310 120 § 3. Members of the Union may, under the provisions for special arrangements in Article 31 of the Convention, conclude, on a world-wide basis, and as a result of a Conference to which all Members of the Union have been invited, special agreements concerning the assignment of frequencies to those of their stations participating in a specific service, on condition that such assignments are within the frequency bands allocated exclusively to that service in Article N7/5.
- NOC 3311 121 § 4. Special agreements concluded in accordance with the provisions of Nos. 3308/118 to 3310/120 shall not be in conflict with any of the provisions of these Regulations.
- MOD 3312 122 § 5. The Secretary-General shall be informed, in advance, of any Conference to be convened to conclude such an agreement; he shall also be informed of the terms of the agreement when concluded; and he shall inform the Members of the Union of the existence of such agreements.
- NOC 3313 123 § 6. In accordance with the provisions of Article N9/8, the International Frequency Registration Board may be invited to send representatives to participate in an advisory capacity in the preparation of these agreements and in the proceedings of the Conferences, it being recognized that in the majority of cases such participation is desirable.

B. 19-4

MOD 3314 124

§ 7. If, besides the action they may take in accordance with No. 3309/119, two or more Members of the Union coordinate the use of individual frequencies in any of the frequency bands covered by Article N7/5 before notifying the frequency assignments concerned, they shall in all appropriate cases inform the Board of such coordination.

3315  
to  
3414

NOT allocated.

B.19-5

## ARTICLE N7/5

MOD

Frequency Allocations [9 kHz to ]

[]

SUP

A.N7/5 Spa2

ADD

## Preamble

ADD 3414A

§ 0. In all documents of the Union where the terms ALLOCATION, ALLOTMENT and ASSIGNMENT are to be used, they shall have the meaning given them in Nos. [3023A to 3023C] the terms used in the three working languages being as follows:

[]

Frequency distribution to:	French	English	Spanish
Services	Attribution (attribuer):	Allocation (to allocate)	Atribución (atribuir)
Areas or countries	Allotissement (allotir)	Allotment (to allot)	Adjudicación (adjudicar)
Stations	Assignment (assigner)	Assignment (to assign)	Asignación (asignar)

B.19-6

NOC

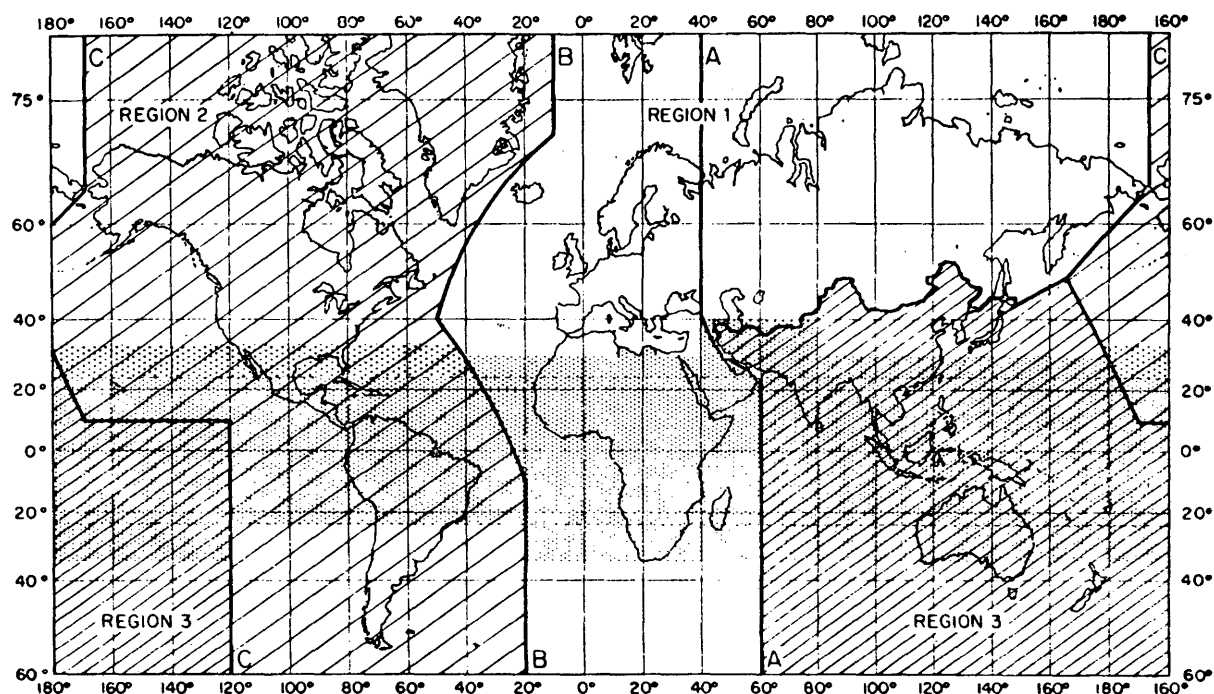
## Section I. Regions and Areas

MOD 3415

125

Spa2

§ 1. For the allocation of frequencies the world has been divided into three Regions 1 as shown in the following chart and described in Nos. 3416/126 to 3422/132:



The shaded part represents the Tropical Zone as defined in Nos. 3425/135 and 3426/136.

NOC 3415.1 125.1  
Spa2

1 It should be noted that where the words "regions" or "regional" are without a capital "R" in these Regulations, they do not relate to the three Regions here defined for purposes of frequency allocation.

NOC 3416 126

Region 1:

Region 1 includes the area limited on the East by line A (lines A, B and C are defined below) and on the West by line B, excluding any of the territory of Iran which lies between these limits. It also includes that part of the territory of Turkey and the Union of Soviet Socialist Republics lying outside of these limits, the territory of the Mongolian People's Republic, and the area to the North of the U.S.S.R. which lies between lines A and C.

B.19-7

NOC 3417 127

Region 2:

Region 2 includes the area limited on the East by line B and on the West by line C.

NOC 3418 128

Region 3:

Region 3 includes the area limited on the East by line C and on the West by line A, except the territories of the Mongolian People's Republic, Turkey, the territory of the U.S.S.R. and the area to the North of the U.S.S.R. It also includes that part of the territory of Iran lying outside of those limits.

NOC 3419 129

The lines A, B and C are defined as follows:

NOC 3420 130

Line A:

Line A extends from the North Pole along meridian 40° East of Greenwich to parallel 40° North; thence by great circle arc to the intersection of meridian 60° East and the Tropic of Cancer; thence along the meridian 60° East to the South Pole.

NOC 3421 131

Line B:

Line B extends from the North Pole along meridian 10° West of Greenwich to its intersection with parallel 72° North; thence by great circle arc to the intersection of meridian 50° West and parallel 40° North; thence by great circle arc to the intersection of meridian 20° West and parallel 10° South; thence along meridian 20° West to the South Pole.

NOC 3422 132

Line C:

Line C extends from the North Pole by great circle arc to the intersection of parallel 65° 30' North with the international boundary in Behring Strait; thence by great circle arc to the intersection of meridian 165° East of Greenwich and parallel 50° North; thence by great circle arc to the intersection of meridian 170° West and parallel 10° North; thence along parallel 10° North to its intersection with meridian 120° West; thence along meridian 120° West to the South Pole.

ADD 3422A

§ 1A. For the purposes of these Regulations, the term "African Broadcasting Area" means:

- a) African countries, parts of countries, territories and groups of territories situated between the parallels 40° South and 30° North;

B. 19-8

- b) islands in the Indian Ocean west of meridian 60° East, situated between the parallel 40° South and the great circle arc joining the points 45° East, 11° 30' North and 60° East, 15° North;
- c) islands in the Atlantic Ocean east of Line B defined in No. 3421/131 of these Regulations, situated between the parallels 40° South and 30° North.

MOD 3423 133

§ 2. The "European Broadcasting Area" is bounded on the West by the western boundary of Region 1, on the East by the meridian 40° East of Greenwich and on the South by the parallel 30° North so as to include the western part of the U.S.S.R., the northern part of Saudi Arabia and that part of those countries bordering the Mediterranean within these limits. In addition, Iraq and Jordan are included in the European Broadcasting Area. { }

NOC 3424 134

The "European Maritime Area" is bounded on the North by a line extending along parallel 72° North from its intersection with meridian 55° East to its intersection with meridian 5° West, then along meridian 5° West to its intersection with parallel 67° North, thence along parallel 67° North to its intersection with meridian 30° West; on the West by a line extending along meridian 30° West to its intersection with parallel 30° North; on the South by a line extending along parallel 30° North to its intersection with meridian 43° East; on the East by a line extending along meridian 43° East to its intersection with parallel 60° North, thence along parallel 60° North to its intersection with meridian 55° East and thence along meridian 55° East to its intersection with parallel 72° North.

MOD 3425 135

The "Tropical Zone" (see chart in No. 3415/125) is defined as:

- a) the whole of that area in Region 2 between the Tropics of Cancer and Capricorn;
- b) the whole of that area in Regions 1 and 3 contained between the parallels 30° North and 35° South with the addition of:
  - 1) the area contained between the meridian 40° East and 80° East of Greenwich and the parallels 30° North and 40° North;
  - 2) that part of Libya north of parallel 30° North.

MOD 3426 136

In Region 2, the Tropical Zone may be extended to parallel 33° North, subject to special agreements between the countries concerned in that Region. (See Article N6/4.)

ADD 3426A

§ 2A. A sub-Region is an area consisting of two or more countries in the same Region.

NOC

## Section II. Categories of Services and Allocations

MOD 3427

### Primary, Permitted and Secondary Services

MOD 3428 137

Where, in a box of the Table in Section IV of this Article, a band is indicated as allocated to more than one service, either on a worldwide or Regional basis, such services are listed in the following order:

- a) services, the names of which are printed in "capitals" (example: FIXED); these are called "primary" services;
- b) services, the names of which are printed in capitals between oblique strokes (example: /RADIOLOCATION/); these are "permitted" services (see No. 3429/138);
- c) services, the names of which are printed in "normal characters" (example: Mobile); these are "secondary" services (see No. 3430/139);
- d) additional remarks shall be printed in normal characters (example: MOBILE except aeronautical mobile).

NOC 3429 138

Permitted and primary services have equal rights, except that, in the preparation of frequency plans, the primary service, as compared with the permitted service, shall have prior choice of frequencies.

NOC 3430 139

### Stations of a secondary service:

- a) shall not cause harmful interference to stations of primary or permitted services to which frequencies are already assigned or to which frequencies may be assigned at a later date;
- b) cannot claim protection from harmful interference from stations of a primary or permitted service to which frequencies are already assigned or may be assigned at a later date;

B. 19-10

- c) can claim protection, however, from harmful interference from stations of the same or other secondary service(s) to which frequencies may be assigned at a later date.

MOD 3431 140

Where a band is indicated in a footnote of the Table as allocated to a service "on a secondary basis" in an area smaller than a Region, or in a particular country, this is a secondary service (see No. 3430/139).

MOD 3432 141

Where a band is indicated in a footnote of the Table as allocated to a service "on a primary basis", or "on a permitted basis" in an area smaller than a Region, or in a particular country, this is a primary service or a permitted service only in that area or country (see No. 3429/138).

MOD 3433

#### Additional allocations

MOD 3434 142

Where a band is indicated in a footnote of the Table as "also allocated" to a service in an area smaller than a Region, or in a particular country, this is an "additional" allocation, i.e. an allocation which is added in this area or in this country to the service or services which are indicated in the Table (see No. 3435/143).

MOD 3435 143

If the footnote does not include any restriction on the service or services concerned apart from the restriction to operate only in a particular area or country, stations of this service or these services shall have equality of right to operate with stations of the other primary service or services indicated in the Table.

MOD 3436 144

If restrictions are imposed on an additional allocation in addition to the restriction to operate only in a particular area or country, this is indicated in the footnote of the Table.

NOC 3437

#### Alternative Allocations

MOD 3438 145

Where a band is indicated in a footnote of the Table as "allocated" to one or more services in an area smaller than a Region, or in a particular country, this is an "alternative" allocation, i.e. an allocation which replaces, in this area or in this country, the allocation indicated in the Table (see No. 3439/146).

MOD 3439 146

If the footnote does not include any restriction on stations of the service or services concerned, apart from the restriction to operate only in a particular



area or country, these stations of such a service or services shall have an equality of right to operate with stations of the primary service or services, indicated in the Table, to which the band is allocated in other areas or countries.

NOC 3440 147

If restrictions are imposed on stations of a service to which an alternative allocation is made, in addition to the restriction to operate only in a particular country or area, this is indicated in the footnote.

NOC 3441

#### Miscellaneous Provisions

NOC 3442 148

Where it is indicated in these Regulations that a service may operate in a specific frequency band subject to not causing harmful interference, this means also that this service cannot claim protection from harmful interference caused by other services to which the band is allocated under Chapter NIII/II of these Regulations.

NOC 3443 149

Except if otherwise specified in a footnote, the term "fixed service", where appearing in Section IV of this Article, does not include systems using ionospheric scatter propagation.

### NOC Section III. Description of the Table of Frequency Allocations

NOC 3444 150

The heading of the Table in Section IV of this Article includes three columns, each of which corresponds to one of the Regions (see No. 3415/125). Where an allocation occupies the whole of the width of the Table or only one or two of the three columns, this is a world-wide allocation or a Regional allocation, respectively.

MOD 3445 151

The frequency band referred to in each allocation is indicated in the left-hand top corner of the part of the Table concerned.

NOC 3446 152

Within each of the categories specified in No. 3428/137, services are listed in alphabetical order according to the French language. The order of listing does not indicate relative priority within each category.

ADD 3446A

In the case where there is a parenthetical addition to an allocation in the Table, that service allocation is restricted to the type of operation so indicated.

NOC 3447 153

The footnote references which appear in the Table below the allocated service or services apply to the whole of the allocation concerned.

NOC 3448 154

The footnote references which appear to the right of the name of a service are applicable only to that particular service.

NOC 3449 155

In certain cases, the names of countries appearing in the footnotes have been simplified in order to shorten the text.

MOD

Section IV. Table of Frequency Allocations [9 kHz to ]

[]

MOD 3450 156

In the Table of Frequency Allocations frequencies are indicated as follows:

- frequencies up to and including 3 000 kHz, in kilohertz (kHz);
- thereafter, up to and including 3 000 MHz, in megahertz (MHz);
- thereafter, up to and including 3 000 GHz, in gigahertz (GHz);

[]

- thereafter, up to and including 3 000 THz, in terahertz (THz).

[]

[This Table is shown on pages [ ] following.]

[] []

## ARTICLE N8/6

NOC

**Special Rules for the Assignment and Use of Frequencies**

ADD 3916A

§ 0. Members recognize that the safety aspects of radionavigation and other safety services require special measures to ensure their freedom from harmful interference; it is necessary therefore to take this factor into account in the assignment and use of frequencies.

MOD 3917 413

§ 1. (1) Members recognize that among frequencies which have long-distance propagation characteristics, those in the bands between 5 000 and 30 000 kHz are particularly useful for long-distance communications; they agree to make every possible effort to reserve these bands for such communications. Whenever frequencies in these bands are used for short or medium-distance communications, the minimum power necessary shall be employed.

NOC 3918 414

(2) To reduce requirements for frequencies in the bands between 5 000 and 30 000 kHz and thus to prevent harmful interference to long-distance radiocommunications, administrations are encouraged to use, whenever practicable, any other possible means of communication.

MOD 3919 415  
Spa2

§ 2. (1) When special circumstances make it indispensable to do so, an administration may, as an exception to the normal methods of working authorized by these Regulations, have recourse to the special methods of working enumerated below, on the sole condition that the characteristics of the stations still conform to those inserted in the Master International Frequency Register:

a) a fixed station in the fixed service or an earth station in the fixed-satellite service may, under the conditions defined in No. 3430/139, transmit to mobile stations on its normal frequencies;

b) a land station may communicate, under the conditions defined in No. 3430/139, with fixed stations in the fixed service or earth stations in the fixed-satellite service or other land stations of the same category.

NOC 3920 416

(2) However, in circumstances involving the safety of life, or the safety of a ship or aircraft, a land station may communicate with fixed stations or land stations of another category.

B.19-14

NOC	3921	417 Spa2	§ 3. Any administration may assign a frequency in a band allocated to the fixed service or allocated to the fixed-satellite service to a station authorized to transmit, unilaterally, from one specified fixed point to one or more specified fixed points provided that such transmissions are not intended to be received directly by the general public.	
NOC	3922	418	§ 4. Any mobile station using an emission which satisfies the frequency tolerance applicable to the coast station with which it is communicating may transmit on the same frequency as the coast station on condition that the latter requests such transmission and that no harmful interference is caused to other stations.	
NOC	3923	419	§ 5. In certain cases provided for in Articles N35/32 and [N56/35], aircraft stations are authorized to use frequencies in the bands allocated to the maritime mobile service for the purpose of communicating with stations of that service (see No. 7973/952).	[ ]
MOD	3924	419A Spa2	§ 6. Aircraft earth stations are authorized to use frequencies in the bands allocated to the maritime mobile-satellite service for the purpose of communicating, via the stations of that service, with the public telegraph and telephone networks.	
MOD	3925	421 Mar2	§ 7. Any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on the international distress and emergency frequencies established for this purpose by these Regulations is prohibited. Supplementary distress frequencies available on less than a world-wide basis should be afforded adequate protection.	
	3926 to 3950		NOT allocated.	

B.19-15

## ARTICLE N28/7

NOC

Broadcasting Service ~~and~~  
Broadcasting-Satellite Service

{ }

SUP

## Section I. Broadcasting Service

SUP 6213

A.

NOC 6214 422

§ 1. (1) The establishment and use of broadcasting stations (sound broadcasting and television broadcasting stations) on board ships, aircraft or any other floating or airborne objects outside national territories is prohibited.

NOC 6215 423

(2) In principle, except in the frequency band 3 900 - 4 000 kHz broadcasting stations using frequencies below 5 060 kHz or above 41 MHz shall not employ power exceeding that necessary to maintain economically an effective national service of good quality within the frontiers of the country concerned.

SUP 6216

B.

NOC 6217 424

§ 2. (1) In these Regulations, the expression "broadcasting in the Tropical Zone" indicates a type of broadcasting for internal national use in countries in the zone defined in Nos. 3425/135 and 3426/136, where it may be shown that because of the difficulty of high atmospheric noise level and propagation it is not possible to provide economically a more satisfactory service by using low, medium, or very high frequencies.

NOC 6218 425

(2) The use by the broadcasting service of the bands listed below is restricted to the Tropical Zone:

2 300 - 2 498 kHz (Region 1)
2 300 - 2 495 kHz (Regions 2 and 3)
3 200 - 3 400 kHz (All Regions)
4 750 - 4 995 kHz (All Regions)
5 005 - 5 060 kHz (All Regions)

[ ]

B.19-16

- ADD 6218A (2A) The carrier power of the transmitter operating in this service in the bands listed in No. 6218/425 shall not exceed 50 kW.
- NOC 6219 426 (3) Within the Tropical Zone, the broadcasting service has priority over the other services with which it shares the bands listed in No. 6218/425.
- NOC 6220 427 (4) However, in that part of Libya north of parallel 30° North the broadcasting service in the bands listed in No. 6218/425 has equal rights to operate with other services in the Tropical Zone with which it shares these bands.
- NOC 6221 428 (5) The broadcasting service operating inside the Tropical Zone, and other services operating outside the Zone, are subject to the provisions of No. 3282/117.

SUP Section II. Broadcasting-Satellite Service

- SUP 6222 428A § 3.  
Spa2
- 6223  
to  
6322 NOT allocated.

## ARTICLE N47

NOC

**Special Rules Relating to the Use of  
Frequencies in the Aeronautical Mobile Service**

NOC    7376    429    § 1.        Frequencies in any band allocated to the aeronautical mobile (R) service are reserved for communications between any aircraft and those aeronautical stations primarily concerned with the safety and regularity of flight along national or international civil air routes.

NOC    7377    430    § 2.        Frequencies in any band allocated to the aeronautical mobile (OR) service are reserved for communications between any aircraft and aeronautical stations other than those primarily concerned with flight along national or international civil air routes.

MOD    7378    431  
                 Aer2    § 3.        Frequencies in the bands allocated to the aeronautical mobile service between 2 850 and [22 000 kHz] (see Article N7/5) shall be assigned in conformity with the provisions of Appendices 26 and 27 Aer2 and the other relevant provisions of these Regulations.    [ ]

MOD    7379    432    § 4.        Administrations shall not permit public correspondence in the frequency bands allocated exclusively to the aeronautical mobile service, unless permitted by special aeronautical regulations adopted by a Conference of the Union to which all interested Members of the Union are invited. Such regulations shall recognize the absolute priority of safety and control messages.

MOD    7380    1162    § 5.        In order to reduce interference, aircraft stations shall, within the means at their disposal, endeavour to select for calling the band with the most favourable propagational characteristics for effecting reliable communication. In the absence of more precise data, an aircraft station shall, before making a call, listen for the signals of the station with which it desires to communicate. The strength and intelligibility of such signals are useful as a guide to propagational conditions and indicate which is the preferable band for calling.

NOC    7381    1207    § 6.        Governments may, by agreement, decide the frequencies to be used for call and reply in the aeronautical mobile service.

7382  
to  
7407

NOT allocated.

B.19-18

SUP

**APPENDIX 24**

**Chart of Regions as Defined in Table of  
Frequency Allocations**

SUP

**RESOLUTION No. 6**

**Relating to Frequency Terminology**

SUP

**RECOMMENDATION No. Aer2 - 6**

**Relating to the Concordance of the French,  
English and Spanish Texts of No. 429  
of the Radio Regulations**

SUP

**RECOMMENDATION No. Aer2 - 9**

**Relating to Public Correspondence with Aircraft**



**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 740  
19 November 1979**E**

B.20

PLENARY MEETING**20th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.4	698 + 699	Resolution No. 8 LF/MF, Geneva 1975 Recommendation No. 3 LF/MF, Geneva 1975 Recommendation No. 5 LF/MF, Geneva 1975
C.4	654	SUP Resolution No. 7 SUP Recommendations No. 4; 7; 8; 9; 13; SUP Recommendations No. Spa2 - 8; No Mar2 - 13; Spa 5; Mar 3

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 3 pages



B.20-1

NOC

RESOLUTION No. 8

**Relating of the Use of Bandwidth Saving Modulation Systems**

of the Regional Administrative LF/MF Broadcasting Conference  
(Regions 1 and 3), Geneva, 1975,

[No action is needed]

[]

NOC

RECOMMENDATION No. 3

**Relating to Methods of Predicting Sky-Wave Propagation**

of the Regional Administrative LF/MF Broadcasting Conference  
(Regions 1 and 3), Geneva, 1975,

[No action is needed]

[]

NOC

RECOMMENDATION No. 5

**Relating to the Publication of a Handbook of  
Radiation Diagrams of Directional Antennae  
that can be used in the Broadcasting Service**

of the Regional Administrative LF/MF Broadcasting Conference  
(Regions 1 and 3), Geneva, 1975,

[No action is needed]

[]

SUP

RESOLUTION No. 7

**Relating to Radio Emissions from Artificial Satellites  
and other Space Vehicles**

[All necessary action has been taken]

[]

SUP

## RECOMMENDATION No. 7

**Relating to Specifications of Broadcasting Receivers at Low Cost**

[All necessary action has been taken]

[ ]

## RECOMMENDATION No. Spa2 - 8

**Relating to the Protection of Radio Astronomy Observations on the  
Shielded Area of the Moon**

[All necessary action has been taken]

[ ]

SUP

## RECOMMENDATION No. Mar2 - 13

**Relating to the Development of Fixed Frequency  
Radar Beacons (Racons)**

[All necessary action has been taken]

[ ]

SUP

## RECOMMENDATION No. 4

**to the CCIR  
Relating to Studies of Radio Propagation and Radio Noise**

[Replaced by Recommendation E]

[ ]

SUP

## RECOMMENDATION No. 8

**Relating to the Classification of Emissions**

[Replaced by Recommendation K]

[ ]

B.20-3

SUP

RECOMMENDATION No. 9

**Relating to the Use of the Rationalized M.K.S. System of Units**

[ Replaced by Recommendation [S/15/380] - Text to be found in a later Document ] [ ] [ ]

SUP

RECOMMENDATION No. 13

**Relating to the Technical Standards to be applied  
when preparing Plans for the Broadcasting Stations  
in the Bands 68 - 73 MHz and 76 - 87.5 MHz**

[ Now obsolete ] [ ]

SUP

RECOMMENDATION No. Spa 5

**to the CCIR Relating to the Broadcasting-Satellite Service**

[ Now obsolete ] [ ]

SUP

RECOMMENDATION No. Mar 3

**Relating to the Utilization of Space Communication  
Techniques in the Maritime Mobile Service**

[ Now obsolete ] [ ]

INTERNATIONAL TELECOMMUNICATION UNION

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 741  
19 November 1979**E**

B.2i

PLENARY MEETING**21st SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.6	631 + 632	Appendix 6 Appendix 7 Appendix 8 Resolution AK

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 12 pages



## APPENDIX 6

MOD                    **Reports of International Monitoring of Emissions**

(see Article N18/13)

ADD                    **Section I. Reports concerning stations in the  
terrestrial radiocommunication services**

1. Reports of measurements of frequency should contain as much as necessary of the following information:

a) identification of the monitoring station (administration or organization, and location);

b) date of measurement;

MOD                    c) time of measurement (UTC);

MOD                    d) call sign or other means of identification, or both, of the station monitored;

MOD                    e) class of emission 1;

f) assigned frequency or reference frequency;

g) frequency tolerance;

h) measured frequency;

i) accuracy of measurement;

j) departure from assigned or reference frequency;

k) additional information (e.g. period covered by measurement, drift of measured frequency during that period, quality of received signal and conditions of reception);

l) remarks.

MOD                    2. Reports of measurements of field strength or power flux density should contain as much as necessary of the following information:

a) identification of the monitoring station (administration or organization, and location);

b) date of measurement;

- MOD        c)    time of measurement (UTC);
- MOD        d)    call sign or other means of identification, or both, of the station monitored;
- MOD        e)    class of emission 1;
- f)    assigned frequency;
- MOD        g)    value of measured field strength or power flux density;
- h)    estimated accuracy of measurement;
- i)    value of the measured component of polarization;
- j)    other elements or characteristics of the measurement;
- k)    remarks.
- MOD    3.       Reports of observations of spectrum occupancy should as far as practicable be made in the form recommended by the IFRB and contain if possible the following information:
- a)    identification of the monitoring station (administration or organization, and location);
- b)    date of the measurement;
- MOD        c)    time of measurement (UTC);
- d)    call sign or other means of identification, or both, of the station monitored;
- MOD        e)    class of emission 1;
- MOD        f)    class of station and nature of service;
- g)    measured frequency;
- ADD        h)    period during which the emission was heard or recorded;
- MOD        i)    value of measured field strength or power flux density or signal strength according to the QSA scale;
- MOD        j)    bandwidth occupied (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the IFRB);

MOD            k)    information as to the locality or area in which reception is intended;

MOD            l)    remarks.

4.            In providing these data, the symbols contained in the Radio Regulations or in the Preface to the International Frequency List should be used as far as possible.

ADD                            **Section II. Reports concerning stations in the  
space radiocommunication services**

1.            Reports of measurements of frequency should contain as much as necessary of the following information:

- a)    identification of the monitoring station (administration or organization, and location);
- b)    date of measurement;
- c)    time of measurement (UTC);
- d)    call sign or other means of identification, or both, of the station monitored;
- e)    class of emission 1;
- f)    assigned frequency or reference frequency;
- g)    frequency tolerance;
- h)    measured frequency;
- i)    accuracy of measurement;
- j)    departure from assigned or reference frequency;
- k)    additional information (e.g. period covered by measurement, drift of measured frequency during that period, quality of received signal and conditions of reception);
- l)    remarks.

2.            Reports of measurements of field strength or power flux density should contain as much as necessary of the following information:

- a)    identification of the monitoring station (administration or organization, and location);
- b)    date of measurement;



- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission 1;
- f) assigned frequency;
- g) value of measured field strength or power flux density;
- h) estimated accuracy of measurement;
- i) value of the measured component of polarization;
- j) other elements or characteristics of the measurement;
- k) remarks.

MOD 3. Reports of observations of spectrum occupancy should as far as practicable be made in the form recommended by the IFRB and contain if possible the following information:

3.1 Reports of observations concerning emissions of space stations:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission 1;
- f) class of station and nature of service;
- g) measured frequency;
- ADD h) period during which the emission was observed or recorded;
- MOD i) value of measured field strength or power flux density or signal strength according to the QSA scale;
- MOD j) bandwidth occupied (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the IFRB);
- MOD k) observed polarization;
- MOD l) information on orbit;

MOD m) information as to the locality or area in which reception is intended, if known;

MOD n) remarks.

3.2 Reports of observations concerning emissions of earth stations:

a) identification of the monitoring station (administration or organization, and location);

b) date of the measurement;

c) time of measurement (UTC);

d) call sign or other means of identification, or both, of the station monitored;

e) class of emission 1;

f) class of station and nature of service;

g) measured frequency;

h) period during which the emission was observed or recorded;

i) value of measured field strength or power flux density or signal strength according to the QSA scale;

MOD j) bandwidth occupied (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the IFRB);

MOD k) information as to the orbital position where reception is intended;

l) remarks.

4. In providing these data, the symbols contained in the Radio Regulations or in the Preface to the International Frequency List should be used as far as possible.

ADD The class of emission shall contain the basic characteristics listed in Article [N3] and, if possible, the additional characteristics listed in Appendix [5 MOD]. If any characteristic cannot be determined, indicate the unknown symbol with a dash. However, if a station is not able to identify unambiguously whether the modulation is frequency or phase modulation, indicate frequency modulation (F).

[ ]  
[ ]

## APPENDIX 7

MOD

**Report of an Irregularity or of an Infringement  
of the Convention or the Radio Regulations <sup>1</sup>**  
(see Articles N20/15 and N19/16)

Particulars concerning the station infringing the Regulations:

1. Name <sup>1</sup> if known (in BLOCK letters).....
2. Call sign or other identification  
(in BLOCK letters).....
3. Nationality, if known.....
- MOD 4. Frequency used (kHz, MHz, GHz or THz).....
5. Class of emission <sup>2</sup>.....
- ADD 6. Class of station and nature of  
service, if known.....
- ADD 7. Location <sup>3</sup>, <sup>4</sup>, <sup>5</sup>.....

Particulars concerning the station, the centralizing office  
or inspection service reporting the irregularity or infringement

- MOD 8. Name (in BLOCK letters).....
- MOD 9. Call sign or other identification  
(in BLOCK letters).....
- MOD 10. Nationality.....
- MOD 11. Location <sup>3</sup>, <sup>4</sup>.....

Particulars of the irregularity or infringement:

- MOD 12. Name <sup>6</sup> of the station (in BLOCK letters)  
in communication with the station committing the  
irregularity or infringement.....
- MOD 13. Call sign or other identification  
(in BLOCK letters) of the station in  
communication with the station committing  
the irregularity or infringement.....

B.21-7

- MOD 14. Date and time 7.....
- MOD 15. Nature of the irregularity or infringement 8.....
- MOD 16. Extracts from ship log or other information supporting the report.....
- MOD Particulars concerning the transmitting station interfered with 9:
- MOD 17. Name of the station (in BLOCK letters).....
- MOD 18. Call sign or other identification (in BLOCK letters).....
- MOD 19. Frequency assigned (kHz, MHz, GHz or THz).....
- MOD 20. Frequency measured at the time of the interference.....
- MOD 21. Class of emission 2 and bandwidth (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the IFRB).....
- MOD 22. Receiving location 3, 4 (in BLOCK letters) where the interference was experienced.....
- MOD 23. Certificate:

I certify that the foregoing report represents, to the best of my knowledge, a complete and accurate account of what took place.

Signature 10:

Date:

.....

.....

#### Instructions for filling in this form

MOD 1 Each report shall refer to only one station (see note 6). If it is forwarded as a letter, it shall be in duplicate, and whenever practicable, should be typewritten. It may also be forwarded as a telegram.

MOD 2 The class of emission shall contain the basic characteristics listed in Article [N3] and, if, possible, the additional characteristics listed in Appendix [5 MOD]. If any characteristic cannot be determined, indicate the unknown symbol with a dash. However, if a station is not able to identify unambiguously whether the modulation is frequency or phase modulation, indicate frequency modulation (F).

[ ]  
[ ]

- MOD 3 In the case of land, fixed, or earth stations, the position shall be expressed in latitude and longitude (Greenwich). If the position cannot be furnished, the area of operation should be indicated.
- MOD 4 In the case of ship or aircraft stations, the position shall be expressed either in latitude and longitude (Greenwich) or by a true bearing in degrees and distance in nautical miles, or in kilometres, from some wellknown place. If the position cannot be furnished, the area of operation should be indicated.
- ADD 5 Where space stations are concerned, information shall be furnished on the orbit.
- MOD 6 If both communicating stations infringe the Regulations, a separate report shall be made for each of these stations.
- MOD 7 The time must be expressed as Universal Coordinated Time (UTC) by a group of four figures (0001 to 2400). If the infringement is prolonged or repeated, the dates and times shall be shown.
- MOD 8 A separate report is required for each irregularity or infringement, unless they are repeated within a short time.
- MOD 9 This information is to be given only in case of a complaint about interference.
- MOD 10 This report shall be signed by the operator who has reported the infringement and countersigned by the Master of the ship or person responsible for the aircraft, or the officer in charge of the station in the case of an infringement reported by a station of the mobile service. When the report originates from a centralizing office or from an inspection service, it shall be signed by the head of that office or service and countersigned by an official of the administration sending it.

**For use of the Administration only**

1. Company controlling the installation of the station against which complaint is made  
.....
2. Name of the operator of the station held responsible for the irregularity or infringement of the Regulations.....  
.....
3. Action taken.....

## APPENDIX 8

NOC

**Report of Harmful Interference**  
(See Article N20/15)Particulars concerning the station causing the interference:

(MOD) a. Name, call sign or other means of identification.....  
.....

MOD b. Frequency measured..... Date:.....  
Time (UTC).....

MOD c. Class of emission 1.....

MOD d. Bandwidth (indicate whether measured or estimated).....

MOD e. Measured field strength or power flux density 2.....  
Date:.....  
Time (UTC).....

MOD f. Observed polarization.....

ADD g. Class of station and nature of service.....

ADD h. Location/position/area/bearing (QTE).....

ADD i. Location of the facility which made the above  
measurements.....

Particulars concerning the transmitting station interfered with:

MOD j. Name, call sign or other means of identification.....  
.....

MOD k. Frequency assigned.....

MOD l. Frequency measured..... Date:.....  
Time (UTC).....

MOD m. Class of emission 1.....

MOD n. Bandwidth (indicate whether measured or estimated or  
indicate the necessary bandwidth notified to the IFRB).....

MOD o. Location/position/area.....

ADD p. Location of the facility which made the above measurements.....

Particulars furnished by the receiving station experiencing the interference:

MOD q. Name of station.....

MOD r. Location/position/area.....

MOD s. Dates and times of occurrence of harmful interference.....

MOD t. Bearings (QTE) or other particulars.....

ADD u. Nature of interference.....

ADD v. Field strength or power flux density <sup>2</sup> at the receiving station of the emission experiencing the interference..... Date:.....

Time (UTC).....

ADD w. Polarization of the receiving antenna or observed polarization.....

MOD x. Action requested.....

ADD 1 The class of emission shall contain the basic characteristics listed in Article [N3] and, if possible, the additional characteristics listed in Appendix [5 MOD]. If any characteristic cannot be determined, indicate the unknown symbol with a dash. However, if a station is not able to identify unambiguously whether the modulation is frequency or phase modulation, indicate frequency modulation (F). [ ]

ADD 2 When measurements are not available, signal strengths according to the QSA scale should be provided.

MOD Note: For convenience and brevity, telegraphic reports shall be in the format above, using the letters in the order listed in lieu of the explanatory titles, but only those letters for which information is provided should be used. However, sufficient information shall be provided to the Administration receiving the report, so that an appropriate investigation can be conducted.

## RESOLUTION AK[1]

[ ]

Relating to the Preparation of Explanatory Information by the  
International Frequency Registration Board on the Application  
of the New Method for Designating Emissions in Notification  
Procedures and the Consequential Revision of the Master  
International Frequency Register

The World Administrative Radio Conference, Geneva, 1979,

having adopted

Article[N3]and Appendix[5 MOD]containing a new system for the  
designation of emissions;

[ ] [ ]

considering

a) that such designations are fundamental to the notification procedures  
detailed in the Radio Regulations;

b) that it is essential for this new system of designating emissions to  
be applied not only to new frequency assignments but also to existing entries  
in the Master Register;

c) that certain new designations are more detailed than the former  
designations;

d) that the IFRB does not have the means to replace automatically all  
former designations by the new designations;

noting

a) that some administrations may have difficulties in implementing the  
new method of designating emissions when it first comes into use;

b) that these administrations need explanatory information well in  
advance of the entry into force of the Final Acts of this Conference;

resolves

1. that the IFRB shall prepare explanatory information on the application  
of the new method of designation, including examples, in the context of the  
notification procedures specified in the Radio Regulations and shall make this  
information available to administrations as early as possible and not later  
than 1 October 1980;

[1]

Replaces Recommendation A of Document B1 (page 7).

[ ]



2. that the IFRB shall proceed with the conversion of the data appearing in the Master Register in consultation with, and on the basis of information provided by, administrations;

3. that, if the Board does not receive from administrations within a reasonable time the information required in the application of resolves 2, it shall convert the data appearing in the Master Register as accurately as possible and insert in the Remarks column a remark referring to the fact that the conversion was made under the terms of this paragraph;

4. that, from the date of entry into force of the present revision of the Radio Regulations, administrations shall use in the coordination and notification procedures only the designations of emissions contained in [revised Article N3]. If however the Board receives, after this date, information or notifications containing the old type of designation, the Board shall not consider them incomplete for this reason alone. The Board shall, when practicable, modify the designation and, if clarification is required, shall consult the administrations concerned.

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 742  
19 November 1979**E**

B.22

PLENARY MEETING**22nd SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.5	668 + 669	Art. 29; 33A Table of 40 - 43,5 GHz (Art. 7) Recommendation N Recommendation O
		SUP Recommendation No. Spa2 - 3
		SUP Recommendation No. Spa2 - 4
		SUP Recommendation No. Spa2 - 5

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 21 pages



## ARTICLE N29

NOC

**Fixed Service**

NOC

**Section I. General**

- MOD 6323 465 § 1. (1) Administrations are urged to discontinue, in the fixed service, the use of double-sideband radiotelephone (class [A3]) transmissions. [ ]
- NOC 6324 466 (2) Class [F3] emissions are prohibited in the fixed service in the bands below 30 MHz. [ ]

NOC

**Section II. Frequencies for the International Exchange of Police Information**

- NOC 6325 467 § 2. (1) The frequencies necessary for the international exchange of information to assist in the apprehension of criminals shall be selected from the bands allocated to the fixed service, if necessary by special agreement concluded between administrations concerned under the provision for special arrangements in Article 31 of the Convention.
- NOC 6326 468 (2) To obtain economy in the use of frequencies, the International Frequency Registration Board should be consulted by the administrations concerned whenever such agreements are under discussion on a regional or world-wide basis.

NOC

**Section III. Frequencies for the International Exchange of Synoptic Meteorological Information**

- NOC 6327 469 § 3. (1) The frequencies necessary for the international exchange of synoptic meteorological information shall be selected from the bands allocated to the fixed service, if necessary by special agreement concluded between administrations concerned under the provision for special arrangements in Article 31 of the Convention.
- NOC 6328 470 (2) To obtain economy in the use of frequencies, the International Frequency Registration Board should be consulted by the administrations concerned whenever such agreements are under discussion on a regional or world-wide basis.

6329  
to  
6353

NOT allocated.

ADD

## ARTICLE N33A

**Radio Astronomy Service**

ADD

**Section I. General Provisions**

ADD 6579

§ 1. Administrations shall cooperate in protecting the radio astronomy service from interference, bearing in mind:

- a) the exceptionally high sensitivity of radio astronomy stations,
- b) the frequent need for long periods of observation without harmful interference, and
- c) that the small number of radio astronomy stations in each country and their known locations often make it practicable to give special consideration to the avoidance of interference.

ADD 6580

§ 2. The locations of the radio astronomy stations to be protected and their frequencies of observation shall be notified to the IFRB in accordance with No. 4577/639BC and published by the Secretary-General in accordance with No. 5534/815 for communication to Members of the Union.

ADD

**Section II. Measures to be taken in the  
Radio Astronomy Service**

ADD 6581

§ 3. The locations of radio astronomy stations shall be selected with due regard to the possibility of harmful interference to these stations.

ADD 6582

§ 4. All practicable technical means shall be adopted at radio astronomy stations to reduce their susceptibility to interference. The development of improved techniques for reducing susceptibility to interference shall be pursued, including participation in cooperation studies through the CCIR.

## ADD           Section III.   Protection of the Radio Astronomy Service

- ADD   6583           § 5.           The status of the radio astronomy service in the various frequency bands is specified in the Table of Frequency Allocations, Article N7/5. Administrations shall provide protection from interference to stations in the radio astronomy service in accordance with the status of this service in those bands. (See also No. 3281/116A).
- ADD   6584           § 6.           In providing protection from interference to the radio astronomy service on a permanent or temporary i.e. basis, administrations etc. Administrations shall use appropriate means such as geographical separation, site shielding, antenna directivity and the use of time-sharing and the minimum practicable transmitter power.
- ADD   6585           § 7.           In bands adjacent to those in which observations are carried out in the radio astronomy service, operating in accordance with the Radio Regulations, administrations {shall}, when assigning frequencies to stations of other {} services, take all practicable steps to protect the radio astronomy service from harmful interference in accordance with No. 3280/116. In addition to the measures referred to in No. 6584, technical means for minimizing the power radiated at frequencies within the band used for radio astronomy {should} be given special consideration. (See also {} No. 3281/116A).
- ADD   6586           § 8.           When assigning frequencies to stations in other bands, administrations are urged, as far as practicable, to take into consideration the need to avoid spurious emissions which could cause harmful interference to the radio astronomy service operating in accordance with the Radio Regulations. (See also No. 3281/116A).
- ADD   6587           § 9.           In applying the measures outlined in this section, administrations shall bear in mind that the radio astronomy service is extremely susceptible to interference from space and airborne transmitters.
- ADD   6588           § 10.          Administrations shall take note of the relevant CCIR Recommendations with the aim of limiting interference to the radio astronomy service from other services.

B.22-4

/Article N7/5/

## TABLE OF FREQUENCY ALLOCATIONS FOR 40 - 400 GHz

± ±

GHz  
40 - 43.5

Allocation to Services		
Region 1	Region 2	Region 3
40 - 40.5	FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE  MOBILE-SATELLITE (Space-to-Earth)	
40.5 - 42.5	BROADCASTING-SATELLITE  /BROADCASTING/  Fixed  Mobile	
42.5 - 43.5	FIXED  FIXED-SATELLITE (Earth-to-space) 3814B  MOBILE except aeronautical mobile  RADIO ASTRONOMY  3814A	

ADD 3814A

In making assignments to stations of other services to which the band 42.5 - 43.5 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference, especially in the bands 42.77 - 42.87 GHz, 43.07 - 43.17 GHz, and 43.37 - 43.47 GHz, which are used for spectral line observations of silicon monoxide. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3281/116A and Article N33A.)

ADD 3814B

The allocation of the spectrum for the fixed-satellite service in the bands 42.5 - 43.5 GHz and 47.2 - 50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5 - 39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2 - 49.2 GHz for feeder links to broadcasting satellites operating in the band 40.5 - 42.5 GHz.

B.22-5

GHz  
43.5 - 50.2

Allocation to Services		
Region 1	Region 2	Region 3
43.5 - 47	MOBILE 3814CA  MOBILE-SATELLITE  RADIONAVIGATION  RADIONAVIGATION-SATELLITE  3814C	
47 - 47.2	AMATEUR  AMATEUR-SATELLITE	
47.2 - 50.2	FIXED  FIXED-SATELLITE (Earth-to-space) 3814B  MOBILE 3814E  3814D	

ADD 3814C In the bands 43.5 - 47 GHz, 66 - 71 GHz, 95 - 100 GHz, 134 - 142 GHz, 190 - 200 GHz and 252 - 265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service.

ADD 3814CA In the bands 43.5 - 47 GHz, 66 - 71 GHz, 95 - 100 GHz, 134 - 142 GHz, 190 - 200 GHz and 252 - 265 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the ~~satellite services~~ to which these bands are allocated (see No. 3442/148). 1 7

ADD 3814D The bands 48.94 - 49.04 GHz, and 97.88 - 98.08 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which these bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3281/116A and Article N33A.)

ADD 3814E In the band 48.94 - 49.04 GHz, all emissions from airborne stations are prohibited.

B.22-6

GHz  
50.2 - 59

Allocation to Services		
Region 1	Region 2	Region 3
50.2 - 50.4	EARTH EXPLORATION-SATELLITE (Passive)	
	FIXED	
	MOBILE	
	SPACE RESEARCH (Passive)	
50.4 - 51.4	FIXED	
	FIXED-SATELLITE (Earth-to-space)	
	MOBILE	
	Mobile-satellite (Earth-to-space)	
51.4 - 54.25	EARTH EXPLORATION-SATELLITE (Passive)	
	SPACE RESEARCH (Passive)	
	3815/412J 3815A	
54.25 - 58.2	EARTH EXPLORATION-SATELLITE (Passive)	
	FIXED	
	INTER-SATELLITE	
	MOBILE 3815BA	
	SPACE RESEARCH (Passive)	
	3815B	
58.2 - 59	EARTH EXPLORATION-SATELLITE (Passive)	
	SPACE RESEARCH (Passive)	
	3815/412J 3815A	

MOD 3815/412J In the bands 51.4 - 54.25 GHz, 58.2 - 59 GHz, 64 - 65 GHz, 86 - 92 GHz, 105 - 116 GHz and 217 - 231 GHz all emissions are prohibited. In these bands the use of passive sensors by other services is also authorized.

ADD 3815A In the bands 51.4 - 54.25 GHz, 58.2 - 59 GHz, 64 - 65 GHz and 72.77 - 72.91 GHz, radio astronomy observations may be carried out under national arrangements. Administrations are urged to take all practicable steps to protect radio astronomy observations in these bands from harmful interference.

ADD 3815B Additional allocation : in the Federal Republic of Germany, Japan and the United Kingdom, the band 54.25 - 58.2 GHz is also allocated to the radiolocation service on a primary basis.

ADD 3815BA In the bands 54.25 - 58.2 GHz, 59 - 64 GHz, 116 - 134 GHz, 170 - 182 GHz and 185 - 190 GHz, the use of stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 3442/148).



B.22-7.

GHz  
59 - 66

Allocation to Services		
Region 1	Region 2	Region 3
59 - 64	FIXED  INTER-SATELLITE  MOBILE 3815BA  RADIOLOCATION 3815C  3815D	
64 - 65	EARTH EXPLORATION-SATELLITE (Passive)  SPACE RESEARCH (Passive)  3815/412J 3815A	
65 - 66	EARTH EXPLORATION-SATELLITE  SPACE RESEARCH  Fixed  Mobile	

ADD 3815C

In the bands 59 - 64 GHz and 126 - 134 GHz, the use of airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 3442/148).

ADD 3815D

The band 61 - 61.5 GHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 61.25 GHz). The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned in agreement with other administrations whose radiocommunication services might be affected. In applying this provision administrations shall have due regard to the latest CCIR Recommendations.

B.22-8

GHz  
66 - 76

Allocation to Services		
Region 1	Region 2	Region 3
66 - 71	MOBILE 3814CA MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 3814C	
71 - 74	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) 3815A	
74 - 75.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	
75.5 - 76	AMATEUR AMATEUR-SATELLITE	

B.22-9

GHz  
76 - 86

Allocation to Services		
Region 1	Region 2	Region 3
76 - 81	RADIOLOCATION  Amateur  Amateur-satellite  3815E	
81 - 84	FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE  MOBILE-SATELLITE (Space-to-Earth)	
84 - 86	FIXED  MOBILE  BROADCASTING  BROADCASTING-SATELLITE  3815F	

[ ADD 3815E In the band 78 - 79 GHz radars located on space stations may be operated on a primary basis in the earth exploration-satellite service and in the space research service. ] - 7

ADD 3815F In the band 84 - 86 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service.

B.22-10

GHz  
86 - 95

Allocation to Services		
Region 1	Region 2	Region 3
86 - 92	EARTH EXPLORATION-SATELLITE (Passive)  RADIO ASTRONOMY  SPACE RESEARCH (Passive)  3815/412J	
92 - 95	FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE  RADIOLOCATION  3815G	

ADD 3815G

The band 93.07 - 93.27 GHz is also used by the radio astronomy service for spectral line observations. In making assignments to stations of other services to which this band is allocated, administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).

B.22-11

GHz  
95 - 116

Allocation to Services		
Region 1	Region 2	Region 3
95 - 100	MOBILE 3814CA  MOBILE-SATELLITE  RADIONAVIGATION  RADIONAVIGATION-SATELLITE  Radiolocation  3814C 3814D	
100 - 102	EARTH EXPLORATION-SATELLITE (Passive)  FIXED  MOBILE  SPACE RESEARCH (Passive)  3679A	
102 - 105	FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE  3679A	
105 - 116	EARTH EXPLORATION-SATELLITE (Passive)  RADIO ASTRONOMY  SPACE RESEARCH (Passive)  3679A 3815/412J	

SUP 3816/412K  
Spa2

ADD 3679A

In the bands [ 1 400 - 1 727 MHz, ] 101 - 120 GHz  
and 197 - 220 GHz, passive research is being conducted by some countries in  
a programme of search for intentional emissions of extra-terrestrial  
origin.

B.22-12

GHz  
116 - 142

Allocation to Services		
Region 1	Region 2	Region 3
116 - 126	EARTH EXPLORATION-SATELLITE (Passive)  FIXED  INTER-SATELLITE  MOBILE 3815BA  SPACE RESEARCH (Passive)  3679A 3816A 3816B	
126 - 134	FIXED  INTER-SATELLITE  MOBILE 3815BA  RADIOLOCATION 3815C	
134 - 142	MOBILE 3814CA  MOBILE-SATELLITE  RADIONAVIGATION  RADIONAVIGATION-SATELLITE  Radiolocation  3814C 3816C 3816D	

ADD 3816A

The band 122 - 123 GHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 122.5 GHz). The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned in agreement with other administrations whose radiocommunication services might be affected. In applying this provision administrations shall have due regard to the latest CCIR Recommendations.

ADD 3816B

The band 119.98 - 120.02 GHz is also allocated to the amateur service on a secondary basis.

ADD 3816C

The bands 140.69 - 140.98 GHz, 144.68 - 144.98 GHz, 145.45 - 145.75 GHz and 146.82 - 147.12 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which the bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3281/116A and Article N33A.)

ADD 3816D

In the band 140.69 - 140.98 GHz all emissions from airborne stations, and from space stations in the space-to-Earth direction, are prohibited.

B.22-13

GHz  
142 - 151

Allocation to Services		
Region 1	Region 2	Region 3
142 - 144	AMATEUR  AMATEUR-SATELLITE	
144 - 149	RADIOLOCATION  Amateur  Amateur-satellite  3816C	
149 - 150	FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE	
150 - 151	EARTH EXPLORATION-SATELLITE (Passive)  FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE  SPACE RESEARCH (Passive)  3816E	

ADD 3816E

The bands 150 - 151 GHz, 174.42 - 175.02 GHz, 177 - 177.4 GHz, 178.2 - 178.6 GHz, 181 - 181.46 GHz and 186.2 - 186.6 GHz are also allocated to the radio astronomy service on a secondary basis for spectral line observations. In making assignments to stations of other services to which these bands are allocated, administrations are urged to take all practicable steps to protect radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3281/116A and Article N33A.)

B.22-14

GHz  
151 - 182

Allocation to Services		
Region 1	Region 2	Region 3
151 - 164	FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE	
164 - 168	EARTH EXPLORATION-SATELLITE (Passive) RADIO ASTRONOMY SPACE RESEARCH (Passive)	
168 - 170	FIXED MOBILE	
170 - 174.5	FIXED INTER-SATELLITE MOBILE 3815BA 3816E	
174.5 - 176.5	EARTH EXPLORATION-SATELLITE (Passive) FIXED INTER-SATELLITE MOBILE 3815BA SPACE RESEARCH (Passive) 3816E	
176.5 - 182	FIXED INTER-SATELLITE MOBILE 3815BA 3816E	



B.22-15

GHz  
182 - 217

Allocation to Services		
Region 1	Region 2	Region 3
182 - 185	EARTH EXPLORATION-SATELLITE (Passive) RADIO ASTRONOMY SPACE RESEARCH (Passive) 3816F 3816G	
185 - 190	FIXED INTER-SATELLITE MOBILE 3815BA 3816E	
190 - 200	MOBILE 3814CA MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 3679A 3814C	
200 - 202	EARTH EXPLORATION-SATELLITE (Passive) FIXED MOBILE SPACE RESEARCH (Passive) 3679A	
202 - 217	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 3679A	

ADD 3816F

Additional Allocation : in the United Kingdom the band 182 - 185 GHz is also allocated to the fixed and mobile services on a primary basis.

ADD 3816G

In the band 182 - 185 GHz all emissions are prohibited except for those under the provisions of No. 3816F. The use of passive sensors by other services is also authorized.

B.22-16

GHz  
217 - 248

Allocation to Services		
Region 1	Region 2	Region 3
217 - 231	EARTH EXPLORATION-SATELLITE (Passive)  RADIO ASTRONOMY  SPACE RESEARCH (Passive)  3815/412J 3679A	
231 - 235	FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE  Radiolocation	
235 - 238	EARTH EXPLORATION-SATELLITE (Passive)  FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE  SPACE RESEARCH (Passive)	
238 - 241	FIXED  FIXED-SATELLITE (Space-to-Earth)  MOBILE  Radiolocation	
241 - 248	RADIOLOCATION  Amateur  Amateur-satellite  3816H	

ADD 3816H

The band 244 - 246 GHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 245 GHz). The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned in agreement with other administrations whose radiocommunication services might be affected. In applying this provision administrations shall have due regard to the latest CCIR Recommendations.

B.22-17

GHz  
248 - 265

Allocation to Services		
Region 1	Region 2	Region 3
248 - 250	AMATEUR  AMATEUR-SATELLITE	
250 - 252	EARTH EXPLORATION-SATELLITE (Passive)  SPACE RESEARCH (Passive)  3816I	
252 - 265	MOBILE 3814CA  MOBILE-SATELLITE  RADIONAVIGATION  RADIONAVIGATION-SATELLITE  3814C 3816I 3816J 3816K	

ADD 3816I

The bands 250 - 251 GHz and 262.24 - 262.76 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which these bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116, 3281/116A and Article N33A).

ADD 3816J

The band 257.5 - 258 GHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. In making assignments to stations of other services to which the band is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116, 3281/116A and Article N33A).

ADD 3816K

In the Federal Republic of Germany, Argentina, Spain, France, Finland, India, Italy, the Netherlands and Sweden, the band 261 - 265 GHz is also allocated to the radio astronomy service on a primary basis. In making assignments to stations of other services to which the band is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).

B.22-18

GHz  
265 - 400

Allocation to Services		
Region 1	Region 2	Region 3
265 - 275	FIXED  FIXED-SATELLITE (Earth-to-space)  MOBILE  RADIO ASTRONOMY  3816L	
275 - 400	(Not allocated)  3816M	

ADD 3816L

In making assignments to stations of other services to which the band 265 - 275 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference, especially in the bands 265.64 - 266.16 GHz, 267.34 - 267.86 GHz and 271.74 - 272.26 GHz, which are used for spectral line observations. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116, 3281/116A and Article N33A).

ADD 3816M

The frequency band 275 GHz - 400 GHz may be used by administrations for experimentation with, and development of, various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services :

Radio astronomy service : 278 - 280 GHz and 343 - 348 GHz;

Space research service (passive) and earth exploration-satellite service (passive) : 275 - 277 GHz, 300 - 302 GHz, 324 - 326 GHz, 345 - 347 GHz, 363 - 365 GHz and 379 - 381 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the next competent World Administrative Radio Conference.

## RECOMMENDATION N

**Relating to the Use of Airborne Radars  
in the in the Frequency Bands Shared Between  
the Inter-Satellite Service and the Radiolocation Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the bands 59 - 64 GHz and 126 - 134 GHz are allocated to the inter-satellite service and the radiolocation service;
- b) that the foregoing bands are located in parts of the radio frequency spectrum close to peaks of atmospheric absorption;
- c) that, nevertheless, the atmospheric absorption alone may not prevent harmful interference to stations of the inter-satellite service from radars operating on aircraft flying at high altitudes;
- d) that for this reason airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see ADD 3815C, the text of which is reproduced below) <sup>1</sup>;

recommends

that, as a matter of urgency, studies should be made of the sharing criteria for these two services in the frequency bands listed above;

requests the CCIR

to carry out these studies;

recommends further

that a future competent World Administrative Radio Conference review the allocations of these bands, taking into account the results of the CCIR studies.

---

<sup>1</sup> ADD 3815C

In the bands 59 - 64 GHz and 126 - 134 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 3442/148).

## RECOMMENDATION O

**Relating to Sharing Frequency Bands between the  
Aeronautical Mobile Service and the Inter-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the bands 54.25 - 58.2 GHz, 59 - 64 GHz, 116 - 134 GHz, 170 - 182 GHz, and 185 - 190 GHz are allocated to the inter-satellite service and the mobile service;
- b) that the foregoing bands are located in parts of the radio frequency spectrum close to peaks of atmospheric absorption;
- c) that, nevertheless, the atmospheric absorption alone may not prevent harmful interference to the stations of the inter-satellite service from stations on aircraft flying at high altitudes;
- d) that for this reason aircraft stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see ADD 3815BA, the text of which is reproduced below) 1;

recommends

that, as a matter of urgency, studies should be made of the sharing criteria for these two services in the frequency bands listed above;

requests the CCIR

to carry out these studies;

recommends further

that a future competent World Administrative Radio Conference review the allocations of these bands, taking into account the results of the CCIR studies.

---

1 ADD 3815BA

In the bands 54.25 - 58.2 GHz, 59 - 64 GHz, 116 - 134 GHz, 170 - 182 GHz and 185 - 190 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 3442/148).

B.22-21

SUP Recommendation No. Spa2 - 3

[ Reason: Superseded by draft Recommendations N and O  
of the present document. ] [ ]

SUP Recommendation No. Spa2 - 4

[ Reason: All action has been completed by decisions of  
Committee 5 (See Documents Nos. 394(Rev.2), 449(Rev.1)  
and 450(Rev.1)). ] [ ]

SUP Recommendation No. Spa2 - 5

[ Reason: All action has been completed by decisions of  
Committee 5 (See Document No. 390(Rev.2)). ] [ ]

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 743-E  
19 November 1979  
Original: EnglishWORKING GROUP 6A

## EIGHTH REPORT FROM DRAFTING GROUP 6A1

1. Article N12 of the Radio Regulations

During consideration of Article N12, Drafting Group 6A1 recognized that a Region 2 Administrative Radio Conference for planning the Broadcasting Service in the band 535 - 1605 kHz is scheduled.

A draft Resolution introduced by the delegate of Brazil was considered, and after a short discussion, the amended text appearing in the Annex was agreed unanimously. Adoption of this text, now submitted for consideration by Working Group 6A, would permit partial suppression of No. 4299/504 in Article N12.

2. Up-links to Broadcasting-Satellites

Proposal F/82/822 relating to the co-ordination of up-links to broadcasting-satellites in the 11.7 - 12.5 GHz band was considered in the light of Committee 4 comments (Document No. 557), the final report of the Ad Hoc Group 2 of Committee 6 (Document No. 678), and the current state of Committee 5 discussion as known to members of the Drafting Group. An updated text prepared by the delegation of France was also taken into account.

After considerable discussion, the Drafting Group agreed to report to Working Group 6A that having regard to

- the present uncertainties concerning the frequency bands involved
- the possible need in certain circumstances for co-ordination between the up-links to broadcasting-satellites at adjacent orbital locations, and between these links and terrestrial services, and
- the so far undefined agenda for future Space Conferences

the Drafting Group felt unable to take the matter further.

Nevertheless, the Drafting Group agreed that co-ordination of these links in the period before implementation of the Final Acts of any relevant Space Conferences was a matter of possible concern to administrations, and Working Group 6A may wish to consider the matter further. The delegation of France expressed their willingness to prepare a further draft Resolution should Working Group 6A so decide.

J.R. MACKIE  
Interim Chairman of Drafting Group 6A1

Annex : 1





A N N E XRESOLUTION No. 6A1 - 17

Relating to examination by the I.F.R.B. of the notices referring to a station in the Broadcasting Service in Region 2 in the band 535 - 1605 kHz during the period preceding the entry into force of the Final Acts of the Regional Administrative MF Broadcasting Conference (Region 2)

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that a Region 2 Administrative Radio Conference will be convened, in two sessions to draw up a plan for the Broadcasting Service in the band 535 - 1605 kHz;
- b) that the first session of that Conference will be held in March 1980, and the second session shall be convened in November 1981;
- c) that the relevant provisions of Article N12/9 were modified by the present Conference;
- d) that the Regional Administrative MF Broadcasting Conference (Region 2) should adopt provisions to be applied by the Board for notification and recording in the Master Register of frequency assignments included in the Plan; and
- e) that it is therefore necessary to establish a procedure to be applied by the Board concerning the examination of notices referring to broadcasting stations in Region 2 in the band 535 - 1605 kHz in the period between the entry into force of the Final Acts of the WARC 1979 and the entry into force of the Final Acts of the Region 2 MF Broadcasting Conference;

resolves

- 1. that until the entry into force of the Final Acts of the Regional Administrative MF Broadcasting Conference (Region 2), the Board shall not examine, with respect to No. 4297/502, frequency assignment notices to a broadcasting station of Region 2 in the band 535 - 1605 kHz and shall record them with no date in Column 2a or in Column 2b; the date in Column 2c being given for information only.



**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 744-E  
19 November 1979  
Original : English

PLENARY MEETING

TWENTIETH REPORT OF COMMITTEE 4

Committee 4 has examined proposals from Administrations relative to new Resolutions and new Recommendations. It has unanimously decided as follows :

- a) Resolution No. S/15/378 : Committee 4 agrees that there is usefulness in the proposal, but has sent this text to Committee 5 for further action (see Document No. 590).
- b) Resolution No. D/84/443 : the substance is incorporated in Recommendation No. M (Document No. 635 = B.15).
- c) Resolution No. AUS/102/276A : approved as it stands. The text has been sent to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 745 ).
- d) Resolution No. AUS/102/276B : approved as Recommendation with amendments. The text has been sent to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 745).
- e) Resolution No. CME/120/6 : there was no support for this proposal.
- f) Recommendation No. S/15/380 : approved as it stands, in replacement of Recommendation No. 9. The text has been sent to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 745).
- g) Recommendation No. USA/47/455 : the proposal has been withdrawn by the delegation of the USA.
- h) Recommendation No. USA/47/791 : the proposal has been withdrawn by the delegation of the USA, as the substance has been incorporated into Article N27.



- i) Recommendation No. CAN/60A/203 : the substance is incorporated in Recommendation No. L (Document No. 635 = B.15).
- j) Recommendation No. CAN/60A/204 : the substance is incorporated in Recommendation No. M (Document No. 635 = B.15).
- k) Recommendation No. IND/93/228 : approved as it stands. The text has been sent to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 745).
- l) Recommendation No. FIJI/489 : as the subject has been mentioned in the Summary Record of the tenth meeting of Committee 4, held on Saturday 10 November 1979, the proposal has been withdrawn by the delegation of Fiji.
- m) Resolution No. SYR/576 : Committee 4 has considered this Resolution and decided that it is more appropriate for Committee 6 (see Document No. 594).

N. MORISHIMA  
Chairman of Committee 4



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 745-E

19 November 1979

Original : English

## COMMITTEE 9

### TWENTIETH SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has unanimously adopted the texts of Resolution No. AUS/102/276A, of the proposal AUS/102/276B transformed into a Recommendation, of Recommendation No. S/15/380 and of Recommendation No. IND/93/228.

The texts shown in the Annex are hereby submitted to the Editorial Committee (see also Document No. 744).

N. MORISHIMA  
Chairman of Committee 4

Annex : 1



A N N E X

AUS/102/276A

ADD

RESOLUTION No. [ 7 ]

[ ]

**Relating to Improvements in the Design  
and Use of Radio Equipment**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the radio frequency spectrum is a scarce natural resource which has value only when used;
- b) that efficient utilization of the spectrum can be limited by the characteristics of both transmitting and receiving equipment;
- c) that operational aspects of radio systems can also limit the efficient utilization of the spectrum;
- d) that continuing advancements in electronics and allied fields are enabling the production of more spectrum efficient radiocommunication systems;

resolves

that administrations should encourage improvements in the design and construction of radio equipment and in the mode of operation of systems in order to improve the utilization of the radio frequency spectrum.



AUS/102/276B

ADD

RECOMMENDATION No. [ 1 ]

[ ]

**Relating to Standardization of the Technical  
and Operational Characteristics of Radio Equipment**

The World Administrative Radio Conference, Geneva, 1979,  
considering

- a) that the cost of radiocommunications equipment is often a substantial portion of overall transmission system costs;
- b) that reducing system costs facilitates greater utilization of the radio frequency spectrum;
- c) that development of equipment for limited markets usually increases equipment costs;
- d) that administrations find it necessary to allocate increasing resources to regulation of equipment performance;
- e) that administrations, and in particular those in developing countries often have difficulty in providing such resources;
- f) that a number of international bodies including the CCIR, the IEC, IMCO and ICAO provide recommendation and standards for the technical and operating characteristics for equipment performance and measurement;

noting

that in international trade negotiations, a multilateral code of conduct is being negotiated with a view to reducing and/or eliminating technical barriers to trade and to fostering greater uniformity of product standards;

recommends

1. that administrations should endeavour to produce radio equipment specifications that are internationally standardized in the appropriate international forum;
2. that, where such internationally standardized specifications exist, administrations should adhere to those standard specifications for their national regulation of equipment performance;
3. that, again where such internationally standardized specifications exist, administrations should allow the use of equipment meeting such standards on a national basis, and, in particular they should, as far as practicable, accept type approval of equipment to such specifications by administrations of other countries;
4. that, where such internationally standardized specifications do not exist and are not in the course of preparation, administrations, when developing equipment specifications for national use, should produce specifications for national use, should produce specifications that are capable of acceptance as internationally standardized specifications.

S/15/380

ADD

RECOMMENDATION No. [ ]<sup>1</sup>

[ ]

**Relating to the Use of the Rationalized  
"Système International d'Unités" (SI)**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that many difficulties associated with older systems of units are remedied by the SI systems;
- b) that the International Standardization Organization has approved the SI system and recommends it for general adoption;

recognizing

- a) that the SI system has already been adopted by many international organizations, and is in wide use in the CCIR and other permanent organs of the Union;
- b) that the SI system is national standard in many countries;
- c) that the SI system is widely used by radio engineers, scientists and authors of radio publications also in countries where the SI system has not yet been adopted as national standard;
- d) that the use of the SI system is continuously spreading in all parts of the world;

recommends

that administrations shall use the SI system in their relations with the Union and its organs.

---

<sup>1</sup> Replaces Recommendation No. 9 of the Administrative Radio Conference, Geneva, 1959.



IND/93/228

ADD

RECOMMENDATION No. [ ]

[ ]

**Relating to Specifications of Low-Cost Television Receivers**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the potential of television medium as an instrument for national development is being increasingly recognized;
- b) that direct reception of television broadcast from satellites is demonstrated to be technically feasible and economically attractive;
- c) that, within the limited resources available to them many developing countries might wish to exploit the television medium to the best benefit;
- d) that the availability of an efficient, low-cost television receiver would be an important determinant in the setting up and expansion of television broadcast service in developing countries;
- e) that the need for both monochrome and colour receiver sets can be foreseen for receiving terrestrial and satellite transmissions;
- f) that CCIR is already studying specifications for low-cost monochrome television receivers for home and community use, as also the characteristics of the receiving system for broadcasting satellite service (television);
- g) that general agreement on the performance of suitable television receivers would considerably assist TV receiver manufacturers to produce suitable receivers of desired types and adequate standards of performance at the lowest possible cost;
- h) that the design and production of television receivers has to take into account the rapid advances in technology as well as obsolescence;

invites the CCIR

1. to draw up performance specifications for one or more types of low-cost television receivers as in considering e) above and suitable for quantity production;
2. to collaborate as necessary, with other international bodies working in this field with a view to finalizing the specifications for such low-cost sets in the quickest possible time;

requests the Secretary-General

to communicate the results of this study together with suggestions as to the action to be taken to the Director General of UNESCO.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 746-E

19 November 1979

Original : English

## PLENARY MEETING

### TWENTYFIRST REPORT OF COMMITTEE 4

Committee 4 has examined two proposals from Administrations, namely Recommendation No. CAN/60A/205 and Recommendation No. E/114/10. It has unanimously decided to combine the two texts into one new Recommendation.

The text has been sent to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 747).

N. MORISHIMA  
Chairman of Committee 4



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Corrigendum No. 1 to

Document No. 747-E

21 November 1979

## COMMITTEE 9

### TWENTYFIRST SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

page 2 : invites the CCIR

1. to carry out ..... packet radiocommunication, spread spectrum and multifunction techniques;
2. ....
3. to make .....
  - the technical ..... services;
  - the technical ..... systems; and
  - the criteria on which to base spectrum management for these new technology systems.

N. MORISHIMA  
Chairman of Committee 4



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 747 -E

19 November 1979

Original : English

## COMMITTEE 9

### TWENTYFIRST SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has unanimously decided to combine the two texts of proposals CAN/60A/205 and E/114/10 in a new Recommendation.

The text shown in the Annex is hereby submitted to the Editorial Committee (see also Document No. 746 ).

N. MORISHIMA  
Chairman of Committee 4

Annex : 1



A N N E X

ADD

RECOMMENDATION No. [C]

[ ]

**Relating to Technology for New Spectrum Sharing  
and Band Utilization Schemes**

The World Administrative Radio Conference, Geneva, 1979,

recognizing

a) that advances in technology, particularly digital radio techniques and new encoding, modulation and access schemes, are making practicable new sharing schemes that offer economical as well as technological advantages for increasing the efficiency of spectrum-band utilization;

b) that there are rapid advances being made in the associated technology;

invites the CCIR

1. to carry out studies of the digital radio techniques and new encoding, modulation and access schemes; examples for areas of such studies are packet radiocommunication and spread spectrum techniques;
2. to develop new concepts in the use of a carrier on time sharing basis for different radiocommunication services, i.e. use of same part of spectrum by multiple services;
3. to make recommendations to appropriate future World Administrative Radio Conferences relating to:
  - the technical criteria and specifications of the most efficient spectrum sharing schemes for the various services;
  - the technical and performance criteria for ensuring compatibility and interworking of systems; and
  - the technical criteria on which frequency spectrum management for multiple-function systems would have to be based.



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 748-E

19 November 1979

Original : English

## PLENARY MEETING

### TWENTYSECOND REPORT OF COMMITTEE 4

Committee 4 has examined the existing Recommendation No. Sat-3 and a proposed Resolution No. IND/93/227. It has unanimously decided to combine the two texts in one new Recommendation and to suppress the existing text of Recommendation No. Sat-3.

The new text has been sent to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 749).

N. MORISHIMA  
Chairman of Committee 4



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 749-E  
19 November 1979  
Original : English

## COMMITTEE 9

### TWENTYSECOND SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has unanimously decided to combine the existing Recommendation No. Sat-3 and a proposed Resolution No. IND/93/227 in a new Recommendation.

The existing Recommendation No. Sat-3 is therefore suppressed.

The new text as shown in the Annex is hereby submitted to the Editorial Committee (see also Document No. 748).

N. MORISHIMA  
Chairman of Committee 4

Annex : 1





A N N E X

ADD

RECOMMENDATION No. [ I ] 1

[ ]

**To the CCIR Relating to Studies of Propagation at 12 GHz  
for the Broadcasting-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the technical criteria adopted at the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, to draw up an assignment plan for broadcasting satellite service in Regions 1 and 3 included a maximum margin of 2 dB, at an elevation angle of 45°, for rainfall attenuation;
- b) that some studies have indicated that the necessary margin in the Tropical Zone could be higher than 2 dB;
- c) that the Special Preparatory Meeting of CCIR, Geneva, 1978 has recognized that for the application of the technique suggested in CCIR Report 721, the available rain rate data are likely to underestimate the attenuation which will occur in tropical regions;
- d) that there is need for ample information on the various other propagation factors required for the planning of the broadcasting-satellite service;

recommends that the CCIR

- 1. should expedite studies of the effects of rainfall attenuation in the tropical regions and specify, as early as possible, the attenuation values necessary for ensuring a satisfactory broadcasting-satellite service;
- 2. should continue the study of the effects of precipitation attenuation at low angles of incidence in all climatic zones;

3. continue the study of the effects of sand and dust storms;
4. examine the relationship between the propagation characteristics for 99% of the worst month and those for the year;
5. examine, for emissions using circular polarization, the level of the depolarized component relative to the polarized component;

requests the Director of the CCIR

To bring the values of rainfall attenuation, as may be specified, to the notice of all administrations.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 750(Rev.1)-E

21 November 1979

Original : French

## COMMITTEE 5

### REPORT OF SUB-WORKING GROUP 5BA14 TO COMMITTEE 5\*)

#### DRAFT

#### RESOLUTION No.

#### Relating to the Modification of Carrier Frequencies of LF Broadcasting Stations in Region 1

The World Administrative Radio Conference, Geneva, 1979,

#### considering

- a) that it would be advantageous, both technically and economically, to reduce interference in domestic broadcasting receivers caused by combination frequencies,
- b) that such interference is considerably reduced when the nominal values of the carrier frequencies of broadcasting stations are multiples of the channel separation;
- c) that the nominal values of the carrier frequencies of stations listed in the LF Broadcasting Plan for Region 1 (Geneva, 1975) are not multiples of the channel separation (9 kHz);
- d) that, in order to avoid interference among the stations in question, the modification of the carrier frequencies of LF broadcasting stations in Region 1 must be carried out on the same date for all stations;
- e) that modification of the carrier frequencies of LF broadcasting stations will, in certain cases, increase the interference caused to aeronautical radionavigation stations and that it will therefore be necessary to change those frequencies used by these stations;

#### resolves

that on 1 February 1986 at 0100 hours UTC :

1. the LF band allocated to the broadcasting service in Region 1 shall become 148.5 - 283.5 kHz instead of 150 - 285 kHz;
2. the nominal values of the carrier frequencies of all LF stations in conformity with the LF/MF Broadcasting Agreement (Geneva, 1975) shall be reduced by 2 kHz on that date, so that they become multiples of 9 kHz, the other characteristics of the stations remaining unchanged;

\*) In accordance with the decision taken in Working Group 5BA, this report is submitted directly to Committee 5.



requests the Secretary-General

1. to publish each year a list of assignments to LF broadcasting stations that are in service;
  2. to transmit this Resolution and the above-mentioned list to administrations and to ICAO so that the measures necessary for changing the frequencies of aeronautical radionavigation stations can be taken.
-

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 750-E

19 November 1979

Original : French

COMMITTEE 5

## REPORT OF SUB-WORKING GROUP 5BA14 TO COMMITTEE 5

DRAFT

### RESOLUTION

#### Relating to the Modification of Carrier Frequencies of LF Broadcasting Stations in Region 1

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that it would be advantageous, both technically and economically, to reduce interference caused in domestic broadcasting receivers by combination frequencies;
- b) that such interference is considerably reduced when the nominal values of the carrier frequencies of broadcasting stations are multiples of the channel separation;
- c) that the nominal values of the carrier frequencies of stations listed in the LF Broadcasting Plan for Region 1 (Geneva, 1975) are not multiples of the channel separation (9 kHz);
- d) that, in order to avoid interference among the stations in question, the modification of the carrier frequencies of LF broadcasting stations in Region 1 must be carried out on the same date for all stations;
- e) that modification of the carrier frequencies of LF broadcasting stations will, in certain cases, increase the interference caused to aeronautical radionavigation stations and that it will therefore be necessary to change those stations' frequencies;

resolves

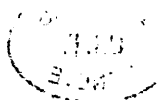
that on 1 February 1986 at 0100 hours UTC :

1. the LF band allocated to the broadcasting service in Region 1 shall become 148.5 - 283.5 kHz instead of 150 - 285 kHz;
2. the nominal values of the carrier frequencies of all LF stations in conformity with the LF/MF Broadcasting Agreement (Geneva, 1975) shall be reduced by 2 kHz on that date, so that they become multiples of 9 kHz, the other characteristics of the stations remaining unchanged;



requests the Secretary-General

1. to publish each year a list of assignments to LF broadcasting stations that are in service;
  2. to transmit this Resolution and the above-mentioned list to administrations and to ICAO so that the measures necessary for changing the frequencies of aeronautical radionavigation stations can be taken.
- 



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 751-E

19 November 1979

Original : English

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PLENARY MEETING

Japan

The Japanese Administration proposes to add the following paragraph after resolves 1 of Resolution No. ... (Annex 2 to Document No. 678) :

1 bis that the up-links operating in other bands than designated in 1 above, for which the advance publication information has been published before [the date of entry into force of the Final Acts of the World Administrative Radio Conference, 1979], may continue to operate in such other bands after the date of entry into force of the agreements and associated plans indicated in 1 above.

Reasons : For several years, Japan has been using the band 14.0 - 14.5 GHz for the up-link to broadcasting-satellite in accordance with the current Frequency Allocation Table. It is difficult to transfer the up-link frequency to the new band [10.7 - 11.7, 14.5 - 15.35 or 17.3 - 18.1 GHz] within a short period of time.



**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 752  
19 November 1979**E**

B.23

PLENARY MEETING**23rd SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.4	696 + 697	Resolution AL Recommendations P; Q; R; S; T; U; V.

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 11 pages





## RESOLUTION AL 1

**Relating to the Recommendations and Standards for Emergency  
Position-Indicating Radiobeacons Operating on the  
Frequencies 121.5 MHz and 243 MHz**

MOD            The World Administrative Radio Conference, Geneva, 1979,

NOC            considering

a)            that emergency position-indicating radiobeacons operating on the frequencies 121.5 MHz and 243 MHz are intended to facilitate search and rescue operations;

b)            that the frequencies 121.5 MHz and 243 MHz are in common use by aircraft engaged in search and rescue operations;

c)            that the International Civil Aviation Organization has established recommended signal characteristics and technical specifications for aircraft equipment operating on 121.5 MHz and/or 243 MHz;

NOC            resolves

that administrations authorizing the use of emergency position-indicating radiobeacons on 121.5 MHz and/or 243 MHz should ensure that such radiobeacons comply with the relevant recommendations and standards of the International Civil Aviation Organization and the International Radio Consultative Committee.

---

1    Replaces Resolution No. Mar 7 of the World Administrative Radio Conference, Geneva, 1967.

## RECOMMENDATION P 1

## to the CCIR Relating to the Frequency Tolerances of Transmitters

MOD The World Administrative Radio Conference, Geneva, 1979,

(MOD) considering

- a) that Appendix 3 to the Radio Regulations specifies the frequency tolerances for transmitters;
- b) that the principal objective of Appendix 3 has been the reduction of frequency space required per channel by means of the tightening of frequency tolerances, and that in many cases considerable improvement in spectrum utilization can continue to be obtained by further tightening of frequency tolerances;
- c) that for some services, a reduction in frequency tolerance to the lowest value possible in the state of the technique would be useful in order to increase the signal to noise ratio, improve intelligibility and reduce errors;
- d) that in certain cases, a further reduction of frequency tolerance would not in practice increase the number of available channels;
- e) that in particular frequency bands, the frequency tolerances specified in Appendix 3 may already approach the minimum useful value for certain categories of station when using existing techniques and methods of operation;
- f) that it will be of considerable assistance to administrations, in the future planning of services and provision of equipment, to know those frequency tolerances which can be considered to be the ultimate useful minimum value for stations when using existing techniques and methods of operation;
- g) that in certain cases, reduction of frequency tolerances is subject to economic limitations, which should be known and taken into account;

---

1 Replaces Recommendation No. 1 of the Administrative Radio Conference, Geneva, 1959.

(MOD) invites the CCIR

1. to continue its study of frequency tolerances with a view to the reduction of the frequency space required for a given channel;
2. to consider whether or not in certain cases it is possible to predict ultimate values of tolerances, which it would not be necessary to make more stringent under currently known conditions of operation, and to state what these tolerance values might be;
3. to report upon the possibility of achieving such ultimate values of tolerances consistent with economic and design requirements and other practical considerations;
4. to indicate which, if any, of the tolerances specified in Appendix 3 have already attained these ultimate values.

B.23-4

## RECOMMENDATION Q 1

## Relating to the Technical Standards of the IFRB

- MOD           The World Administrative Radio Conference, Geneva, 1979,  
recognizing
- NOC           that the Technical Standards of the International Frequency  
Registration Board (IFRB) are in daily use in the technical examination  
of frequency assignment notices;
- NOC           urges the CCIR  
  
to expedite all phases of the programme of studies which will  
assist the IFRB in the further refinement of its Technical Standards;
- NOC           and invites administrations  
  
in their participation in the work of the CCIR and its Study  
Groups, to give special priority to those studies.

---

<sup>1</sup> Replaces the Recommendation No. 2 of the Administrative Radio  
Conference, Geneva, 1959.

## RECOMMENDATION R 1

**to the CCIR Relating to Signal to Interference Protection  
Ratios and Minimum Field Strengths Required**

MOD           The World Administrative Radio Conference, Geneva, 1979,

NOC           recognizing

that the available information on signal to interference protection ratios and minimum field strengths required for each one of the services needs further refinement in order to permit the most efficient planning of the use of the radio frequency spectrum;

(MOD)       invites the CCIR

1.       to continue to study the signal to interference protection ratios which define the threshold of harmful interference for the several services;
2.       to continue to study the signal to noise ratios and the minimum field strengths required for satisfactory reception of the different classes of emission in the several services;
3.       to continue the study of fading allowances for the several services;
4.       to give particular attention to those studies which will assist in the further refinement of the Technical Standards used by the International Frequency Registration Board.

---

<sup>1</sup> Replaces Recommendation No. 3 of the Administrative Radio Conference, Geneva, 1959.

## RECOMMENDATION S 1

**to the CCIR Relating to Studies  
of the Technical Characteristics of Equipment**

MOD           The World Administrative Radio Conference, Geneva, 1979,

NOC           recognizing

that the available technical information concerning the various types of apparatus used for the reception of the different classes of emission in the several services needs to be more complete and more precise in order to permit the most efficient planning of the use of the radio frequency spectrum;

invites the CCIR

- (MOD) 1.       to continue to study, and to make recommendations for the bandwidth, selectivity, sensitivity and stability characteristics of various types of apparatus used for the reception of the different classes of emission in the several services;
2.       to continue to study practical methods of achieving the recommended characteristics;
3.       to study the minimum practicable spacing between adjacent channels for the different classes of emission for the several services in the various bands;
4.       to study other desirable conditions to be fulfilled by the complete systems employed by the different services in order to determine the required technical performance of the equipment, including the station terminal apparatus and the antennae;
5.       to study methods for determining whether the equipment satisfies the recommended requirements;
6.       to give particular attention to those studies which will assist in the further refinement of the Technical Standards used by the International Frequency Registration Board.

---

<sup>1</sup> Replaces Recommendation No. 6 of the Administrative Radio Conference, Geneva, 1959.

**Relating to the Criteria to be applied for Frequency Sharing  
between the Broadcasting-Satellite Service and the Terrestrial  
Broadcasting Service in the Band 620 - 790 MHz**

NOC                    considering

b) that it is necessary to have a power flux density limit which will provide adequate protection to the terrestrial broadcasting service;

(MOD) a) that the conclusions of the Special Joint Meeting of the CCIR (Geneva, 1971), indicated that the following power flux density limits are necessary to protect the terrestrial broadcasting service:

$-105 \text{ dBW/m}^2$   $60^\circ < \delta \leq 90^\circ$

b) that additional tests carried out by one administration after the Special Joint Meeting of the CCIR, indicated that the following more conservative power flux density limits may be necessary:

$$-114 \text{ dBW/m}^2 \quad 60^\circ < \delta \leq 90^\circ$$

1 Replaces Recommendation No. Spa2 - 10 of the World Administrative Radio  
Conference for Space Telecommunications, Geneva, 1971.

- c) that additional information is required on the protection ratio for interference from an FM television signal into a VSB television signal for both the 625- and 525-line systems;
- d) that with terrestrial television receiving systems using current technology, the minimum field strength to be protected may in some cases be less than the values included in CCIR Recommendation 417-2;
- e) that account may have to be taken of ground reflections;
- f) that energy dispersal techniques may reduce the required protection ratio and should be used if shown to be effective;

NOC

recommends

1. that in view of the absence of sufficient information on tests under operational conditions and in order to provide sharing criteria, on a provisional basis, the maximum power flux density produced at the surface of the Earth within the service area of a terrestrial broadcasting station (see CCIR Recommendation 417-2), by a space station in the broadcasting-satellite service in the band 620 - 790 MHz should not exceed:

$$-129 \text{ dBW/m}^2 \qquad \delta \leq 20^\circ$$

$$-129 + 0.4 (\delta - 20) \text{ dBW/m}^2 \qquad 20^\circ < \delta \leq 60^\circ$$

$$-113 \text{ dBW/m}^2 \qquad 60^\circ < \delta \leq 90^\circ$$

where  $\delta$  is the angle of arrival above the horizontal plane (in degrees);

2. that these limits be not exceeded on the territory of a country except with the agreement of its administration;
3. that the transmission of unmodulated carriers should be avoided;
4. that the CCIR urgently study the sharing criteria to be applied to frequency sharing between the broadcasting-satellite service, and the terrestrial broadcasting service in the band 620 - 790 MHz and prepare a Recommendation on power flux densities to be used in lieu of the above provisional limits;
5. that in its studies the CCIR consider in particular the following aspects:
  - 5.1 the required protection ratio for both 525- and 625-line systems for interference from an FM television signal into a VSB television signal;



- 5.2 the minimum field strength to be protected for the terrestrial television service taking into account the current state of the art;
  - 5.3 the effect of ground reflections;
  - 5.4 the number of broadcasting satellites that may be visible from a terrestrial broadcasting receiver;
  - 5.5 the effect of polarization discrimination;
  - 5.6 the effect of antenna directivity;
6. that in its studies the CCIR should consider the advantages of energy dispersal techniques in the broadcasting-satellite service (television).

## RECOMMENDATION U 1

**To the CCIR Relating to the Interdependence of  
Receiver Design Channel Grouping and Sharing Criteria**

MOD           The World Administrative Radio Conference, Geneva, 1979,

NOC           considering

a)           that receiver design, channel grouping and sharing criteria are interrelated and have a considerable influence on the development of a plan for the broadcasting-satellite service;

b)           that, so far, insufficient attention may have been given to these factors and to their influence on the implementation of such a plan;

NOC           invites the CCIR

             to study the problem of the interdependence of receiver design, channel grouping and sharing criteria, together with the effects of these factors on the operation of the broadcasting-satellite service.

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<sup>1</sup> Replaces Recommendation No. Sat - 7 of the World Broadcasting Satellite Administrative Radio Conference, Geneva, 1977.

## RECOMMENDATION V 1

**Relating to the Development of Techniques which  
Would Help to Reduce Congestion in the High Frequency Bands  
Allocated to the Aeronautical Mobile (R) Service**

MOD            The World Administrative Radio Conference, Geneva, 1979,

NOC            considering

a)            that several administrations are actively engaged in the development of communication techniques the wider use of which, in the aeronautical mobile (R) service, would help to reduce congestion in the high frequency bands allocated to that service; such developments include the use of higher frequencies with remotely controlled stations, directional antennae, space radiocommunication techniques and automatic data transmission;

b)            that knowledge of these developments would be useful to other administrations in considering the application of these techniques to their aeronautical mobile (R) communication services;

c)            that the International Civil Aviation Organization (ICAO) is actively engaged in coordinating the operational development of such techniques;

NOC            recommends

administrations engaged in the development of techniques which would help to reduce congestion in the HF bands to inform the IFRB periodically of the progress achieved;

NOC            instructs the IFRB

to circulate periodically the information so obtained to administrations and to the ICAO.

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1    Replaces Recommendation No. Aer2 - 1 of the World Administrative Radio Conference on the Aeronautical Mobile Service, Geneva, 1978.

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 753-E

19 November 1979

Original : English

COMMITTEE 7

Republic of Liberia

REQUEST FOR ADDITIONAL CALL SIGN SERIES

Call signs allocated to the Republic of Liberia have been used up, and it is necessary that another be allocated.

The Liberian Delegation therefore requests that an additional call sign series be allocated to the Republic of Liberia.



WORLD ADMINISTRATIVE  
RADIO CONFERENCE

(Geneva, 1979)

Addendum No. 1 to  
Document No. 754-E  
21 November 1979  
Original : English

COMMITTEE 5

NOTE FROM THE CHAIRMAN OF WORKING GROUP 5/AD HOC 8

Subject : Study of the problems associated with the Region 2 12 GHz planning conference.

1. Further to the majority decision taken in the Working Group to recommend to Committee 5 Resolution No. / BB / (Document No. 754), informal discussions took place in an attempt to overcome the difficulties which lead to a reservation by the delegation of the USSR on "resolves 4".
2. As a result of these discussions I have been requested to indicate to Committee 5 that a solution to this problem has now been identified, which would require several modifications to Resolution No. / BB /.
3. The proposed modifications, which have not been discussed in the Working Group are given in the Annex of this note.

R.O. PHILLIPS  
Chairman of Working Group 5/ad hoc 8

Annex : 1



A N N E X

RESOLUTION No. / BB /

Relating to the Application of Certain Provisions of the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, to take into account Changes made by the 1979 World Administrative Radio Conference to the Table of Frequency Allocations for Region 2 in the Band 11.7 - 12.7 GHz.

a) Delete present text of resolves 4.

b) Insert new text as follows :

4. that Article 9 and Annex 5 of the 1977 Final Acts, which specify power flux-density limits between 11.7 - 12.2 GHz to protect terrestrial services in Regions 1 and 3 from Region 2 broadcasting-satellite space stations, shall also be applied to the band 12.2 - 12.5 GHz.

c) Add new resolves 5 :

5. that until the final decisions are made by the 1983 Regional Conference, in the band 12.5 - 12.7 GHz,

a) Article 9 and the limits in Annex 5(1) of the 1977 Final Acts shall be applied to the operation of Region 2 space stations in the broadcasting-satellite service, and

b) the power flux-density limits specified in No. 6072/470NU shall be applied to the operation of Region 2 space stations in the fixed-satellite service with respect to the countries mentioned in No. 3788/405BD.

d) Delete present text of requests the CCIR.

e) Insert new text as follows :

requests the CCIR

to study urgently the question of appropriate protection for terrestrial services in each affected Region in the band 12.5 - 12.7 GHz, in the context of efficient planning of the broadcasting-satellite service in Region 2, as referred to in resolves 4 and 5 above; to prepare a special report on the subject in time for its consideration by appropriate preparatory meetings and as a guideline for the work of the 1983 Regional Conference.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 754-E

19 November 1979

Original : English

## COMMITTEE 5

### FIRST REPORT OF WORKING GROUP 5/AD HOC 8 TO COMMITTEE 5

Subject : Study of the problems associated with the Region 2 12 GHz planning conference

1. Working Group 5/ad hoc 8 has so far held two meetings. Representatives of the Administrations of Algeria, Australia, Brazil, Canada, Cuba, Federal Republic of Germany, Japan, Nigeria, Senegal, Thailand, United Kingdom, United States of America, the USSR and Venezuela were present.
2. The Working Group considered the proposed Region 2 frequency allocations contained in Document No. 584(Rev.1). It was agreed unanimously that, in principle, the frequency allocation proposals do not introduce new inter-regional sharing situations that were not considered by the World Broadcasting-Satellite Administrative Radio Conference, WARC-BC-Sat, Geneva, 1977 except for the case of sharing between the fixed satellite service in Regions 1 and 3 with the broadcasting satellite service in Region 2.
3. The Working Group decided by majority to recommend to Committee 5, for its consideration, a draft Resolution indicating how the provisions of the Final Acts of the WARC-BC-Sat, Geneva, 1977, could be applied to the sharing situations arising from the Region 2 frequency allocation proposals.
4. The delegation of the USSR reserved the right to return to "resolves 4" in Committee 5 in that it was considered that the provisions of No. 6072 should apply to the broadcasting-satellite service in Region 2 in the band 12.5 - 12.7 GHz so as to protect the fixed and mobile services operating under footnote 405BD.
5. The draft Resolution is presented in Annex 1 of this Report.

R.O. PHILLIPS

Chairman of Working Group 5/ad hoc 8

Annex : 1



A N N E X

RESOLUTION No. [BB]

Relating to the Application of Certain Provisions of the Final Acts  
of the World Broadcasting-Satellite Administrative  
Radio Conference, Geneva, 1977, to take into Account Changes made  
by the 1979 World Administrative Radio Conference  
to the Table of Frequency Allocations for  
Region 2 in the Band 11.7 - 12.7 GHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the 1971 Space World Administrative Radio Conference allocated the frequency band 11.7 - 12.2 GHz in Region 2 to the fixed-satellite, broadcasting-satellite, fixed, mobile (except aeronautical mobile), and broadcasting services;
- b) that the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, established a Plan and associated procedures for the broadcasting-satellite service in the band 11.7 - 12.5 GHz in Region 1 and in the band 11.7 - 12.2 GHz in Region 3;
- c) that that Conference also established inter-regional sharing criteria based on the frequency allocations prevailing at that time;
- d) that the frequency allocations to the fixed-satellite and broadcasting-satellite services in the 12 GHz band in Region 2 have been expanded and modified by the World Administrative Radio Conference, Geneva, 1979;

recognizing

- a) that these modifications to the frequency allocations Table do not introduce in principle new inter-regional sharing situations apart from that identified in b) below;
- b) that provisions of the Final Acts of the 1977 Conference can be applied directly as indicated above to all sharing situations other than that between fixed-satellites in Regions 1 and 3 and broadcasting satellites in Region 2 in the frequency band 12.5 - 12.7 GHz;
- c) that the single case referred to in b) above is dealt with in Resolution No. [CC] ;

resolves

- 1. that Article 4 and Annex 1 of the 1977 World Administrative Radio Conference Final Acts, relating to the modification to the Plan for the broadcasting-satellite service in Regions 1 and 3, shall also be applied with respect to the protection of the broadcasting-satellite service in the band 12.2 - 12.5 GHz, and to the fixed-satellite service in the band 12.2 - 12.3 GHz allocated in Region 2;





2. that Article 6 and Annex 3 of the 1977 Final Acts, relating to the procedure for the coordination and notification of frequency assignments to terrestrial stations affecting broadcasting-satellite frequency assignments, shall also be applied over the band 12.2 - 12.7 GHz with respect to the broadcasting-satellite service in Region 2;

3. that Article 7 and Annex 4 of the 1977 Final Acts, and Resolution No. [Sat-5\_7], which relate to the preliminary procedures, and the coordination, notification and recording of frequency assignments to stations in the fixed-satellite and broadcasting-satellite services respectively, in Region 2, shall also be applied to the bands 12.2 - 12.3 GHz as allocated to the fixed-satellite service, and to the band 12.2 - 12.5 GHz as allocated to the broadcasting-satellite service in Region 2;

4. that Article 9 and Annex 5 of the 1977 Final Acts, which specify power flux-density limits between 11.7 and 12.2 GHz to protect terrestrial services in Regions 1 and 3 from Region 2 broadcasting-satellite space stations, shall also be applied to the band 12.2 - 12.7 GHz, pending further consideration at the 1983 Regional Conference of the Protection to Terrestrial Services [Region 3 and\_] those countries in Radio Regulations 3788/405BD in the band 12.5 - 12.7 GHz

requests the CCIR

to study urgently the question of protection for terrestrial services in the band 12.5 - 12.7 GHz referred to in resolves 4 above.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 755(Rev.1)-E

21 November 1979

Original : English

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COMMITTEE 5

REPORT FROM DRAFTING GROUP 5BA12 TO COMMITTEE 5

1. The Drafting Group set up by the Working Group 5BA at 17 November 1979 and comprising representatives from the delegations of Japan, Sweden, United Kingdom, United States of America, IMCO/CIRM and ICS held a meeting on 19 November 1979 concerning the Recommendations contained in Proposals Nos. 384 and 385 in Document No. 15 from Sweden taking into account the discussions on the subject in Working Group 5BA. The group unanimously agreed the text of the proposed draft Recommendations as indicated in Annexes 1 and 2.
2. Due to the lack of time the Chairman of Working Group 5BA instructed the Drafting Group 5BA12 to report directly to Committee 5.
3. The frequency limits have been put into square brackets pending the final decisions to be taken on the Table of Frequency Allocations.

B. ERIKSON

Coordinator of Drafting Group 5BA12

Annexes : 2



A N N E X 1

RECOMMENDATION No. ...

Relating to the Planning for the Use of Frequencies by the  
Maritime Mobile Service in the Band 415 - 526.5 kHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the frequency allocations to the maritime mobile service in the 415 - 526.5 kHz band have been modified by the present Conference;
- b) that the present Conference has adopted Recommendations 7 (Documents Nos. DT/210 and 402, Annex 2) 7 concerning this band;
- c) that certain technical standards used in the maritime mobile service have been reviewed by the present Conference;
- d) that the technical standards contained in the Final Acts of the European Maritime Conference (Copenhagen 1948), that served as a basis for planning by European countries, have become out-of-date;
- e) that at the present time no plan exists for Regions 2 and 3;
- f) that ships using frequencies within this band travel world-wide;
- g) that some countries have already assigned frequencies for other services operating in this band that may place constraints on the planning for the maritime mobile service;
- h) that there is consequently a need for detailed examination regarding the use and planning of this band which takes into account the latest technical developments and standards;

noting

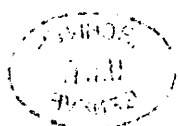
[ that this Conference has recommended the convening of a conference for mobile services; ]

recommends

that the Administrative Council ensure that the conference for mobile services is competent to take decisions regarding planning and use of frequencies in this band;

requests the CCIR

to undertake as a matter of urgency the study of the technical and operational aspects of these matters including the need for criteria for sharing with other services;



invites

- a) the Secretary-General to refer this Recommendation to IMCO inviting its urgent consideration of the operational requirements for the maritime mobile service using this frequency band, and to make such Recommendations as may be appropriate;
- b) Administrations to study this matter and to submit proposals for consideration by the conference for mobile services.

A N N E X 2

RECOMMENDATION No. ...

Relating to the Planning for the Use of Frequencies  
in the Bands between 1 606.5 and 3 400 kHz Allocated to the Maritime Mobile Service

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the frequency allocations to the maritime mobile service in the bands between 1 606.5 kHz and 3 400 kHz have been modified by the present Conference;
- b) that the present Conference has adopted Recommendation (Document No. 645, Annex 3) and a Resolution (Document No. 689, Annex 1) concerning these bands;
- c) that it is desirable to achieve the most efficient use of these bands in the implementation of the revised Table of Frequency Allocations;
- d) that ships using frequencies within these bands travel world-wide;
- e) that existing plans are limited to regional use;
- f) that there is consequently a need for detailed examination regarding the use and planning of these bands;

noting

[ that this Conference has recommended the convening of a conference for mobile services; ]

recommends

that the Administrative Council ensure that the conference for mobile services is competent to take decisions regarding planning and use of frequencies in these bands;

requests the CCIR

to undertake as a matter of urgency the study of the technical and operational aspects of these matters including the need for criteria for sharing with other services;

invites

- a) the Secretary-General to refer this Recommendation to IMCO inviting its urgent consideration of the operational requirements for the maritime mobile service using these frequency bands, and to make such Recommendations as may be appropriate;
- b) Administrations to study this matter and to submit proposals for consideration by the conference for mobile services.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 755-E  
19 November 1979  
Original : English

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COMMITTEE 5

REPORT FROM DRAFTING GROUP 5BA12 TO COMMITTEE 5

1. The Drafting Group set up by the Working Group 5BA at 17 November 1979 and comprising representatives from the delegations of Japan, Sweden, United Kingdom, United States of America, IMCO/CIRM and ICS held a meeting on 19 November 1979 concerning the Recommendations contained in Document No. S/15/384-385 taking into account the discussions on the subject in Working Group 5BA. The group unanimously agreed the text of the proposed draft Recommendations as indicated in Annexes 1 and 2.
2. Due to the lack of time the Chairman of Working Group 5BA instructed the Drafting Group 5BA12 to report directly to Committee 5.
3. The frequency limits have been put into square brackets pending the final decisions to be taken on the Table of Frequency Allocations.

B. ERIKSON  
Coordinator of Drafting Group 5BA12

Annexes : 2



A N N E X 1

RECOMMENDATION No. ...

Relating to the Planning for the Use of Frequencies by the  
Maritime Mobile Service in the Band [415 - 526.5] kHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the frequency allocations to the maritime mobile service in this band have been modified by the Conference;
- b) that this Conference has adopted Recommendations (Documents Nos. DT/210 and 402, Annex 2) concerning this band;
- c) that some technical standards used in the maritime mobile service have been reviewed by this Conference;
- d) that the technical standards contained in the Final Acts of the European Maritime Conference (Copenhagen 1948), that served as a basis for European countries, have become out-of-date;
- e) that at the present time no plan exists for Regions 2 and 3;
- f) that ships using frequencies within this band travel world-wide;
- g) that countries have already assigned frequencies for other services operating in this band that may place constraints on the planning for the maritime service;
- h) that there is consequently a need for detailed examination regarding the use and planning of this band that takes into account the latest technical developments and standards;

noting

[ that this Conference has recommended the convening of a general mobile conference; ]

recommends

that the Administrative Council insure that the mobile conference is competent to take decisions regarding planning and use of frequencies in this band;

requests the CCIR

to undertake as a matter of urgency the study of the technical and operational aspects of these matters including the need for sharing criteria with other services;

invites

- a) the Secretary-General to refer this Recommendation to the IMCO inviting its urgent consideration of the operational requirements for the maritime mobile service using this frequency band, and to make such Recommendations as may be appropriate;
- b) Administrations to study this matter and to submit proposals for consideration by the mobile conference.



A N N E X 2

RECOMMENDATION No. ...

Relating to the Planning for the Use of Frequencies by the  
Maritime Mobile Service in the Bands between [ 1 606.5 and 3 400 ] kHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the frequency allocations to the maritime mobile service in these bands have been modified by the Conference;
- b) that this Conference has adopted Recommendation (Document No. 645, Annex 3) and Resolution (Document No. 689, Annex 1) concerning these bands;
- c) that it is desirable to achieve the most efficient use of these bands in the implementation of the revised Table of Frequency Allocations;
- d) that ships using frequencies within these bands travel world-wide;
- e) that existing plans are limited to regional use;
- f) that there is consequently a need for detailed examination regarding the use and planning of these bands;

noting

[ that this Conference has recommended the convening of a general mobile conference; ]

recommends

that the Administrative Council ensure that the mobile conference is competent to take decisions regarding planning and use of frequencies in these bands;

requests the CCIR

to undertake as a matter of urgency the study of the technical and operational aspects of these matters including the need for sharing criteria with other services;

invites

- a) the Secretary-General to refer this Recommendation to the IMCO inviting its urgent consideration of the operational requirements for the maritime mobile service using these frequency bands, and to make such Recommendations as may be appropriate;
  - b) Administrations to study this matter and to submit proposals for consideration by the mobile conference.
-

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 756-E

20 November 1979

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## COMMITTEE 5

### FOURTH REPORT OF WORKING GROUP 5BB TO COMMITTEE 5

#### 1. Frequency bands between 7 300 - 8 195 kHz

1.1 All proposals concerning this frequency band have been considered and the Working Group decided by majority to recommend to Committee 5 the adoption of the revised Table and of footnote ADD 3509A which appear in Annex 1.

1.2 A substantial number of delegations have reserved the right to come back in Committee 5 on the question of an allocation to the broadcasting service in the band 7 300 - 7 500 kHz.

#### 2. Frequency band 8 195 - 8 815 kHz

2.1 When considering the bands allocated exclusively to the maritime mobile service the Working Group had agreed that the question of footnotes providing for the possible use by the fixed service of some of the higher bands allocated to the maritime mobile service would be considered later. This matter was taken up again when reviewing the proposed allocations in the adjacent bands to the 8 195 - 8 815 kHz band, and the Working Group decided by majority not to provide for the use of the band 8 195 - 8 815 kHz by the fixed service.

2.2 The delegations of India and of the USSR have reserved the right to revert to this question in Committee 5.

#### 3. Frequency bands between 9 040 - 9 995 kHz

3.1 All proposals concerning these bands have been considered and the Working Group decided by a two-third majority to recommend to Committee 5 the adoption of the revised Table and of footnotes 3510A and 3510B which appear in Annex 2.

3.2 The delegations of Poland and of the USSR reserved the right to raise the allocation issue again in Committee 5.

#### 4. Frequency bands between 10 100 - 11 175 kHz

4.1 All proposals concerning these bands have been considered and the Working Group decided by majority to recommend to Committee 5 the adoption of the revised Table and of footnote 3499A which appears in Annex 3.

#### 5. Frequency bands between 11 400 - 12 330 kHz

5.1 All proposals concerning these frequency bands have been considered and the Working Group decided by majority to recommend to Committee 5 the adoption of the revised Table and of footnotes ADD 3511A and ADD 3511B which appear in Annex 4. It was also decided to recommend the deletion of footnote 3512/216.



5.2 The delegations of Senegal and USSR have reserved the right to revert in Committee 5 to the question of the allocations proposed in the bands 11 650 - 11 700 kHz, 11 975 - 12 050 kHz and 12 230 - 12 330 kHz.

6. The delegation of Uruguay made a special plea on behalf of its country concerning the importance of retaining the fixed bands especially below 10 MHz. It emphasized that these bands were heavily used in Region 2 and were indispensable for providing communications to assist with the development of the country.

7. The Working Group discussed the period needed to allow for the satisfactory transfer of the fixed service and proposed a period of 10 years from the commencement of the application of the transfer procedure. This time period would also depend upon the details of the Resolution governing the transfer.

P. BARNES

Chairman of Working Group 5BB



A N N E X 1

kHz  
7 300 - 8 195

Region 1	Region 2	Region 3
7 300 - 8 100	FIXED Land mobile 3509A	
8 100 - 8 195	FIXED MARITIME MOBILE	

ADD 3509A

In Region 3, the stations of services to which the band 7 995 - 8 005 kHz is allocated may transmit standard frequencies and time signals.

A N N E X 2

kHz  
9 040 - 9 995

Region 1	Region 2	Region 3
9 040 - 9 500	FIXED	
9 500 - 9 900	BROADCASTING 3510A 3510B	
9 900 - 9 995	FIXED	

ADD 3510A

The band 9 775 - 9 900 kHz is allocated to the fixed service on a primary basis subject to the procedures described in Resolution No. 7. The use of this band by the broadcasting service shall be subject to provisions to be established by the World Administrative Radio Conference for the planning of high frequency bands allocated to the broadcasting service (see Recommendation No. 4227). Within this band, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in Resolution No. 7, of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations and recorded in the Master Register and which may be affected by broadcasting operations on that channel.

ADD 3510B

On condition that harmful interference is not caused to the broadcasting service, frequencies in the band 9 775 - 9 900 kHz, 11 650 - 11 700 kHz and 11 975 - 12 050 kHz may be used by fixed stations communicating only within the boundary of the country in which they are located, each station having a total radiated power not exceeding 24 dBW.

A N N E X    3

kHz  
10 100 - 11 175

Region 1	Region 2	Region 3
10 100 - 10 150	FIXED  Amateur  3499A	
10 150 - 11 175	FIXED  Mobile except aeronautical mobile (R)	

3499A

For the use of the bands allocated to the amateur service  
at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz, and  
144 MHz in the event of natural disasters, see Resolution No. 7.

A N N E X    4

kHz  
11 460 - 13 360

Region 1	Region 2	Region 3
11 400 - 11 650	FIXED	
11 650 - 12 050	BROADCASTING	
	3510B 3511A	
12 050 - 12 230	FIXED	
12 230 - 13 200 *)	MARITIME MOBILE	
	3511B	

\*) For the band 12 330 - 13 200 kHz, see Document No. 403.

ADD    3511A

The bands 11 650 - 11 700 kHz and 11 975 - 12 050 kHz are allocated to the fixed service on a primary basis subject to the procedures described in / Resolution No. 7. The use of these bands by the broadcasting service shall be subject to provisions to be established by the World Administrative Radio Conference for the planning of high frequency bands allocated to the broadcasting service (see Recommendation No. / / Document No. 422\_7). Within these bands, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in / Resolution No. 7, of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations / and recorded in the Master Register\_7 and which may be affected by broadcasting operations on that channel.

ADD    3511B

The band 12 230 - 12 330 kHz is allocated to the fixed service on a primary basis subject to the procedures described in / Resolution No. 7. The use of this band by the maritime mobile service shall be subject to provisions to be decided by a competent World Administrative Radio Conference. The date of commencement of operations in the maritime mobile service on a frequency in accordance with the above-mentioned provisions shall not be earlier than the date of completion of satisfactory transfer, in accordance with the procedure described in / Resolution No. 7, of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations / and recorded in the Master Register\_7 and which may be affected by maritime mobile operations on that frequency.

SUP    3512/216

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 757-E  
20 November 1979  
Original : English

## COMMITTEE 5

### FIFTH REPORT OF WORKING GROUP 5BB TO COMMITTEE 5

#### 1. Frequency bands 13 360 - 14 990 kHz

1.1 All proposals concerning these frequency bands have been considered and the Working Group decided by majority to recommend to Committee 5 the adoption of the revised Table and of footnotes ADD 3499A, ADD 3512A, MOD 3513/217, ADD 3513A, MOD 3514/218 which appear in Annex 1.

1.2 The delegation of USSR, opposing the allocation for the broadcasting service of 200 kHz in the band 13 410 - 14 000 kHz, reserves its right to return to this question in Committee 5.

1.3 The delegations of Denmark, United States, Norway, New Zealand and Switzerland expressed concern about the inclusion of additional countries in footnote MOD 3514/218 which allows for fixed stations to operate in the band 14 250 - 14 350 kHz allocated exclusively to the amateur service.

#### 2. Frequency bands 15 100 - 17 410 kHz

2.1 All proposals concerning these frequency bands have been considered and the Working Group decided by majority to recommend to Committee 5 the adoption of the revised Table and of footnotes ADD 3515A, ADD 3515B and ADD 3515C which appear in Annex 2.

2.2 The delegation of Japan reserved the right to revert in Committee 5 to the extension of the band allocated to the broadcasting and maritime services until the procedures of transfer are known.

2.3 The delegation of USSR also expressed a reservation on the allocations made in the same bands.

2.4 The delegations of Canada, Spain, United States, France, Greece and Israel have reserved the right to revert in Committee 5 to the inadequate amount of additional spectrum which has been allocated to the maritime mobile services.

P. BARNES  
Chairman of Working Group 5BB

Annexes : 2

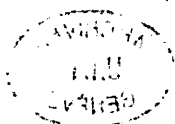




A N N E X 1

kHz  
13 360 - 14 990

Region 1	Region 2	Region 3
13 360 - 13 410	FIXED  RADIO ASTRONOMY  3512A	
13 410 - 13 600	FIXED  Mobile except aeronautical mobile (R)  3513/217	
13 600 - 13 800	BROADCASTING  3513A	
13 800 - 14 000	FIXED  Mobile except aeronautical mobile (R)	
14 000 - 14 250	AMATEUR  AMATEUR-SATELLITE  3499A	
14 250 - 14 350	AMATEUR  3499A 3514/218	
14 350 - 14 990	FIXED  Mobile except aeronautical mobile (R)	



- ADD 3499A For the use of the bands allocated to the amateur service at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution   .
- ADD 3512A In making assignments to stations of other services to which the band 13 360 - 13 410 kHz is allocated, Administrations are urged to take all practical steps to protect the radio astronomy service from harmful interference. Emissions from space and airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3281/116A and Article N33A.)
- MOD 3513/217 The band 13 553 - 13 567 kHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 13 560 kHz). Radio services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 5002A.
- ADD 3513A The band 13 600 - 13 800 kHz is allocated to the fixed service on a primary basis subject to the procedures described in Resolution No.   . The use of this band by the broadcasting service shall be subject to provisions to be established by the World Administrative Radio Conference for the planning of high frequency bands allocated to the broadcasting service. (See Recommendation No.    (Document No. 422).). Within this band, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in Resolution No.   , of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations and recorded in the Master Register and which may be affected by broadcasting operations on that channel.
- MOD 3514/218 Additional allocation : in Afghanistan, China, Ivory Coast, Iran, and USSR, the band 14 250 - 14 350 kHz is also allocated to the fixed service on a primary basis.

A N N E X 2

kHz  
15 100 - 17 410

Region 1	Region 2	Region 3
15 100 - 15 600	BROADCASTING	
	3515A	
15 600 - 16 360	FIXED	
	3515B	
16 360 - 17 410*)	MARITIME MOBILE	
	3515C	

\*) For the band 16 460 - 17 360 kHz, see Document No. 403.

ADD 3515A

The band 15 450 - 15 600 kHz is allocated to the fixed service on a primary basis subject to the procedures described in / Resolution No. \_\_\_\_/. The use of this band by the broadcasting service shall be subject to provisions to be established by the World Administrative Radio Conference for the planning of high frequency bands allocated to the broadcasting service. (See Recommendation No. [ ] (Document No. 422).) Within this band, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in / Resolution No. \_\_\_\_, of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations / and recorded in the Master Register / and which may be affected by broadcasting operations on that channel.

ADD 3515B

In Region 3, the stations of those services to which the band 15 995 - 16 005 kHz is allocated may transmit standard frequencies and time signals.

ADD 3515C

The bands 16 360 - 16 460 kHz and 17 360 - 17 410 kHz are allocated to the fixed service on a primary basis subject to the procedures described in / Resolution No. \_\_\_\_/. The use of these bands by the maritime mobile service shall be subject to provisions to be decided by a competent World Administrative Radio Conference. The date of commencement of operations in the maritime mobile service on a frequency in accordance with the above-mentioned provisions shall not be earlier than the date of completion of satisfactory transfer, in accordance with the procedure described in / Resolution No. \_\_\_\_, of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations / and recorded in the Master Register / and which may be affected by maritime mobile operations on that frequency.

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 758-E  
19 November 1979  
Original : English

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PLENARY MEETING

REPORT BY WORKING GROUP PLEN. AD HOC 2  
TO THE PLENARY MEETING

Subject : Document No. 576 on HF broadcasting.

Working Group Plen. ad hoc 2 met on 19 November 1979 and considered Document No. 576.

It unanimously agreed to submit to the Plenary Meeting the text of the draft Recommendation reproduced in the Annex to this document.

O. CHABSIGH  
The Convenor of Working Group Plen. ad hoc 2

Annex : 1



A N N E X

DRAFT RECOMMENDATION

Concerning HF broadcasting

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the congestion of the HF broadcasting bands;
- b) the extent of adjacent channel interference;

noting

the possibility of improving the situation by implementing pertinent CCIR Recommendations;

recommends

1. that Administrations pay special attention to the provisions for out-of-band spectrum contained in CCIR Recommendation 328-4;
2. that Administrations encourage, the maximum extent possible, manufacturers to design and build HF broadcasting receivers that conform to CCIR Recommendation 332-4 concerning the selectivity of receivers;

invites Administrations

to take advantage, to the extent practicable, of synchronized frequency transmitter operation, taking into account CCIR Recommendation 205-1;

invites the CCIR

to carry out further studies in relation to the Recommendations mentioned above, taking into account the requirements of HF broadcasting, with a view to updating these three Recommendations wherever necessary.

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# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 759-E

19 November 1979

Original : English

## REPORT OF WORKING GROUP 7/AD HOC 4

1. The Working Group has considered the contents of Document No. 625, to which were annexed texts of proposed additional provisions in Articles N11, N12 and N13 relating to the responsibility for frequency notifications and to cases of disputed sovereignties, and Document No. DL/226 containing a proposal from Morocco for a preamble to the Radio Regulations on this subject.
2. The Working Group concluded that the questions involved were ones of general significance in the Radio Regulations, and that the approach of a broad statement in a preamble was to be preferred to that of individual provisions at a number of points in the Regulations. The Working Group therefore adopted the text of such a preamble which appears in the Annex to this report. It was agreed that this should stand outside any of the sub-divisions of the Regulations (Parts, Chapters or Articles), but should bear a marginal number indicating that it was a part of the Regulations. It was also decided that the substance of the first sentence of Document No. DL/226, which was not incorporated in the preamble as agreed by the Working Group, could be met by reproducing the definition of the term "Administration" in Article N1 of the Radio Regulations, with the symbol (CONV) to indicate its origin. To avoid confusion with the proposed new preamble to the entire body of the Regulations, it was decided that the present preamble to Article N1 should be retitled "introduction". The proposed changes to the beginning of the Regulations are set out in the Annex.
3. The Working Group further concluded that Resolution No. 5 should be maintained (subject to editorial corrections to take account of changes to Article and Chapter numbering in the new Regulations), and that there would be disadvantages in transferring its contents into the body of the Radio Regulations, as proposed in Document No. 625. In view of this and the proposed introduction of the new preamble it was agreed that Committee 6 should be advised that no changes or additions to Articles N11, N12 or N13 were necessary in this context.

P.R.A. FULTON

Chairman, Working Group 7/ad hoc 4

Annex : 1



A N N E X

THE RADIO REGULATIONS

ADD

PREAMBLE

ADD 3000

The application of the provisions of these Regulations does not imply the expression of any opinion whatsoever on the part of the Members of the Union or its permanent organs concerning the legal status or sovereignty of any country or territory.

PART A

CHAPTER NI

Terminology

ARTICLE NI/1\*)

Terms and Definitions

MOD

Introduction  
~~Preamble~~

NOC 3001\*\*) 1

For the purposes of these Regulations, the following terms shall have the meanings defined below. These terms and definitions do not, however, necessarily apply for other purposes.

Section I. General Terms

ADD 3001A

*Administration:* Any governmental department or service responsible for discharging the obligations undertaken in the Convention of the International Telecommunication Union and the Regulations. (CONV.)



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 760-E

20 November 1979

Original : English

## COMMITTEE 5

### SIXTH REPORT OF WORKING GROUP 5BB TO COMMITTEE 5

#### 1. Frequency bands 17 410 - 17 900 kHz

1.1 All proposals concerning these bands have been considered and the Working Group decided by majority to recommend to Committee 5 the adoption of the revised Table and of footnote ADD 3515D which appear in Annex 1.

1.2 The delegation of Syria reserved the right to revert in Committee 5 to the extensions of the band allocated to the broadcasting service between 17 550 and 17 600 kHz.

1.3 The delegation of USSR also reserved the right to revert in Committee 5 to the extension of the bands allocated to the broadcasting service.

#### 2. Frequency bands 18 030 - 19 990 kHz

2.1 All proposals concerning these bands have been considered and the Working Group decided to recommend to Committee 5 the adoption of the revised Table and of footnotes ADD 3499A, ADD 3515E, ADD 3515F and ADD 3515G which appear in Annex 2.

2.2 The delegation of the USSR reserved the right to revert in Committee 5 to the allocation made in the band 19 680 - 19 800 kHz.

#### 3. Frequency bands 20 010 - 21 924 kHz

3.1 All proposals concerning these frequency bands have been considered and the Working Group decided to recommend to Committee 5 the adoption of the revised Table and of footnotes 3516A and MOD 3517/221B which appear in Annex 3.

3.2 It was also agreed that footnote ADD 3499A would apply to the amateur band 21 000 - 21 450 kHz.

3.3 The delegation of the USSR reserved the right to revert in Committee 5 to the allocation for broadcasting in the band 21 750 - 21 850 kHz.

#### 4. Frequency bands 22 000 - 24 990 kHz

4.1 All proposals concerning these frequency bands have been considered and the Working Group decided to recommend to Committee 5 the adoption of the revised Table and of footnotes ADD 3517A, ADD 3517B, MOD 3518/222, ADD 3518A and 3518B which appear in Annex 4.

4.2 It was also agreed that footnote ADD 3499A would apply to the amateur band 24 890 - 24 990 kHz and that footnote 3519/222A would be deleted.

4.3 The delegation of the USSR reserved the right to revert in Committee 5 to the allocations made in the bands 22 720 - 22 855 kHz and 24 890 - 24 990 kHz.





5. Frequency bands 25 070 - 27 500 kHz

5.1 All the proposals concerning these frequency bands have been considered and the Working Group decided to recommend to Committee 5 the adoption of the revised Table and of footnotes ADD 3521A, ADD 3521B and MOD 3522/225 which appear in Annex 5.

5.2 It was also agreed to recommend the deletion of footnote 3523/226.

5.3 The delegates of USSR reserved the right to revert in Committee 5 to the allocation made in the band 25 110 - 25 210 kHz.

5.4 A proposal submitted by the delegation of Italy concerning a footnote providing for the use of the band 26 960 - 27 280 kHz by a proposed new service called "non-professional personnel service" was opposed in the Working Group on the ground that this kind of problem could not be covered by provisions in the Radio Regulations.

P. BARNES  
Chairman of Working Group 5BB

A N N E X . 1

kHz  
17 410 - 17 900

Region 1	Region 2	Region 3
17 410 - 17 550	FIXED	
17 550 - 17 900	BROADCASTING	
	3515D	

ADD 3515D

The band 17 550 - 17 700 kHz is allocated to the fixed service on a primary basis subject to the procedures described in [Resolution No. ]. The use of this band by the broadcasting service shall be subject to provisions to be established by the World Administrative Radio Conference for the planning of high frequency bands allocated to the broadcasting service. (See Recommendation No. [ (Document No. 422) ].) Within this band, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in [Resolution No. ], of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations [and recorded in the Master Register] and which may be affected by broadcasting operations on that channel.

A N N E X 2

kHz  
18 030 - 18 168

Region 1	Region 2	Region 3
18 030 - 18 052	FIXED	
18 052 - 18 068	FIXED	
	Space research	
18 068 - 18 168	AMATEUR	
	AMATEUR-SATELLITE	
	Space research	
	3499A 3515E 3515G	

ADD 3499A For the use of the bands allocated to the amateur service at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution No. 7.

ADD 3515E The use of the band 18 068 - 18 168 kHz by the amateur service shall be subject to the completion of satisfactory transfer of all assignments to fixed stations operating in this band 7 and recorded in the Master Register 7, in accordance with the procedure described in 7 Resolution No. 7.

ADD 3515G Additional allocation : in the USSR, the band 18 068 - 18 168 kHz is also allocated to the fixed service on a primary basis for use within the boundary of the USSR, with a maximum 7 power of 1 kW 7.

kHz  
18 168 - 19 990

Region 1	Region 2	Region 3
18 168 - 18 780	FIXED	
18 780 - 18 900	MARITIME MOBILE	
	3515F	
18 900 - 19 680	FIXED	
19 680 - 19 800	MARITIME MOBILE	
	3515F	
19 800 - 19 990	FIXED	

ADD 3515F

The bands 18 780 - 18 900 kHz and 19 680 - 19 800 kHz are allocated to the fixed service on a primary basis subject to the procedures described in / Resolution No. \_\_\_\_/. The use of these bands by the maritime mobile service shall be subject to provisions to be decided by a competent World Administrative Radio Conference. The date of commencement of operations in the maritime mobile service on a frequency in accordance with the above-mentioned provisions shall not be earlier than the date of completion of satisfactory transfer, in accordance with the procedure described in / Resolution No. \_\_\_\_, of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations / and recorded in the Master Register / and which may be affected by maritime mobile operations on that frequency.

A N N E X 3

kHz  
20 010 - 21 924

Region 1	Region 2	Region 3
20 010 - 21 000	FIXED Mobile	
21 000 - 21 450	AMATEUR AMATEUR-SATELLITE 3499A	
21 450 - 21 850	BROADCASTING 3516A	
21 850 - 21 870	FIXED 3517/221B	
21 870 - 21 924	AERONAUTICAL FIXED	

ADD 3499A

See Annex 2.

ADD 3516A

The band 21 750 - 21 850 kHz is allocated to the fixed service on a primary basis subject to the procedures described in [Resolution No. 7]. The use of this band by the broadcasting service shall be subject to provisions to be established by the World Administrative Radio Conference for the planning of high frequency bands allocated to the broadcasting service. (See Recommendation No. 4 (Document No. 422) 7.) Within this band, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in [Resolution No. 7], of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations [and recorded in the Master Register] and which may be affected by broadcasting operations on that channel.

MOD 3517/221B

Alternative allocation : in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the USSR, the band 21 850 - 21 870 kHz is allocated to the aeronautical fixed and the aeronautical mobile (R) services on a primary basis.

A N N E X 4

kHz

22 000 - 23 350

Region 1	Region 2	Region 3
22 000 - 22 855*)	MARITIME MOBILE 3517A 3517B	
22 855 - 23 000	FIXED 3517B	
23 000 - 23 200	FIXED Mobile except aeronautical mobile (R) 3517B	
23 200 - 23 350	AERONAUTICAL FIXED AERONAUTICAL MOBILE (OR)	

\*) For the band 22 000 - 22 720 kHz, see Document No. 403.

ADD 3517A

The band 22 720 - 22 855 kHz is allocated to the fixed service on a primary basis subject to the procedures described in [Resolution No. 7]. The use of this band by the maritime mobile service shall be subject to provisions to be decided by a competent World Administrative Radio Conference. The date of commencement of operations in the maritime mobile service on a frequency in accordance with the above-mentioned provisions shall not be earlier than the date of completion of satisfactory transfer, in accordance with the procedure described in [Resolution No. 7], of all assignments to fixed stations operating in accordance with the Table and other provisions of the Radio Regulations [and recorded in the Master Register 7] and which may be affected by maritime mobile operations on that frequency.

ADD 3517B

Additional allocation : in Nigeria, the band 22 720 - 23 200 kHz is also allocated to the meteorological aids service (radiosondes) [on a primary basis 7].

kHz  
23 350 - 24 990

Region 1	Region 2	Region 3
23 350 - 24 000	FIXED  MOBILE except aeronautical mobile  3518/222 3518B	
24 000 - 24 890	FIXED  LAND MOBILE  3518B	
24 890 - 24 990	AMATEUR  AMATEUR-SATELLITE  3499A 3518A 3518B	

MOD 3518/222

The use of the band 23 350 - 24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.

ADD 3499A

See Annex 2.

ADD 3518A

The use of the band 24 890 - 24 990 kHz by the amateur service shall be subject to the completion of the satisfactory transfer of all assignments to fixed stations operating in this band and recorded in the Master Register, in accordance with the procedure described in Resolution No. .

SUP 3519/222A

ADD 3518B

Additional allocation : in Kenya, the band 23 600 - 24 900 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.

A N N E X 5

kHz  
25 070 - 27 500

Region 1	Region 2	Region 3
25 070 - 25 210*)	MARITIME MOBILE 3521A	
25 210 - 25 550	FIXED MOBILE except aeronautical mobile	
25 550 - 25 670	RADIO ASTRONOMY 3521B	
25 670 - 26 100	BROADCASTING	
26 100 - 26 175	MARITIME MOBILE 3521A	
26 175 - 27 500	FIXED MOBILE except aeronautical mobile 3522/225	

\*) For the band 25 070 - 25 110 kHz, see Document No. 228(Rev.2).

SUP 3521/224

See Document No. 228(Rev.2).

ADD 3521A

The bands 25 110 - 25 210 kHz and 26 100 - 26 175 kHz are allocated to the fixed and mobile except aeronautical mobile services on a primary basis subject to the procedures described in / Resolution No. \_/ The use of these bands by the maritime mobile service shall be subject to provisions to be decided by a competent World Administrative Radio Conference. The date of commencement of operations in the maritime mobile service on a frequency in accordance with the above-mentioned provisions shall not be earlier than the date of completion of satisfactory transfer, in accordance with the procedure described in / Resolution No. \_/, of all assignments to fixed and mobile stations operating in accordance with the Table and other provisions of the Radio Regulations / and recorded in the Master Register / and which may be affected by maritime mobile operations on that frequency.

ADD 3521B

After / ..... / all emissions capable of causing harmful interference to the radio astronomy service in this band shall be avoided. The use of passive sensors by other services is also authorized.

MOD 3522/225

The band 26 957 - 27 283 kHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 27 120 kHz). Radio services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 5002A.

SUP 3523/226



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Corrigendum No. 1 to  
Document No. 761  
23 November 1979

**E**

B.24

PLENARY MEETING

## **24th SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING**

Pages B.24-2 to B.24-5    Replace the text of Resolution AN  
and Resolution AO by the following:

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 4 pages



- 1 -  
(Cor. No 1 au Doc. No 761)

MOD

RESOLUTION AN 1

**Relating to the Use of Class [A3A] and [A3J] Emissions  
for Distress and Safety Purposes on the Carrier  
Frequency 2 182 kHz**

[ ] [ ]

(MOD) The World Administrative Radio Conference, Geneva, 1979,  
noting

a) that the Radio Regulations require the use on the carrier frequency  
2 182 kHz of:

- MOD
- class [A3] or [A3H] emissions by ship, aircraft and survival [ ] [ ]  
craft stations;
  - class [A3H] emissions by coast stations; [ ]
  - the classes of emission, specified in Appendix 20A, by  
emergency position-indicating radiobeacons;

b) that the main object of these provisions is to maintain reliable  
distress and safety communications by using proven techniques;

noting also

- a) the Final Report of the Panel of Experts, Geneva, 1963;
- MOD b) the relevant CCIR studies concerning single-sideband techniques;  
(see CCIR Question 26-1/8, Recommendations 488 and 543 and Report 744);

recognizing

MOD that the use of class [A3A] and [A3J] emissions on the carrier frequency [ ]  
2 182 kHz would provide the operational advantages, inherent in [ ]  
single-sideband techniques which are already being obtained on other  
frequencies;

ADD recognizing, however,

that the CCIR recommends that class [A3A] emissions should not be [ ]  
used for distress and safety purposes (see CCIR Recommendation 543);

MOD considering

a) that a large number of equipments employing class [A3] and [A3H] [ ] [ ]  
emissions will still be in use for distress and safety purposes on  
1 January 1982;

1 Replaces Resolution No. Mar2 - 20 of the World Maritime  
Administrative Radio Conference, Geneva, 1974.

- 2 -

(Cor. No 1 au Doc. No 761)

- b) that single-sideband equipment must be designed to work with closer frequency tolerances and higher technical standards than those necessary for double-sideband equipment;
- c) that equipment designed for safety purposes, particularly survival craft equipment, should:
- be capable of reliable operation in varying environments, and after long periods of storage;
  - be easy to operate by an inexperienced person in all circumstances;
  - be relatively low priced;
- d) that the requirement for direction-finding and homing must be satisfied;
- e) that the need to transmit and receive the two-tone radiotelephone alarm signal, including signals from emergency position-indicating radiobeacons, must also be satisfied, taking into account the frequency tolerances in Appendix 20A and the relevant CCIR Recommendations;

MOD resolves

1. that continuation of the study of the use of class [A3A] and [A3J] [ ] [ ] emissions for distress and safety purposes is required;

MOD 2. that this study should be completed in time for a decision on the date for the final conversion to class [A3A] and [A3J] emissions on the carrier frequency 2 182 kHz to be made by the next competent World Administrative Radio Conference; [ ] [ ]

MOD requests the CCIR

to continue its studies on the above-mentioned subject as a matter of urgency and, if possible, to issue Recommendations sufficiently in advance of the above-mentioned conference;

requests the Secretary-General

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

invites the Inter-Governmental Maritime Consultative Organization

to consider the matter as part of the study currently being undertaken of the maritime distress and safety system.

MOD

RESOLUTION AO 1

**Relating to the Use of Class [A3A] and [A3J] Emissions on the  
Carrier Frequencies 4 125 kHz and 6 215.5 kHz Used to  
Supplement the Carrier Frequency 2 182 kHz  
for Distress and Safety Purposes**

[ ] [ ]

(MOD) The World Administrative Radio Conference, Geneva, 1979,  
noting

MOD a) that the Radio Regulations permit, until 1 January 1984, the  
use, on the carrier frequencies 4 125 kHz and 6 215.5 kHz, of class [A3H]  
emissions by coast, ship and aircraft stations (see No. [6644/1351I] of the  
Radio Regulations);

[ ]  
[ ]

b) that the main object of these provisions is to maintain reliable  
distress and safety communications using proven techniques;

noting also

a) the Final Report of the Panel of Experts, Geneva, 1963;

MOD b) relevant CCIR studies concerning single-sideband techniques  
(see CCIR Question 26-1/8, Recommendations 488, 543 and 544);

recognizing

MOD that the use of class [A3A] and [A3J] emissions on the carrier  
frequencies 4 125 kHz and 6 215.5 kHz would provide the operational  
advantages inherent in single-sideband techniques, which are already  
being obtained on other frequencies;

[ ] [ ]

ADD recognizing, however,

that the CCIR recommends that class [A3A] emissions should not be  
used for distress and safety purposes (see CCIR Recommendation 543);

[ ]

considering

MOD a) that a large number of equipments employing class [A3H] emissions  
are still in use for distress and safety purposes;

[ ]

MOD b) that equipment employing class [A3A] and [A3J] emissions must be  
designed to work with closer frequency tolerances and higher technical  
standards than those necessary for equipment employing class [A3H] emissions and  
envelope detection in the receiver;

[ ] [ ]

[ ]

1 Replaces Resolution No. Mar2 - 20 of the World Maritime  
Administrative Radio Conference, Geneva, 1974.

(Cor. NO 1 au Doc. NO 761)

c) that equipment designed for safety purposes should, in all circumstances, be capable of reliable operation and be easy to operate by an inexperienced person;

resolves

MOD that no further study of the use of class [A3A] and [A3J] emissions for distress and safety purposes on the carrier frequencies 4 125 kHz and 6 215.5 kHz is required (see CCIR Recommendations 543 and 544);

[ ] [ ]

requests the Secretary-General

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

invites

1. the Inter-Governmental Maritime Consultative Organization to consider the matter as part of the study currently being undertaken of the maritime distress and safety system;
2. the next competent World Administrative Radio Conference to consider this matter further.

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 761  
19 November 1979**E**

B.24

PLENARY MEETING**24th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.4	714 + 715	Resolutions AM; AN; AO; AP Recommendations W; X; Y; Z; ZA; ZB
C.4	716 + 717	Recommendations ZC; ZD; ZE; ZF

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 20 pages



## RESOLUTION AM 1

ADD

**Relating to the Experimental Use of Radio Waves  
by Ionospheric Research Satellites**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that research into the Earth's ionosphere is very important in the study of the relationship between the Sun and the Earth and also for the effective use of radio wave transmission via the ionosphere;
- b) that successful research has been conducted with satellites such as Aouette 1 and 2, ISIS 1 and 2 and ISS in which top-side sounding equipment is installed;
- c) that similar ionospheric research satellites will be used for further research into the ionosphere and beyond;
- d) that top-side sounding equipment is operated mostly in a frequency-sweeping pulse mode;
- e) that these types of satellite are usually operated intermittently during a limited period each day according to the orbital characteristics;
- f) that operation of the sounder can be accurately commanded at will by the earth station concerned;

resolves

that administrations may continue to permit the emissions of radio waves from ionospheric research satellites in orbit above the ionosphere in the MF and HF bands provided that suitable means are available for controlling emissions from these satellites as required by No. [470v] of the Radio Regulations to prevent harmful interference to other services. [ ]

---

<sup>1</sup> Replaces Resolution No. Spa2 - 4 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971.

B.24-2

ADD

## RESOLUTION AN 1

Relating to the Use of Class [A3A] and [A3J] Emissions  
for Distress and Safety Purposes on the Carrier  
Frequency 2 182 kHz

[ ]

The World Administrative Radio Conference, Geneva, 1979,

noting

a) that the Radio Regulations require the use on the carrier frequency  
2 182 kHz of:

- class [A3] or [A3H] emissions by ship, aircraft and survival craft stations; [ ]
- class [A3H] emissions by coast stations; [ ]
- the classes of emission, specified in Appendix 20A, by emergency position-indicating radiobeacons;

b) that the main object of these provisions is to maintain reliable  
distress and safety communications by using proven techniques;

noting also

a) the Final Report of the Panel of Experts, Geneva, 1963;

b) the relevant CCIR studies concerning single-sideband techniques, in  
particular those relating to Question 26-1/8;

recognizing

that the use of class [A3A] and [A3J] emissions on the carrier frequency  
2 181 kHz would provide the operational advantages, inherent in  
single-sideband techniques which are already being obtained on other  
frequencies.†

[ ]

[ ]

1 Replaces Resolution No. Mar2 - 20 of the World Maritime  
Administrative Radio Conference, Geneva, 1974.



considering

a) that a large number of equipments employing class [A3] and [A3H] emissions will still be in use for distress and safety purposes on 1 January 1982; [ ]

b) that single-sideband equipment must be designed to work with closer frequency tolerances and higher technical standards than those necessary for double-sideband equipment;

c) that equipment designed for safety purposes, particularly survival craft equipment, should:

- be capable of reliable operation in varying environments, and after long periods of storage;
- be easy to operate by an inexperienced person in all circumstances;
- be relatively low priced;

d) that the requirement for direction-finding and homing must be satisfied;

e) that the need to transmit and receive the two-tone radiotelephone alarm signal, including signals from emergency position-indicating radiobeacons, must also be satisfied, taking into account the frequency tolerances in Appendix [20A] and the relevant CCIR Recommendations; [ ]

resolves

1. that study of the use of class [A3A] and [A3J] emissions for distress and safety purposes is required; [ ]

2. that this study should be completed in time for a decision on the date for the final conversion to class [A3A] and [A3J] emissions on the carrier frequency 2 182 kHz to be made by the next competent World Administrative Radio Conference; [ ]

requests the CCIR

to study the above-mentioned subject as a matter of urgency and, if possible, to issue Recommendations sufficiently in advance of the above-mentioned conference;

requests the Secretary-General

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

invites the Inter-Governmental Maritime Consultative Organization

to consider the matter as part of the study currently being undertaken of the maritime distress and safety system.

ADD

## RESOLUTION AO 1

Relating to the Use of Class[A3A] and [A3J] Emissions on the  
Carrier Frequencies 4 125 kHz and 6 215.5 kHz Used to  
Supplement the Carrier Frequency 2 182 kHz  
for Distress and Safety Purposes

[]

The World Administrative Radio Conference, Geneva, 1979,

noting

a) that the Radio Regulations permit, until 1 January 1984, the use, on the carrier frequencies 4 125 kHz and 6 215.5 kHz, of class[A3H] emissions by coast, ship and aircraft stations (see No. [6644/1351I] of the Radio Regulations);

[]  
[]

b) that the main object of these provisions is to maintain reliable distress and safety communications using proven techniques;

noting also

a) the Final Report of the Panel of Experts, Geneva, 1963;

b) relevant CCIR studies concerning single-sideband techniques, in particular, those relating to Question 26-1/8;

recognizing

that the use of class[A3A and A3J] emissions on the carrier frequencies 4 125 kHz and 6 215.5 kHz would provide the operational advantages inherent in single-sideband techniques, {which are already being obtained on other frequencies};

{  
|  
}

considering

a) that a large number of equipments employing class[A3H] emissions are still in use for distress and safety purposes;

[]

b) that equipment employing class[A3A] and [A3J] emissions must be designed to work with closer frequency tolerances and higher technical standards than those necessary for equipment employing class[A3H] emission and envelope detection in the receiver;

[]

[]

c) that equipment designed for safety purposes should, in all circumstances, be capable of reliable operation and be easy to operate by an inexperienced person;

1 Replaces Resolution No. Mar2 - 21 of the World Maritime Administrative Radio Conference, Geneva, 1974.

noting further

that the study of the use of class[A3A] and [A3J] emissions for distress and safety purposes on the carrier frequencies 4 125 kHz and 6 215.5 kHz has been completed by the CCIR (see Recommendations 543 and 544); [ ]

requests the Secretary-General

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization;

invites

1. the Inter-Governmental Maritime Consultative Organization to consider the matter as part of the study currently being undertaken of the maritime distress and safety system;
2. the next competent World Administrative Radio Conference to consider this matter further.

ADD

## RESOLUTION AP 1

Relating to the Use, by Space Stations Operating in the Frequency Bands 11.7 - 12.2 GHz (in Regions 2 and 3) and [11.7 - 12.2] GHz (in Region 1), of the Geostationary Orbit and No Other

[ ]

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that a Plan designating frequency assignments in the above-mentioned frequency bands and positions in the geostationary orbit has been adopted by the World Broadcasting Satellite Administrative Radio Conference, Geneva, 1977, for Regions 1 and 3;
- b) that a similar plan for Region 2 is expected to result from a Regional Administrative Radio Conference in 1983;
- c) that the operation of space radiocommunication services in the frequency bands concerned in orbits other than the geostationary orbit would be incompatible with the plans referred to in a) and b) above;

resolves

that administrations shall ensure that their space stations in these frequency bands are operated in the geostationary orbit and no other.

---

<sup>1</sup> Replaces Resolution No. Sat - 7 of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

ADD

## RECOMMENDATION W 1

**Relating to Frequency Modulation Transmissions**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that listeners should be enabled to hear national broadcasting transmissions free of interference from other stations;
- b) that in many regions, the overloading of Bands 5 and 6 is such that listening is becoming increasingly difficult;
- c) that experience has shown that where frequency modulated transmissions are broadcast in Band 8, listeners in those countries are assured of improved reception;

recommends

that Members of the Union should consider the possibility of using frequency modulated transmissions in the Band 8 for their national sound broadcasting services.

---

<sup>1</sup> Replaces Recommendation No. 15 of Administrative Radio Conference, Geneva, 1959.

ADD

## RECOMMENDATION X 1

**to the CCIR Relating to the  
Study of Modulation Methods for Radio-Relay Systems  
in Relation to Sharing with Fixed-Satellite Service Systems**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that Article N7 of the Radio Regulations permits the sharing of certain frequency bands by the fixed-satellite service and the fixed service;
- b) that the sharing criteria to avoid mutual interference between the stations in these two services have been established in Article N25 and N26;
- c) that among many factors of over-all efficiency of utilization of frequency bands it seems that the reduction of interference between two services is most important;

noting

- a) that the over-all efficiency of utilization of the frequency bands shared by the two services depends on the methods of modulation used by the systems concerned;
- b) that studies of the preferred modulation characteristics for fixed-satellite service systems are to be carried out under Study Programme 2D-1/4 of the CCIR;

recommends

that the CCIR should study especially, under the general framework of Question 2 - 3/4, modulation methods (such as pulse-code modulation using phase or frequency modulation) in particular for line-of-sight radio-relay systems in relation to sharing with fixed-satellite service systems.

---

1. Replaces Recommendation No. Spa-4 of the Extraordinary Administrative Radio Conference, Geneva, 1963.

ADD

RECOMMENDATION Y 1

**Relating to a Study of the Utilization of Space Communication  
Techniques in the Aeronautical Mobile (R) Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the continuing efforts of the aeronautical mobile (R) service to obtain improvements in communications commensurate with increases in the number, size and speed of aircraft;
- b) the efforts of the International Telecommunication Union to reduce congestion in the bands between 4 and 27.5 MHz;
- c) the need to effect conservation in the use of the high frequency spectrum;

noting

- a) that successful application of space radiocommunication techniques to the communication needs of international civil aviation offers the possibility of substantially improving aeronautical mobile (R) service communications while avoiding congestion in the bands between 4 and 27.5 MHz;
- b) that tests have demonstrated the capability of effecting communication between aircraft and aeronautical stations by relay via a geostationary satellite;
- c) that the state of the art in space radiocommunication techniques is rapidly advancing;
- d) that the technical potential is such that space radiocommunication techniques could provide a capability for accommodating, in the near future, many of the aeronautical mobile (R) service communication requirements over major world air routes on all but the polar routes;
- e) that before administrations will be willing to undertake a programme to implement space radiocommunication techniques they will need a comprehensive investigation into those techniques and a statement of the measures that need to be taken;
- f) that the ability of administrations to undertake such a programme is intimately linked to the economic implications involved;

---

1 Replaces Recommendation No. Aer - 2 of the Extraordinary Administrative Radio Conference, Geneva, 1966.

g) that the International Civil Aviation Organization (ICAO) is the international body primarily concerned with the establishment of standards and recommended practices governing radiocommunication systems and techniques used to support international civil aviation;

h) that the CCIR has a Study Group on Mobile Services and that close coordination of the work of the CCIR and ICAO in this field is desirable;

recommends

1. that administrations, bearing in mind the economic and operational aspects involved, should take account of the possibilities of satisfying the communication needs of the aeronautical mobile (R) service on major world air routes by the use of space radiocommunication techniques;
2. that administrations should give further study to these questions taking as a basis for their consideration the factors listed in the Annex hereto.

ANNEX TO RECOMMENDATION Y

(Note: The list of factors which follows is not claimed to be exhaustive nor is it intended to limit consideration of any other aspects pertinent to the use of space radiocommunication techniques by the aeronautical mobile (R) service.)

1. The technical parameters of the satellite and aircraft receiving and transmitting system, including:

- a) required received (carrier) power at the satellite (from the aircraft)
- b) required received (carrier) power at the aircraft (from the satellite)
- c) satellite effective radiated power (per channel)
- d) aircraft effective radiated power (per channel)
- e) type of emission which should be employed
- f) bandwidth of each channel
- g) channelling arrangement
- h) polarization requirements
- i) need for omni-directional aircraft antennae; sea/ground reflections



B.24-11

- j) required separation between transmit and receive frequencies at the satellite
  - k) requirement on the satellite for capability of aircraft to use each channel independently (multiple/random access)
  - l) requirements in relation to system reliability
  - m) other considerations.
- 2. The number and location of satellites, including:
  - a) in regard to provision of service, disposition of air routes and the number of flights over each air route
  - b) group of air routes which may be served via a common satellite
  - c) number of satellites needed to provide service to each group of air routes
  - d) location of each of the satellites
  - e) number of channels needed aboard each satellite
  - f) other considerations.
- 3. Technical performance requirements of aeronautical (R) stations, including:
  - a) suitable transmitting and receiving antennae characteristics: gain, beamwidth, siting, etc.
  - b) minimum effective radiated power
  - c) development and utilization of low-cost aeronautical (R) station (terminal) facilities
  - d) need for a selective calling system (SELCAL)
  - e) other considerations.
- 4. Method of operation and location of aeronautical (R) stations, including:
  - a) the method of operation: where multiple frequencies are provided on the satellite, the need, or absence of need, to continue the present practice of providing route separation by use of different/separate frequencies; that is:
    - should all (R) frequencies on the satellite be available at all aeronautical (R) stations; or
    - should the communication load be distributed between available frequencies, each of which is limited to a specific geographic area; or
    - some other arrangement

## B.24-12

- b) as appropriate, to list (by frequency) each of the aeronautical (R) stations which should employ each satellite frequency
  - c) other considerations.
- 5. Provisions for handling aeronautical point-to-point communications:
  - a) technical system performance parameters of the terminal equipment
  - b) technical system performance parameters of the satellite equipment
  - c) requirement on the satellite for capability of terminals to have independent access to relaychannels through the satellite (multiple/random access)
  - d) frequency bands to be used
  - e) required separation between transmit and receive frequencies on the satellite
  - f) development and utilization of low-cost terminal facilities
  - g) the entity of entities which should provide, own or operate the satellites and terminal facilities as well as the extent to which aeronautical point-to-point communications should be handled
  - h) other considerations.
- 6. Estimated costs of a satellite system to include: land-based, airborne and satellite-borne facilities.
- 7. Operational aspects of a satellite system, including all facilities mentioned in paragraph 6 above, particularly:
  - a) the environment within which the system must work
  - b) the evolutionary process of introducing the system.

ADD

## RECOMMENDATION Z 1

**Relating to the Coordination of Earth Stations**

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that under the terms of Article N11 of the Radio Regulations, frequency assignments to earth stations in certain bands shared with equal rights between terrestrial radiocommunication services and space radiocommunication services must be coordinated with a view to preventing mutual harmful interference;

b) that the calculation method described in Appendix [28] to the Radio Regulations applies solely to frequencies in the 1 - 40 GHz range; [ ]

c) that Tables I and II of this Appendix do not show numerical values for all the necessary parameters of certain space radiocommunication services and terrestrial radiocommunication services sharing frequency bands with equal rights;

invites the CCIR

to continue as a matter of urgency its study:

- of data not included in Tables I and II of Appendix [28] to the Radio Regulations, relating to the space radiocommunication services and terrestrial radiocommunication services sharing frequency bands with equal rights; [ ]
- of the formulation of calculation methods for determining the coordination area of earth stations at frequencies below 1 GHz and above 40 GHz;

recommends to administrations

that until the next competent World Administrative Radio Conference they should use:

- any CCIR Recommendation, if applicable, for the values missing from Tables I and II of Appendix [28] to the Radio Regulations; [ ]
- the methods of determining the coordination area for frequencies below 1 GHz and above 40 GHz, which may be the subject of a CCIR Recommendation.

---

1 Replaces Recommendation No. Spa2 - 9 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971,

ADD

## RECOMMENDATION ZA 1

**Relating to Carrier Energy Dispersal in Systems in the  
Fixed-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that use of carrier energy dispersal techniques in systems in the fixed-satellite service can result in a substantial reduction of interference to stations of a terrestrial service operating in the same frequency bands;
- b) that the use of such techniques can result in a substantial reduction in the level of interference between systems in the fixed-satellite service operating in the same frequency bands and in a corresponding increase of efficiency in the utilization of the geostationary satellite orbit;
- c) that such techniques are being regularly and successfully employed in systems in the fixed-satellite service without noticeable deterioration of the quality of operation;

recommends

1. that systems in the fixed-satellite service employing angle modulation by analogue signals should use carrier energy dispersal techniques as far as is practicable with a view to spreading energy at all times and in a manner consistent with the satisfactory operation of the systems;
2. that systems in the fixed-satellite service employing digital modulation should use carrier energy dispersal techniques when this becomes technically feasible and is practical.

---

<sup>1</sup> Replaces Recommendation No. **Spa2** - 11 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971.

ADD

RECOMMENDATION ZB 1

**Relating to Technical Standards for the Assessment  
of Harmful Interference in the Frequency Bands above 28 MHz**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the definition of harmful interference (No. 3142/93 of the Radio Regulations), being of a qualitative nature, leads to a purely subjective estimation of the nuisance;
- b) that, for the accomplishment of its regulatory tasks, the IFRB has adopted in its Technical Standards, for the frequency bands below 28 MHz, values for the ratio between the wanted signal and the interfering signal, below which harmful interference may be expected;
- c) that "harmful interference" implies a considerable degree, or probability, of interference;
- d) that, as a consequence, it is desirable to determine the level of interference by which any emission, radiation or induction affects a radiocommunication service beyond specific limits established to ensure the quality and reliability of performance required by the nature of the service;
- e) that the assessment of interference levels is related to various factors such as the nature of the services concerned, number of interference sources, percentages of time during which the interfering signal affects the wanted signal;

noting

- a) that the IFRB has been considering the maximum allowable values of interference given in the pertinent CCIR Recommendations to be values which ensure a satisfactory service;
- b) that, however, the IFRB does not possess data on the extent to which these recommended values and the associated percentages of time may be exceeded without affecting a service beyond the specific limits established to ensure the quality and reliability of performance required by the nature of the service;

invites the CCIR

to continue to study this subject and to recommend the technical criteria for the frequency bands above 28 MHz, allocated to space radiocommunication, radio astronomy, and the terrestrial radiocommunication services concerned, in order to enable the IFRB and administrations to apply such criteria for these bands.

---

<sup>1</sup> Replaces Recommendation No. Spa2 - 12 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971.

ADD

## RECOMMENDATION ZC 1

**Relating to the Radiation of Harmonics  
of the Fundamental Frequency by Broadcasting-Satellite Stations**

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that the frequency band [23.6 - 24] GHz is allocated to the radio astronomy service on a primary basis; []

b) that the second harmonic of the fundamental frequency of broadcasting-satellite stations operating within the band [11.8 - 12] GHz may seriously disturb radio astronomy observations in the band [23.6 - 24] GHz if effective steps are not taken to reduce the radiation level produced by this harmonic; []  
[]

in view of

the provisions of No. 3248/673 of the Radio Regulations;

recommends

that, when defining the characteristics of their space stations operating in the broadcasting-satellite service, particularly within the band [11.8 - 12] GHz, administrations take all necessary steps to reduce the radiation level of the second harmonic below the values indicated in the relevant CCIR Recommendations. []

---

1 Replaces Recommendation No. Sat - 2 of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

ADD

RECOMMENDATION ZD 1

**To the CCIR Relating to Transmitting Antennae  
for the Broadcasting-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the need for ample information on transmitting antennae for the planning of the broadcasting-satellite service;
- b) the studies being pursued by the CCIR under the appropriate Questions and Study Programmes;

invites the CCIR

1. to continue the study of reference patterns for the co-polar and cross-polar components of transmitting antennae for the broadcasting-satellite service for both individual and community reception, and in particular the practicable means of achieving various degrees of improved side-lobe suppression and the economic implication thereof;
2. to continue the study of the technical characteristics designed to achieve a pointing accuracy for transmitting antennae such that:
  - the deviation of the antenna beam from its nominal direction of pointing shall not exceed  $0.1^\circ$ ;
  - the angle of rotation of the transmitting beam about its axis shall not exceed  $\pm 2^\circ$ .

---

<sup>1</sup> Replaces Recommendation No. Sat - 4 of the World  
Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

ADD

RECOMMENDATION ZE 1

**To the CCIR Relating to Up-links for the  
Broadcasting-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the need for ample information on the characteristics of up-links for planning the broadcasting-satellite service;
- b) the studies being pursued by the CCIR under the appropriate Study Programme;
- c) that the carrier-to-noise ratios for the up-links to broadcasting satellites should be of the order of ten times greater than those for the down-links;
- d) that, as regards up-link interference between broadcasting satellites at different orbital positions, adequate up-link protection ratios (approximately 10 dB greater than those in the down-link) would appear to be readily achievable by antenna pattern discrimination in earth station transmitting antennae which would clearly have to be larger in diameter than the receiving antennae used in the down-links;
- e) that, where planning is based on isolation parameters such as radiation patterns for space station transmitting antennae, carrier interleaving, and/or polarization discrimination in meeting the down-link carrier-to-interference requirements between service areas served from a single orbital position, the increased carrier-to-interference requirements in the up-links serving the satellite(s) at that same orbital position will have to use the same isolation parameters provided that this produces an improvement of about 10 dB in net isolation. The characteristics of the transmitting earth station will clearly not affect this isolation, apart from the purity of their on-beam polarization;
- f) that in the implementation of broadcasting-satellite systems, consideration must be given to all aspects of associated space operation service functions (tracking, telemetry, telecommand and ranging) in connection with the operation of broadcasting satellites;

---

1 Replaces Recommendation No. Sat - 5 of the World  
Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.



invites the CCIR

1. to continue the study of those radiation characteristics of receiving antennae of space stations in the broadcasting-satellite service which, singly or in combination with other means of discrimination, would give the necessary protection ratios for the up-links of systems in the broadcasting-satellite service for (a) satellite(s) occupying a given position in the geostationary satellite orbit;
2. to continue the study of those polarization characteristics of receiving antennae of space stations in the broadcasting-satellite service which, singly or in combination with other means of discrimination, would give the necessary protection ratios for the up-links of systems in the broadcasting-satellite service for (a) satellite(s) occupying a given position in the geostationary satellite orbit;
3. to continue the study of the technical up-link characteristics required to implement the plan for this service;
4. to study the technical and design characteristics and requirements which affect the provision of "space operation service functions" of space stations in the broadcasting-satellite service;
5. to study the requirements for adjacent-channel isolation in up-links for (a) satellite(s) in the broadcasting-satellite service occupying a given position in the geostationary satellite orbit.

ADD

## RECOMMENDATION ZF 1

**To the CCIR Relating to Spurious Emissions  
in the Broadcasting-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that space stations in the broadcasting-satellite service operating at high power levels are likely to cause interference to services in adjacent and in harmonically related frequency bands due to spurious emissions;

b) that, in the planning of the broadcasting-satellite service, account must be taken of the need to reduce interference to services operating in adjacent bands to acceptable levels at the lower and upper edges of the bands [11.7 - 12.2] GHz in Regions 2 and 3 and [11.7 - 12.5] GHz in Region 1, and to the radio astronomy service which has an exclusive allocation at [23.6 - 24] GHz in all three Regions; [ ]

c) the studies being pursued by the CCIR under the appropriate Study Programme;

invites the CCIR

to continue, as a matter of urgency, the study of the technical and operational aspects of spurious emissions from space stations in the broadcasting-satellite service.

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<sup>1</sup> Replaces Recommendation No. Sat - 6 of the World  
Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 762-E

20 November 1979

Original : French

COMMITTEE 7

NOTE FROM THE CHAIRMAN OF COMMITTEE 6 TO THE  
CHAIRMAN OF COMMITTEE 7

Notices and heading of the columns of the International Frequency List  
(Appendices 1, 1A and 9)

Committee 6 examined a draft Resolution relating to the preparation of new notices to facilitate the computer processing of data supplied by Administrations and concerning changes in the presentation of the International Frequency List. Committee 6 considered that it would suffice to include a paragraph in its summary record, giving IFRB the necessary authority :

- a) to prepare, if necessary, without altering the basic data which, under the Radio Regulations, have to be included in any frequency assignment notice, new models of notice to replace those given in Appendices 1 and 1A for the purpose of facilitating the computer processing of the information provided by Administrations;
- b) to introduce the necessary improvements in the presentation of the International Frequency List, without in any way altering its regulatory content as specified in the Radio Regulations.

Committee 6 requests Committee 7 to amend Article N24/20 as necessary by deleting the second sentence of No. 5509/791 from the Radio Regulations :

"These particulars shall include the data enumerated in Appendix 9".

Dr. M. JOACHIM  
Chairman of Committee 6



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 763-E

19 November 1979

Original : English

## COMMITTEE 7

Cameroon, Guyana, Kenya, Liberia, Nigeria, Philippines, Sri Lanka

### RESOLUTION

#### Relating to the Role of Telecommunications in Integrated Rural Development

The World Administrative Radio Conference, Geneva, 1979,

#### recalling

Resolution 3362 (S-VII) of the seventh special session of the United Nations General Assembly which, inter alia, requested Member States to promote integrated rural development in the developing countries;

#### recalling further

the importance placed on rural development by various inter-governmental conferences during the Second United Nations Development Decade, which recognized the need for the intensification of development efforts aimed at satisfying the aspirations of the rural communities and accelerating the development of infrastructure in the rural areas;

#### convinced

of the importance of telecommunications as an essential element of infrastructure for the rural areas;

#### recognizing

- a) that most developing countries are still lacking an adequate telecommunication infrastructure;
- b) that many rural areas of the world do not currently enjoy the benefits of telecommunication technology;
- c) that many populations within individual countries live in isolation from each other due to geographical barriers such as oceans, mountains, forests and deserts;
- d) that the provision of modern telecommunications and, in particular, radiocommunications, including satellite technology, can serve to overcome those difficulties and to integrate rural communities in the development process;
- e) that many developing countries are unable to provide entirely from their own resources such modern telecommunications;



noting

the proven potential of modern telecommunication technology as a means of bringing to the rural areas, education, health care and other welfare services of importance for social development;

noting further

the significant supporting role of an adequate rural telecommunication network in stimulating growth in agricultural activities and in other sectors important for economic progress;

urges

Member governments to strengthen their technical cooperation efforts for the realization of accelerated telecommunication development to serve the rural communities, bearing in mind the existing inadequacies in the resources of various developing countries;

urges also

Administrations to participate actively in the studies carried out in the Autonomous Working Groups (GAS 3 and GAS 5) of the CCITT/CCIR in regard to rural telecommunications development;

requests the Secretary-General

to continue to give special attention to the Union's technical assistance activities for the detailed planning, operation and maintenance of the rural telecommunication infrastructure and application of appropriate technology;

to bring this Resolution to the attention of the appropriate United Nations bodies; and

to continue to cooperate with the specialized agencies and organizations of the United Nations system in the field of integrated rural development;

invites

the Administrative Council to consider this Resolution, to monitor its implementation and to report on progress in the annual report on the activities of the Union.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 764-E

20 November 1979

Original : Spanish

COMMITTEE 5

## FOURTH REPORT OF WORKING GROUP 5BA

TO COMMITTEE 5

### 1. Frequency band 1 606.5 (1 605 in Region 2) - 1 800 kHz

1.1 The Working Group examined all the proposals relating to this frequency band and decided to recommend to Committee 5 the adoption of the revised Table and of Footnotes ADD 3484B, ADD 3484C, ADD 3485A, ADD 3485B, MOD 3488/194, [MOD 3490/195A] ADD 3490A, ADD 3490B, ADD 3490C and ADD 3492B which appear in Annex 1. It also decided to recommend the deletion of Footnotes 3485/192, 3486/420, 3487/193, 3489/195 and 3491/197. Footnote 3487/193 has been replaced by Footnote MOD 3499/205 wherever it appeared in the Table.

1.2 The Working Group was unable to reach a consensus on whether to maintain or delete Footnote MOD 3490/195A, therefore it is shown in square brackets.

1.3 The delegation of the Netherlands reserved the right to revert in Committee 5 to the need for exclusive world-wide allocations to the maritime mobile service in the band 1 606.5 - 2 000 kHz.

### 2. Frequency band 1 800 - 2 000 kHz

2.1 The Working Group examined all the proposals relating to this frequency band and decided to recommend to Committee 5 the adoption of the revised Table and of Footnotes MOD 3492/198, ADD 3492A, ADD 3492C, ADD 3492D, and MOD 3499/205 which appear in Annex 2.

2.2 The Working Group also decided that notes 3485B, 3490A, 3490B, 3490C would be applicable in the band 1 800 - 1 810 kHz (Region 1), that Footnote 3488/194 would be applicable in the band 1 850 - 2 000 kHz (Region 1) and that Footnote [3490/195A] would be applicable in the band 1 800 - 2 000 kHz (Region 1).

2.3 See also paragraph 1.3 relating to the reservation made concerning the allocations in the band 1 606.5 - 2 000 kHz.

### 3. Frequency band 2 000 - 2 170 kHz

3.1 The Working Group examined all the proposals relating to this frequency band and decided to recommend to Committee 5 the adoption of the revised Table and of Footnotes MOD 3493/200 ADD 3493B, ADD 3493C and ADD 3493D which appear in Annex 3.

3.2 The Working Group also decided that for Region 1 Footnote [3490/195A] would be applicable in the band 2 000 - 2 160 kHz, that Footnote 3499/205 would be applicable in the band 2 000 - 2 045 kHz, that Footnotes 3490A, 3490B and 3490C would be applicable in the band 2 160 - 2 170 kHz and that Footnotes 3485A and 3485B would be applicable in the bands 2 107 - 2 160 kHz and 2 160 - 2 170 kHz respectively.

3.3 The delegation of Yugoslavia reserved the right to revert in Committee 5 to the allocation in the band 2 045 - 2 170 kHz (see also paragraph 7).



4. Frequency band 2 194 - 2 850 kHz

4.1 The Working Group examined all the proposals relating to this frequency band and decided to recommend to Committee 5 the adoption of the revised Table and of Footnotes ADD 3495A, (MOD) 3496/202 and ADD 3497A and the deletion of Footnotes 3497/203 and 3498/203A (see Annex 4).

4.2 The Working Group also decided that Footnote [ 3490/195A ] would be applicable in the bands 2 194 - 2 498 kHz and 2 502 - 2 850 kHz (Region 1) and that Footnote 3499/205 would be applicable in the bands 2 194 - 2 498 kHz, 2 502 - 2 625 kHz and 2 650 - 2 850 kHz (Region 1).

4.3 The delegation of Norway reserved the right to revert in Committee 5 to the allocations in the band 2 502 - 2 850 kHz in Region 1, and the delegation of the Netherlands reserved the right to revert in Committee 5 to the allocations in the band 2 650 - 2 850 kHz, also in Region 1. (See also paragraph 7.)

5. Frequency band 3 230 - 3 400 kHz

5.1 The Working Group examined all the proposals relating to this frequency band and decided to recommend to Committee 5 the adoption of the revised Table and of Footnote ADD 3499C which appear in Annex 5.

5.2 The Working Group also decided that Footnotes [ 3490/195A ], 3496/202 and 3496A would be applicable in this band.

5.3 The delegation of Guyana reserved the right to revert in Committee 5 to the inclusion of Footnote 3499C in this band.

5.4 The delegations of the Federal Republic of Germany, France, the Netherlands and the United States reserved the right to revert in Committee 5 on the question of not including Footnote 3500A for the frequency 3 390 kHz (ISM).

6. Frequency band 3 500 - 4 000 kHz

6.1 The Working Group examined all the proposals relating to this frequency band and decided to recommend to Committee 5 the adoption of the revised Table and of Footnotes ADD 3499A, ADD 3500B, ADD 3500C, ADD 3500D, ADD 3501A, ADD 3502A and ADD 3502B, and the deletion of Footnotes 3501/206 and 3502/207 (see Annex 6).

6.2 [ The Working Group also decided that Footnote 3490/195A would be applicable in the band 3 500 - 3 800 kHz in Region 1. ]

6.3 The delegation of Jordan reserved the right to revert in Committee 5 to the possibility of allocating the band 3 500 - 3 800 kHz to the amateur service in Region 1.

6.4 The delegations of Belgium and Sweden on the one hand and of the Federal Republic of Germany and the United Kingdom on the other, reserved the right to revert in Committee 5 to the possibility of allocating the band 3 900 - 4 000 kHz to the broadcasting service on an exclusive basis or on a shared basis with other services in Region 1.

7. The delegation of Greece reserved the right to revert in Committee 5 to all the allocations dealt with in Annexes 3 and 4.

8. The attention of Committee 5 is drawn to the need to include the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz (which have been allocated to the radiolocation service on an exclusive basis in Region 1), and the band 1 810 - 1 850 kHz (which has been allocated to the amateur service on an exclusive basis in Region 1) in the procedure in preparation for the transfer of the fixed and mobile services which use these bands at present.

L. COOK  
Chairman of Working Group 5BB

A N N E X 1

kHz  
1 606.5 (1 605 Region 2) - 1 800

Region 1	Region 2	Region 3
1 606.5 - 1 625 MARITIME MOBILE /FIXED/ /LAND MOBILE/ [ 3490/195A ] 3485A	1 605 - 1 625 BROADCASTING  3484B 3484C	1 606.5 - 1 800 FIXED MOBILE RADIOLOCATION RADIONAVIGATION
1 625 - 1 635 RADIOLOCATION [ 3490/195A ] 3485B 3490A 3490B 3490C	1 625 - 1 705 BROADCASTING 3484B /FIXED/ /MOBILE/ Radiolocation 3484C	
1 635 - 1 800 MARITIME MOBILE /FIXED/ /LAND MOBILE/  3488/194 [ 3490/195A ] 3485A	1 705 - 1 800 FIXED MOBILE RADIOLOCATION AERONAUTICAL RADIONAVIGATION	3492B

ADD 3484B

In Region 2, the use of the band 1 605 - 1 705 kHz by broadcasting service stations will be subject to a Plan to be established by a Regional Administrative Radio Conference (see Recommendation [ 7 ]) [ Document No. 513 ].

ADD 3484C

Until the dates decided by the Regional Administrative Radio Conference referred to in No. 3484B, the bands 1 605 - 1 625 kHz and 1 625 - 1 705 kHz will be allocated to the fixed, mobile and aeronautical radionavigation services on a primary basis and to the radiolocation service on a secondary basis (see Recommendation [ 7 ]) [ Document No. 513 ].



SUP 3485/192

ADD 3485A

Different category of services : in Bulgaria, Poland, the German Democratic Republic, Czechoslovakia and the USSR, in the bands 1 606.5 - 1 625 kHz, 1 635 - 1 800 kHz and 2 107 - 2 160 kHz, the allocation to the fixed and land mobile services is on a primary basis.

ADD 3485B

Additional allocation : in Bulgaria, Poland, the German Democratic Republic, Czechoslovakia and the USSR, the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz are also allocated to the fixed and land mobile services on a primary basis.

SUP 3486/420

SUP 3487/193

MOD 3488/194

In the Federal Republic of Germany, Denmark, Finland, Hungary, Ireland, Malta, Norway, Poland, the German Democratic Republic, the United Kingdom, Sweden, Czechoslovakia and the USSR, administrations may allocate up to 200 kHz to their amateur service in the bands 1 715 - 1 800 kHz and 1 850 - 2 000 kHz. However, when allocating bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 watts.

SUP 3489/195

/ MOD 3490/195A

The countries of Region 1 use radiodetermination systems the establishment and operation of which are covered by special arrangements between administrations having services which may be affected. /

ADD 3490A

In Region 1, the establishment and operation of radiolocation stations in the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz shall be subject to the agreement referred to in the procedure in Article N13A between administrations operating services which may be affected (see also No. 3490B).

ADD 3490B

In Region 1, in the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz (except in Botswana, Ethiopia, Lesotho, Malawi, the German Democratic Republic, Somalia and Zambia in the band 2 160 - 2 170 kHz), stations in the fixed and land mobile services (and stations of the aeronautical mobile (OR) service in the band 2 160 - 2 170 kHz) existing as of 1 January 1980 may continue to operate on a primary basis until a satisfactory reassignment is made in accordance with the procedure described in Resolution /.../. For the maritime mobile service, the reassignment shall be made in accordance with Resolution /.../ see Document No. 689/.

ADD 3490C

In Region 1, in the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz, the radiated mean power of radiolocation stations shall not exceed 50 watts. In these bands, pulse systems are prohibited.

SUP 3491/197

ADD 3492B

Additional allocation : in Australia, Indonesia, the Philippines, New Zealand, Singapore and Thailand, the band 1 606.5 - 1 705 kHz is also allocated to the broadcasting service on a secondary basis.

A N N E X 2

kHz  
1 800 - 2 000

Region 1	Region 2	Region 3
1 800 - 1 810 RADIOLOCATION 3485B / 3490/195A / 3490A 3490B 3490C	1 800 - 1 850 AMATEUR	1 800 - 2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIONAVIGATION Radiolocation
1 810 - 1 850 AMATEUR / 3490/195A / 3492C 3492D	3492/198	
1 850 - 2 000 FIXED MOBILE except aeronautical mobile  3488/194 / 3490/195A / 3499/205	1 850 - 2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION 3492/198 3492A	3492/198

ADD 3485B See Annex 1

MOD 3488/194 See Annex 1

/ MOD 3490/195A / / See Annex 1 /

MOD 3492/198 In Region 2, Loran stations operating in the band 1 800 - 2 000 kHz shall cease operation on 31 December 1982. In Region 3, the Loran system operates either on 1 850 kHz or 1 950 kHz, the bands occupied being 1 825 - 1 875 kHz and 1 925 - 1 975 kHz respectively. Other services to which the band 1 800 - 2 000 kHz is allocated may use any frequency therein on condition that no harmful interference is caused to the Loran system operating on 1 850 or 1 950 kHz.

ADD 3492A Alternative allocation : in Argentina, Bolivia, Chile, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela, the band 1 850 - 2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis.

ADD 3492C

In Region 1, the use of the band 1 810 - 1 850 kHz by the amateur service is subject to the satisfactory reassignment of frequencies of all the stations of the fixed and land mobile services operating in this band (except for the stations of the countries listed in No. 3492D) in accordance with the procedure described in [ Resolution No. ... ]. In the case of the maritime mobile service, the reassignment shall be made in accordance with Resolution [ No. ... (see Document No. 689) ]. The mean power of any amateur station shall not exceed 10 W. In addition, the use of the band 1 810 - 1 830 kHz by the amateur service in the countries of Region 1 whose territories are totally or partially located on North of 40° N is subject to agreement between the administrations of the European countries listed in No. 3492D.

ADD 3492D

Alternative allocation : in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, France, Greece, Italy, Luxembourg, the Netherlands, the German Democratic Republic, Tanzania, Turkey, the USSR and Yugoslavia, the band 1 810 - 1 830 kHz is allocated to the fixed and mobile except aeronautical mobile services on a primary basis.

MOD 3499/205

In making assignments to stations in the fixed and mobile services in the bands 1 850 - 2 045 kHz, 2 194 - 2 498 kHz, 2 502 - 2 625 kHz and 2 650 - 2 850 kHz, administrations should bear in mind the special requirements of the maritime mobile service and also the needs of the fixed service.

A N N E X 3

kHz  
2 000 - 2 170

Region 1	Region 2	Region 3
2 000 - 2 025  FIXED  MOBILE except aeronautical mobile (R)  / 3490/195A 7 3499/205	2 000 - 2 065  FIXED  MOBILE	
2 025 - 2 045  FIXED  MOBILE except aeronautical mobile (R)  Meteorological aids 3493C  / 3490/195A 7 3499/205		
2 045 - 2 160  MARITIME MOBILE  /FIXED/  /LAND MOBILE/  3485A / 3490/195A 7	2 065 - 2 107  MARITIME MOBILE  3493/200 3493B	
2 160 - 2 170  RADIOLOCATION  3485B 3490A 3490B 3490C 3493D	2 107 - 2 170  FIXED  MOBILE	

ADD 3485A See Annex 1.

/MOD 3490/195A\_/ / See Annex 1\_/

MOD 3493/200 In Region 2, except in Greenland, coast stations and ship stations using radiotelephony shall be limited to class A3A or A3J emissions and to a peak envelope power not exceeding 1 kW. Preferably, the following carrier frequencies should be used: 2 065.0, 2 079.0, 2 082.5, 2 086.0, 2 093.0, 2 096.5, 2 100.0, 2 103.5 kHz. In Argentina, Brazil and Uruguay, the carrier frequencies 2 068.5 and 2 075.5 kHz are also used for this purpose, while the frequencies within the band 2 072 - 2 075.5 kHz are used as provided in No. 8096/1138.

ADD 3493B Provided no harmful interference is caused to the maritime mobile service, the frequencies between 2 065 kHz and 2 107 kHz may be used in Regions 2 and 3 by fixed service stations communicating only within national borders and whose mean power does not exceed 50 W. In notifying the frequencies, the attention of the International Frequency Registration Board should be drawn to these provisions.

ADD 3493C In Region 1, the use of the band 2 025 - 2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.

ADD 3493D Additional allocation: in Botswana, Ethiopia, Lesotho, Malawi, the German Democratic Republic, Somalia and Zambia, the band 2 160 - 2 170 kHz is also allocated to the fixed and mobile except aeronautical mobile (R) services on a primary basis. The mean power of stations in these services shall not exceed 50 W.

MOD 3499/205 See Annex 2.

A N N E X 4

kHz  
2 194 - 2 502

Region 1	Region 2	Region 3
2 194 - 2 300  FIXED  MOBILE except aeronautical mobile (R)  / 3490/195A / 3499/205 3495A	2 194 - 2 300  FIXED  MOBILE  3495A	
2 300 - 2 498  FIXED  MOBILE except aeronautical mobile (R)  BROADCASTING 3496/202  / 3490/195A / 3499/205	2 300 - 2 495  FIXED  MOBILE  BROADCASTING 3496/202	
2 498 - 2 501  STANDARD FREQUENCY AND TIME SIGNALS (2 500 kHz)	2 495 - 2 501  STANDARD FREQUENCY AND TIME SIGNALS (2 500 kHz)	
2 501 - 2 502  STANDARD FREQUENCY AND TIME SIGNALS  Space Research		

kHz  
2 502 - 2 850

Region 1	Region 2	Region 3
2 502 - 2 625 FIXED MOBILE except aeronautical mobile (R) [ 3490/195A ] 3497A 3499/205	2 502 - 2 505 STANDARD FREQUENCY AND TIME SIGNALS	
2 625 - 2 650 MARITIME MOBILE MARITIME RADIONAVIGATION [ 3490/195A ]	2 505 - 2 850 FIXED MOBILE	
2 650 - 2 850 FIXED MOBILE except aeronautical mobile (R) [ 3490/195A ] 3499/205	3497A	

[ MOD 3490/195A ]

[ See Annex 1 ]

ADD 3495A

Alternative allocation : in Belgium, Cyprus, Denmark, Spain, France, Greece, Iceland, Italy, Malta, Norway, the Netherlands, Portugal, the United Kingdom, Singapore, Sweden and Yugoslavia, the band 2 194 - 2 300 kHz is allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.

(MOD) 3496/202

For the conditions for the use of the band 2 300 - 2 495 kHz (2 498 kHz in Region 1), 3 200 - 3 400 kHz [ ... ] by the broadcasting service, see numbers 3425/135, 3426/136 and 6215/423 to 6221/428.

SUP 3497/203

ADD 3497A

Alternative allocation : in Bahrain, Belgium, Cyprus, Denmark, the United Arab Emirates, Spain, Ethiopia, France, Greece, Iraq, Italy, Kuwait, Malta, Norway, the Netherlands, Qatar, Sweden and Yugoslavia, the band 2 502 - 2 625 kHz, and in Singapore the band 2 505 - 2 625 kHz, are allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.

SUP 3498/203A

MOD 3499/205

See Annex 2

ANNEX 5

kHz  
3 230 - 3 400

Region 1	Region 2	Region 3
3 230 - 3 400	FIXED	
	MOBILE except aeronautical mobile	
	BROADCASTING 3496/202	
	[ 3490/195A_7 3496A 3499C	

[ MOD 3490/195A\_7

[ See Annex 1\_7

MOD 3496/202

See Annex 4

ADD 3496A

See Document No. 645 - Annex 4.

ADD 3499C

Additional allocation : in Brazil, Canada, the United States, Japan, Mexico, New Zealand, Papua New Guinea, Peru and Uruguay, the band 3 230 - 3 400 kHz is also allocated to the radiolocation service on a secondary basis.



A N N E X 6

kHz  
3 500 - 4 000

Region 1	Region 2	Region 3
3 500 - 3 800 AMATEUR FIXED MOBILE except aeronautical mobile [ 3490/195A ] 3499A	3 500 - 3 750 AMATEUR  3499A 3500B 3500D	3 500 - 3 900 AMATEUR FIXED MOBILE
3 800 - 3 900 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	3 750 - 4 000 AMATEUR FIXED MOBILE except aeronautical mobile (R)	3499A
3 900 - 3 950 AERONAUTICAL MOBILE (OR) 3501A		3 900 - 3 950 AERONAUTICAL MOBILE BROADCASTING
3 950 - 4 000 FIXED BROADCASTING	3499A 3500C 3500D 3502A	3 950 - 4 000 FIXED BROADCASTING 3502B

[MOD 3490/195A]

[See Annex 1]

- ADD 3499A For the use of the bands allocated to the amateur service at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution [...].
- ADD 3500B Additional allocation : in Guyana, Mexico, Peru and Venezuela, the band 3 500 - 3 750 kHz is also allocated to the fixed and mobile services on a primary basis.
- ADD 3500C Alternative allocation : in Argentina, Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay, the band 3 750 - 4 000 kHz is allocated to the fixed and mobile except aeronautical mobile services on a primary basis.
- ADD 3500D Additional allocation : in Brazil, the band 3 700 - 4 000 kHz is also allocated to the radiolocation service on a primary basis.
- SUP 3501/206
- ADD 3501A Alternative allocation : in Botswana, Lesotho, Malawi, Namibia, Republic of South Africa, Swaziland, Zambia and Zimbabwe, the band 3 900 - 3 950 kHz is allocated to the broadcasting service on a primary basis.
- SUP 3502/207
- ADD 3502A Additional allocation : in Canada and Greenland, the band 3 950 - 4 000 kHz is allocated to the broadcasting service on a primary basis. The power of broadcasting stations operating in this band shall not exceed the value required to provide economically a good quality national service within the frontiers of these countries.
- ADD 3502B In Region 3, the stations of those services to which the band 3 995 - 4 005 kHz is allocated may transmit standard frequencies and time signals.
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INTERNATIONAL TELECOMMUNICATION UNION

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 765-E

20 November 1979

Original : Spanish

COMMITTEE 5

## FIFTH REPORT OF WORKING GROUP 5BA TO COMMITTEE 5

Subject : Designation of a frequency for the transmission of navigational and meteorological warnings to ships by coast stations

After considering the report of Sub-Group 5BA5 (Document No. 364 and Corr.1), the Working Group decided to submit the draft Recommendation annexed hereto to Committee 5 for approval.

L. COOK

Chairman of Working Group 5BA

Annex : 1



A N N E X

DRAFT RECOMMENDATION No. ...

Relating to the designation of a frequency in the bands  
415 - 490 or 510 - 526,5 kHz (525 kHz in Region 2) on a  
world-wide basis for the transmission by Coast Stations  
of Navigational and Meteorological Warnings to Ships,  
using Narrow-Band, Direct-Printing Telegraphy

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that for the purpose of improving the existing provisions of the present maritime distress and safety system the Intergovernmental Maritime Consultative Organization (IMCO) has recommended<sup>1)</sup> that Administrations should introduce narrow-band directing-printing broadcasts for the purpose of promulgation of navigational and meteorological warnings to shipping;
- b) that such transmissions would enhance the safety of life at sea;
- c) that the CCIR has recommended<sup>2)</sup> an automated direct-printing telegraph system for transmission of navigational and meteorological information to ships;
- d) that in some countries in Europe, Administrations are already providing such transmissions on an experimental basis, using the frequency 518 kHz;
- e) that a number of Administrations have proposed to this Conference that the frequency 518 kHz be designated on a world-wide basis for this purpose;
- f) that this Conference considers this to be a matter for the next competent World Administrative Radio Conference;
- g) that there is a continuing need for transmission of navigational and meteorological warnings to ships by means of normal Morse telegraphy;

recommends

that the next competent World Administrative Radio Conference should consider this matter and take action as required to designate a suitable international frequency for the purpose of promulgating of navigational and meteorological warnings to shipping using narrow-band direct-printing telegraphy, whilst maintaining provisions for the continuation of existing normal Morse telegraphy for promulgating of such warnings;

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1) See IMCO Assembly Resolution A-283(VIII).

2) See CCIR Recommendation 540.

invites

Administrations to study this matter with a view to submitting appropriate proposals to the next competent World Administrative Radio Conference;

recommends

that IMCO be invited to continue its study on this matter and to make such recommendations as may be desirable;

requests the Secretary-General

to communicate the present Recommendation to IMCO,

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 766-E

19 November 1979

Original : Spanish

## COMMITTEE 5

### SIXTH REPORT OF WORKING GROUP 5BA TO COMMITTEE 5

#### 1. Frequency bands 130 - 285 kHz (Region 1)

1.1 After considering all proposals relating to the above bands and also the reports of Sub-Groups 5B1 (see Document No. 237) and 5BA1 (see Document No. 445) which had been set up to study these matters, the Working Group was unable to reach agreement on the allocations to be made in the bands 130 - 285 kHz in Region 1.

1.2 It was therefore decided to refer the question to Committee 5 for decision. The proposals on which the Working Group were not able to formulate a recommendation are shown in square brackets in the Table annexed hereto.

1.3 The Working Group, however, provisionally adopted the footnotes MOD 3461/167, MOD 3465/172, MOD 3466/173, MOD 3469/176, ADD 3469A and [MOD 3470/177]. These footnotes may require further amendment in the light of the decisions adopted on allocations in Committee 5. It is also recommended that footnotes 3467/174 and 3468/175 should be deleted (see the Annex).

1.4 The delegation of Tunisia reserved the right, if necessary, because of the decisions taken in Committee 5 concerning allocations and footnotes relating to the band 255 - [283.5] kHz, to indicate in an appropriate manner that in Tunisia the band in question is allocated exclusively to the broadcasting service.

L. COOK

Chairman of Working Group 5BA

Annex : 1



A N N E X

kHz  
130 - 148.5

Region 1	Region 2	Region 3
130 - <u>148.5</u> MARITIME MOBILE 3465/172 /FIXED/ 3461/167 3466/173	For the allocations in Regions 2 and 3, see Document No. 388.	
<u>148.5</u> - 255 BROADCASTING 3469/176 3469A		
255 - <u>283.5</u> BROADCASTING <u>/AERONAUTICAL RADIONAVIGATION/</u> 3469A <u>3470/177</u>		

SUP 3457/163

See Document No. 228(Rev.2).

(MOD) 3461/167

Only classes A1 or F1, A4 or F4 emissions are authorized for stations of the fixed service in the bands allocated to this service between 90 and 148.5 kHz and for stations of the maritime mobile service in the bands allocated to this service between 110 and 148.5 kHz. Exceptionally, class A7J emissions are also authorized in the bands between 110 and 148.5 kHz for stations of the maritime mobile service.

MOD 3465/172

The use of the band 130 - 148.5 kHz is limited to ship stations. However the bands between 140 - 146 kHz may also be used by coast stations on a permitted basis.

MOD 3466/173

Additional allocation : in Bulgaria, Hungary, Mongolia, Poland, Roumania, Czechoslovakia and the USSR, the band 130 - 148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have equal right to operate.

SUP 3467/174

SUP 3468/175

MOD 3469/176

Alternative allocation : in Burundi, Rwanda, Republic of South Africa and Zaire, the band 160 - 200 kHz is allocated to the fixed service on a primary basis.

ADD 3469A

Alternative allocation : in Angola, Botswana, Burundi, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Oman, Rwanda, Somalia, Sudan, Republic of South Africa, Swaziland, Tanzania, Zaire, Zambia and Zimbabwe, the band 200 - / 283.5 / kHz is allocated to the aeronautical radionavigation service on a primary basis.

/ MOD 3470/177

In the western part of the European Broadcasting Area, the band 255 - / 283.5 / kHz is used solely by the aeronautical radionavigation service except that in the United Kingdom frequencies are also assigned, by special agreement, to stations of the maritime mobile service. /

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

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## COMMITTEE 5

### SEVENTH REPORT OF WORKING GROUP 5BA TO COMMITTEE 5

1. After considering the report of Sub-Working Group 5BA10 (Document No. 689) concerning the allocation of the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz to the radiolocation service, the Working Group decided to recommend Committee 5 to adopt the draft Resolution in Annex 1 concerning the transfer of the services to which these bands are at present allocated. In view of the similarity of the problem, it was decided to mention in this same Resolution the band 1 810 - 1 850 kHz, which has been allocated to the amateur service.

2. The Working Group also considered the draft Recommendation relating to the preparation of a broadcasting plan in the band 1 605 - 1 705 kHz, which it is proposed to allocate to the broadcasting service in Region 2. This draft Recommendation, which is contained in Annex 2 and the adoption of which by Committee 5 is suggested by the Working Group, was prepared by Sub-Working Group 5BA7 and completed by Sub-Working Group 5BA11.

L. COOK

Chairman of Working Group 5BA

Annexes : 2



A N N E X 1

DRAFT RESOLUTION

Relating to the Reassignment of Stations  
in the Fixed and Mobile Services in the  
Bands Allocated to Radiolocation  
and Amateur Services in Region 1

(1 625 - 1 635 kHz; 1 800 - 1 810 kHz; 1 810 - 1 850 kHz and 2 160 - 2 170 kHz)

The World Administrative Radio Conference, Geneva, 1979,

considering

that the present Conference has adopted modifications to the allocation  
of the frequency bands between 1 605 and 2 850 kHz;

noting

1. that the implementation of the revised Table of Frequency Allocations presents difficulties in particular for stations in the maritime mobile service in Region 1 in the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz which are being made available for radiolocation services and the band 1 810 - 1 850 kHz which is being made available to the amateur service;

2. that the present Conference has recommended the convening of a general mobile conference not later than 1982;

emphasizing

the need for frequency assignment plans to be drawn up for Region 1 for the band 1 605 - 2 850 kHz in order to implement the provisions in Nos. 3490B and 3492C of the Radio Regulations;

invites

the mobile radio conference mentioned above to give priority to the adoption of a new assignment plan for Region 1 for the band 1 605 - 2 850 kHz for the maritime mobile service;

recommends

that Administrations endeavour to reassign existing assignments to stations in the fixed and mobile services in the bands concerned at the earliest possible opportunity in order to make the bands available exclusively for the radiolocation service and amateur service;

resolves

that the protection afforded to stations of the fixed and mobile services by No. 3490B and No. 3492C shall continue to apply until such time as a satisfactory reassignment has been made. For the stations of the maritime mobile service the reassignment shall be made in accordance with a regional frequency assignment plan / adopted by a competent Conference /.

A N N E X 2

DRAFT RECOMMENDATION No.

Relating to the Preparation of a Broadcasting Plan  
in the Band 1 605 - 1 705 kHz in Region 2

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the band 1 605 - 1 705 kHz has been allocated to the broadcasting service in Region 2 by the present Conference;
- b) that in accordance with No. 3484B, the use of the band 1 605 - 1 705 kHz by the broadcasting service is subject to a broadcasting plan to be established by a Regional Administrative Radio Conference;
- c) that the Table of Frequency Allocations also provides that the band 1 605 - 1 625 kHz is allocated exclusively to the broadcasting service, and the band 1 625 - 1 705 kHz is allocated to the broadcasting service on a shared basis with other services;

recognizing

the provision of No. 3282/117 of the Radio Regulations;

recommends

- 1. that a Regional Administrative Radio Conference be convened to establish a plan for the broadcasting service in the band 1 605 - 1 705 kHz in Region 2;
- 2. that such a Conference be convened in 1985 at the latest;
- 3. that the exact dates of coming into force of the plan be decided at the said Regional Administrative Radio Conference. Nevertheless, the implementation of the broadcasting service should not take place before 1 July 1987 for the frequencies between 1 625 kHz and 1 665 kHz, and 1 July 1990 for the frequencies between 1 665 kHz and 1 705 kHz;

invites

- 1. the Administrative Council to take the necessary steps for the convening of a Region 2 Administrative Radio Conference to plan the use of the band 1 605 - 1 705 kHz by the broadcasting service;
- 2. the CCIR to perform the necessary technical studies relating to the Region 2 Broadcasting Conference bearing in mind the allocations to other services in Regions 1 and 3 and the need for sharing criteria;

encourages

Administrations of Region 2 to promote the development and availability of receivers suitable for reception of the extended band 1 605 - 1 705 kHz.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 767-E  
19 November 1979  
Original : French

## COMMITTEE 5

### SEVENTH REPORT OF WORKING GROUP 5BA TO COMMITTEE 5

1. After considering the report of Sub-Working Group 5BA10 (Document No. 689) concerning the allocation of the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz to the radiolocation service, the Working Group decided to recommend Committee 5 to adopt the draft Resolution in Annex 1 concerning the transfer of the services to which these bands are at present allocated. In view of the similarity of the problem, it was decided to mention in this same Resolution the band 1 810 - 1 850 kHz, which has been allocated to the amateur service.

2. The Working Group also considered the draft Recommendation relating to the preparation of a broadcasting plan in the band 1 605 - 1 705 kHz, which the Conference proposes to allocate to the broadcasting service in Region 2. This draft Recommendation, which is contained in Annex 2 and the adoption of which by Committee 5 is suggested by the Working Group, was prepared by Sub-Working Group 5BA7 and completed by Sub-Working Group 5BA11.

L. COOK  
Chairman of Working Group 5BA

Annexes : 2



A N N E X 1

DRAFT RESOLUTION

Relating to the Reassignment of Stations  
in the Fixed and Mobile Services in the  
Bands Allocated to Radiolocation  
and Amateur Services in Region 1

(1 625 - 1 635 kHz; 1 800 - 1 810 kHz; 2 160 - 2 170 kHz; and 1 810 - 1 850 kHz)

The World Administrative Radio Conference, Geneva, 1979,

considering

that the World Administrative Radio Conference has adopted modifications to the allocation of the frequency bands between 1 605 and 2 850 kHz;

noting

1. that the implementation of the revised Table of Frequency Allocations presents difficulties in particular for stations in the maritime mobile service in Region 1 in the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz which are to be made available for radiolocation services and the band 1 810 - 1 850 kHz which is to be made available to the amateur service;

2. that the World Administrative Radio Conference has recommended to convene a general mobile conference not later than 1982;

emphasizing

the need for frequency assignment plans to be drawn up for Region 1 for the band 1 605 - 2 850 kHz in order to implement the provisions in Nos. 3490B and 3492C of the Radio Regulations;

invites

the mobile radio conference mentioned above to give priority to the adoption of a new assignment plan for Region 1 for the band 1 605 - 2 850 kHz for the maritime mobile service;

recommends

that Administrations endeavour to reassign existing assignments to stations in the fixed and mobile services in the bands concerned at the earliest possible opportunity in order to make the bands available exclusively for the radiolocation service and amateur service;

resolves

that the protection afforded to stations of the fixed and mobile services by No. 3490B and No. 3490D shall continue to apply until such a time as a satisfactory reassignment has been made. For the stations of the maritime mobile service the reassignment shall be made in accordance with a regional frequency assignment plan drawn up by a competent Conference,

A N N E X 2

DRAFT RECOMMENDATION No.

Relating to the Preparation of a Broadcasting Plan  
in the Band 1 605 - 1 705 kHz in Region 2

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the band 1 605 - 1 705 kHz is allocated to the broadcasting service in Region 2 by the present Conference;
- b) that in accordance with No. 3484B, the use of the band 1 605 - 1 705 kHz by the broadcasting service is subject to a broadcasting plan to be established in 1985 at the latest;
- c) that the Table of Frequency Allocations also provides that the band 1 605 - 1 625 kHz is allocated to the broadcasting service, and the band 1 625 - 1 705 kHz is allocated to the broadcasting service on a shared basis with other services;

recognizing

the provision of No. 3282/117 of the Radio Regulations;

recommends

- 1. that a Regional Administrative Radio Conference be convened to establish a plan for the broadcasting service in the band 1 605 - 1 705 kHz in Region 2;
- 2. that such a Conference be convened in 1985 at the latest;
- 3. that the exact dates of coming into force of the plan be decided at the said Regional Administrative Radio Conference. Nevertheless, the implementation of the broadcasting service [should] not take place before 1 July 1987 for the frequencies between 1 625 - 1 665 kHz, and 1 July 1990 for the frequencies between 1 665 - 1 705 kHz;

invites

- 1. the Administrative Council to take the necessary steps for the convening of a Region 2 Administrative Radio Conference to plan the use of the band 1 605 - 1 705 kHz by the broadcasting service; .
- 2. the CCIR to perform the necessary technical studies relating to the Region 2 Broadcasting Conference bearing in mind the allocations to other services in Regions 1 and 3 and the need for sharing criteria;

encourages

Administrations to promote the development and availability of receivers suitable for reception of the extended band 1 605 - 1 705 kHz.

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INTERNATIONAL TELECOMMUNICATION UNION

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 768-E

20 November 1979

Original : English

COMMITTEE 6

## **NINTH REPORT OF WORKING GROUP 6A**

Working Group 6A has agreed on the text of a draft report from Committee 6 to Committee 5 on the dates to be established for a transitional procedure for the HF fixed service. Committee 6 is requested to transmit this report to Committee 5.

J.K. BJÖRNSJÖ  
Chairman of Working Group 6A

Annex : 1



A N N E X

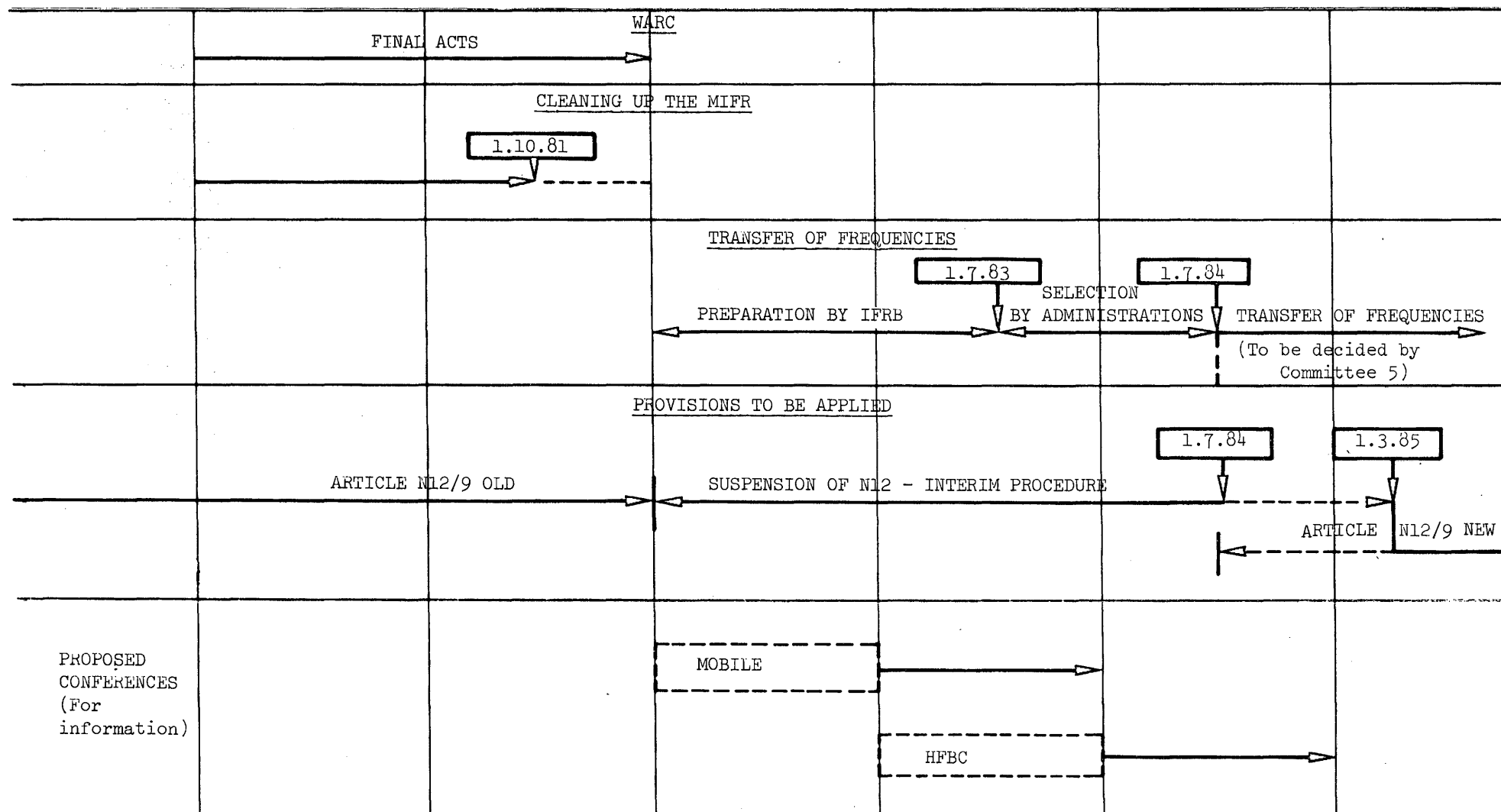
DRAFT

REPORT FROM COMMITTEE 6 TO COMMITTEE 5 ON THE DATES TO BE ESTABLISHED  
FOR A TRANSITIONAL PROCEDURE FOR THE HIGH FREQUENCY FIXED SERVICE

1. Any transitional procedure must be based upon an accurate Master Register. The Master Register is at present inaccurate and must be revised; Committee 6 has therefore developed a draft of an appropriate procedure that should commence shortly after the close of the WARC. The transitional procedure relating to the transfer of fixed services out of the HF bands re-allocated by the WARC to other services must start immediately after the procedure for revision of the relevant parts of the Master Register. The length of time required to complete this transfer involves many factors which have been examined (omitting those appropriate to Committee 5). Committee 6 submits the following conclusions :
  - a) a procedure for revising the Master Register as contained in a draft Resolution should be started on / 1 January 1980 /. It will need about 18 months and should therefore, with a margin, run until / 1 October 1981 /;
  - b) there should then follow a short period for consolidation of the results and publication of the revised parts of the Master Register to provide the basis for a transitional procedure;
  - c) the transitional procedure should start on the date of entry into force of the Final Acts on / 1 January 1982 / and the preparatory phase should run for 18 months. In this period, based on the revised Master Register, all fixed service assignments in the bands that are re-allocated by Committee 5 to other services will be found replacements;
  - d) a further period of one year should then be allowed for acceptance of the new assignments and preparation for the changeover during an operational phase;
  - e) the earliest date for the start of the operational phase, i.e. the start of the transfer of high frequency fixed services out of one band and into another would therefore be / 1 July 1984 /.
2. Committee 5 will of course determine the time scales for these changeovers in the various bands, however from a procedural point of view, Committee 6 believes that the timetable in the diagram annexed could be adopted.
3. With reference to paragraph 1 c), the maximum period required to find replacement frequencies will be determined by the number of assignments for which new frequencies must be found and the resources of the IFRB.

Note : This document should not be considered as prejudging recommendations of this Conference to the Administrative Council concerning the convening of future Conferences and the date of entry into force of ~~their~~ Final Acts.





# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 769-E  
20 November 1979  
Original: English

## COMMITTEE 6

### TENTH REPORT OF WORKING GROUP 6A

Working Group 6A has agreed on the following text which it submits to Committee 6:

- Annex A to Resolution /XA/ on the cleaning-up of the Master Register
- Annex A to Resolution /XB/ relating to the transitional procedure to cover the re-allocation of displaced assignments, as a consequence of changes of allocations in the Table of Frequency Allocations.

A Table is also annexed, showing the different steps of the procedures. Working Group 6A has agreed that the I.F.R.B. in starting the cleaning-up of the Master Register, should, in its letter to administrations, give detailed explanations of these procedures and that the Table showing the different steps of the procedure should be annexed to that letter. In order to expedite and to facilitate the future work, the I.F.R.B. has been requested to contact all delegations during the Conference to establish the form (tabulated extracts or magnetic support) of the extracts from the Master Register and the number of copies requested.

Working Group 6A has also decided that in Resolution /XB/ there should be a clear indication of the date of the temporary suspension of Article N12.

J.K. BJÖRNSJÖ  
Chairman of Working Group 6A

Annexes : 2



A N N E X 1

ANNEX A TO RESOLUTION No. /-XA/

PROCEDURE FOR REVIEWING ENTRIES IN THE MASTER REGISTER IN FREQUENCY BANDS

ALLOCATED TO THE FIXED SERVICE BETWEEN /-3 000 kHz AND 27 500 kHz-/

1. The Board shall extract from the Master Register and shall, as soon as possible after 1 January 1980, forward to each Administration an individual National List<sup>1</sup> of all assignments /-2-/ recorded in the Master Register on behalf of that Administration or for which notices have been received prior to that date in the bands allocated exclusively or on a shared basis to the fixed service between /-3 000 kHz and 27 500 kHz-/ . The Board shall at the same time draw the attention of the Administration to any assignments for which another means of telecommunications is believed to be available.

2. Each Administration, upon receiving the List mentioned in No. 1, shall inform the Board thereof by telegram. An Administration not receiving its National List by 1 April 1980 shall promptly inform the Board who shall forthwith send to that Administration a further copy of the National List. The Board shall ensure that every Administration has received the National List pertaining to its own assignments.

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1.1 <sup>1</sup>The number of copies of the National List to be sent to each Administration shall be determined by the Board as the result of prior enquiries. The National List shall be prepared in the format of the International Frequency List but the medium in which the List is forwarded may, at the request of individual Administrations and with the agreement of the Board, be varied to suit different circumstances.

/-1.2 <sup>2</sup>For the purposes of this procedure assignments to stations of the aeronautical fixed service shall be treated as if they were stations of the fixed service within the band(s) concerned.-/

3. Each Administration, following acknowledgement of receipt of its National List, shall examine the List and shall :

- a) delete from it any of the entries no longer required;
- b) \*) classify the remaining entries of the fixed service as follows :
  - A - for regular operational use; or
  - B - for use as a standby to some other means of telecommunication; or
  - C - for occasional use on a reserve basis and not requiring protection from harmful interference.
- c) indicate the regular hours of operation of the frequency assignment in UTC; otherwise indicate the hours of operation as day service (HJ), night service (HN), or transition period service (HT).

4. An Administration, having completed the actions described in Nos. 2 and 3, shall return its annotated National List to the Board as quickly as possible and in any event not later than 31 March 1981.

5. The Board shall send to each Administration an acknowledgement of receipt of its annotated National List, and shall, in cases of special difficulty or at the request of Administrations, give such help and advice as the circumstances may warrant.

6. On 1 October 1981, the Board shall publish a provisional section of the Master Register relating solely to the assignments in the bands allocated to the fixed service between / 3 000 kHz and 27 500 kHz /. This section shall contain all assignments shown in National Lists as annotated by Administrations and those shown in National Lists which have not been returned to the Board, with the exclusion of all assignments with an unfavourable finding with respect to 4296/501 without reference to No. 3279/115. The assignments in this provisional section shall be annotated as follows.

6.1 All assignments shall bear a symbol indicating a reference to this Resolution.

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(\*) To be aligned with No. 4283A of Article N12.)

6.2 The dates entered in columns 2a, 2b or 2d or the symbol entered in column 2d and the findings shown in the appropriate part of column 13 shall be amended as shown in the attached table.

6.3 Frequency assignments to fixed service stations in the parts of bands re-allocated to other services shall bear a symbol indicating that they are assignments for which replacement assignments shall be found in accordance with Resolution /XB/, retaining the date and status afforded in the attached table.

7. Before applying paragraphs I.2 and II.2 of the table to assignments of countries having a small number of assignments, the Board shall consult the Administration whose assignment caused the unfavourable finding in order to ensure that no actual interference has occurred since the registration of the recorded assignment. If the reply is positive, the Board shall enter the symbol corresponding to class of operation A for the assignment and amend the unfavourable finding. Failing this, it shall apply the provisions of No. 4280A in order to find another frequency and shall proceed to replace the frequency in consultation with the Administration concerned.

8. As soon as possible, after 1 January 1982, the Board shall :

8.1 Publish a supplement to the provisional section of the Master Register containing those assignments for which notices were received between 1 January 1980 and /31 December 1981/.\*)

8.2 Send to Administrations a copy of their National List.

8.3 Incorporate in the Master Register the provisional section mentioned in paragraph 6 including the assignments mentioned in paragraph 8.1 above in replacement of the corresponding entries in the frequency bands concerned.

9. Following completion of the action described above, the Board shall publish a report showing the results obtained from the operation of this procedure.

TABLE

	Column 13a	Column 2	Column 13c
<p>I. <u>Frequency bands below 3 900 kHz (Region 1)</u>  <u>3 950 kHz (Region 3) - 4 000 kHz (Region 2)</u></p> <p><u>I.1 Lists returned to the Board :</u></p> <p>- A class of operation assignments</p> <p>- B or C class of operation assignments</p> <p>- entries RR 115</p> <p><u>I.2 Lists not returned to the Board :</u></p> <p>- assignments entered with a date 2a</p> <p>- assignments entered with a date 2b</p> <p>- entries RR 115</p> <p>II. <u>Frequency bands above 3 900 kHz (Region 1)</u>  <u>3 950 kHz (Region 3) - 4 000 kHz (Region 2)</u></p> <p><u>II.1 Lists returned to the Board :</u></p> <p>- A class of operation assignments</p> <p>- B or C class of operation assignments</p> <p>- entries RR 115</p> <p><u>II.2 Lists not returned to the Board</u></p> <p>- 501 favourable</p> <p>- entries RR 115</p>	Delete any symbols indicating the finding under 502	Replace the date in 2a or 2b by / 1.1.82 / in 2a	RES XA SUP RR 515
	idem	Replace the date in 2a or 2b by / 2.1.82 / in 2b	RES XA SUP RR 515
	NOC	Replace the date by / 5.1.82 / in 2b	RES XA
	NOC	Replace the date by / 3.1.82 / in 2a	RES XA
	NOC	Replace the date by / 4.1.82 / in 2b	RES XA
	NOC	Replace the date by / 5.1.82 / in 2b	RES XA
	Delete any symbols indicating the finding under 503	Replace the date or the symbol in 2d by / 1.1.82 /	RES XA SUP RR 515
	idem	Replace the date or the symbol in 2d by / 2.1.82 /	RES XA SUP RR 515
	NOC	Replace the date or the symbol in 2d by / 5.1.82 /	RES XA
	NOC	Replace the date or the symbol in 2d by / 3.1.82 /	RES XA
	NOC	Replace the date or the symbol in 2d by / 5.1.82 /	RES XA

Editorial note : Dates in square brackets based on assumption that Final Acts will enter into force on 1.1.82.

A N N E X 2

ANNEX A TO RESOLUTION NO. /XB/

TRANSITIONAL PROCEDURE FOR THE SELECTION AND APPROVAL OF REPLACEMENT ASSIGNMENTS

PART I - PREPARATORY PHASE

Section I. Preparation and Publication by the Board of Consolidated  
Proposals for Replacement Assignments

1. For the purpose of this Resolution, the term "displaced assignment" means a frequency assignment to a station in the fixed service in the parts of the bands re-allocated from fixed service to other services for which a replacement assignment shall be found in accordance with this Resolution.
2. The Board, as soon as possible after completion of the procedure annexed to Resolution /XA/ shall prepare consolidated proposals for replacements for all displaced assignments<sup>1)</sup> listed in the Provisional Section of the Master Register in the bands between /4 000 kHz and 27 500/ kHz which the WARC has re-allocated from the fixed service to other services.
3. The displaced assignment shall be treated in the order of the revised date recorded in Column 2d as indicated in Resolution No. /XA/. Furthermore, all displaced assignments which have the same revised date, shall be treated in the following order :
  - 1) assignments for national use;
  - 2) assignments for international use.
- In the application of this provision, the displaced assignments shall be processed in batches without any priority being applied to the assignments of any Administration.
4. The displaced assignments of class of operation C shall not be treated until all displaced assignments of class of operation A or B have been satisfied.
5. Displaced assignments of class of operation C shall be as far as possible evenly distributed throughout the bands that continue to be allocated to the fixed services.
6. The Board, in complying with the provisions of this Section, shall for the purposes of protecting existing recorded assignments employ only the Master Register reconstructed in accordance with the procedure annexed to Resolution /XA/.
7. The Board, upon 1 July 1983<sup>\*)</sup> shall send to each Administration a document listing all the assignments concerning that Administration, identifying those that were recorded in the Provisional Section of the Master Register, and those proposed as replacements.

Editorial Note : <sup>\*)</sup> 18 months after the entry into force of the Final Acts.

## Section II. Examination and Approval of Proposed Assignments

8. Each Administration, upon receipt of the document specified in No. 7, shall acknowledge receipt and shall then examine the proposed replacement assignments contained therein with regard to their acceptability, following which the Administration shall advise the Board as soon as possible :

- of its agreement; or
- which of the proposed assignments it finds unacceptable.

In the latter case, the Administration shall inform the Board, as quickly as possible, of its reasons therefor.

9. The Board shall examine the responses under No. 8 and shall try, preferably by applying small adjustments, to satisfy the Administration concerned in respect of the proposed assignments it found unacceptable. The Board shall do so in the following way:

- The Board shall collect all responses received under No. 8 within six months after 1 July 1983\*), and then process them together and without any priority being applied to the reply of any Administration; and then
- the Board shall collect all responses received under No. 8 in the period from six months to nine months after 1 July 1983\*), and then process this second batch in the same manner as described above for the first batch.

10. The procedure described in this section shall terminate on 1 July 1984\*\*).

## Section III. Subsequent Action by the Board

11. The Board, upon termination of the procedure prescribed by Sections I and II of this Annex, shall insert in the Master Register all replacement assignments that have been agreed by Administrations, with annotations to indicate :

- that they shall have the same common status as the undisplaced assignments as provided for in Resolution / XA /, and
- their provisional nature in accordance with No. 4332/537.

12. The Board shall, for all assignments mentioned in No. 11, insert in Column 2d of the Master Register the appropriate date according to 6.3 of the Annex to Resolution / XA /.

13. The Board shall then publish, in recapitulatory supplements to the International Frequency List, all replacement assignments made in accordance with the procedure prescribed in Part 1 of this Annex.

14. The Board, upon publication of the supplements prescribed by No. 13, shall inform by telegram any Administration having outstanding displaced assignments classified A which have not been satisfied.

Editorial Note : \*) 18 months after the entry into force of the Final Acts.

\*\*) 30 months after the entry into force of the Final Acts.



#### Section IV. Implementation of Article N12

15. As from [1 October 1984]\*), the provisions of Article N12 shall apply to frequency bands allocated to the fixed service between [4 000 kHz and 27 500 kHz.]

16. Following that date, an Administration, having been informed by the Board under No. 14 that certain of its displaced assignments have not been replaced under this transitional procedure, shall be free to select new assignments taking into account the assignments recorded in the Master Register under No. 11, and shall submit new notices to the Board in accordance with Article N12/9.

#### PART II - TRANSFER PHASE

#### Section V. Subsequent Action by Administrations

17. An Administration, having received and accepted replacements for its recorded assignments that were displaced by decisions of the WARC-1979, shall effect the change-over from the old to the new assignment not later than :

- [date X] for frequency bands above [10] MHz; and
- [date Y] for frequency bands below [10] MHz.

18. An Administration shall promptly inform the Board of the date on which the change-over from an old to a replacement assignment takes place. The Board shall remove from that replacement assignment the special symbol placed in accordance with No. 4332/537 (see No. 11 above), in the Master Register thus indicating that it has been implemented, and shall enter the date of the change-over in Column 2c. The 2c date originally recorded with the displaced assignment shall be entered in the Remarks Column.

19. An Administration, having effected the change to a replacement assignment of class of operation A, and having experienced harmful interference or having received a complaint of harmful interference involving another class A assignment:

- a) shall make every effort with any other Administration concerned to resolve the problem, and, if unsuccessful;
- b) may select and submit to the Board an alternative replacement assignment.<sup>1)</sup>

20. Upon a favourable finding by the Board of the replacement assignment selected under No. 19 b), the Administration shall be entitled to have inserted in Column 2d of the Master Register against that assignment the common date of 1 January 1982.

#### Section VI. Relevance of Dates in the Master Register

21. The relevance of the dates related to displaced assignments are referred to in the Annex to Resolution [XA] and Article N12.

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1) Upon request from an Administration, the Board shall assist in the application of Provision 019 b).

Editorial Note : \*) Thirty-three months after the entry into force of the Final Acts.

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 770-E

20 November 1979

Original : English

COMMITTEE 6

ELEVENTH REPORT OF WORKING GROUP 6A

In examining the proposals relating to Article N12 of the Radio Regulations, Working Group 6A recognized that a Region 2 Administrative Radio Conference for Planning the Broadcasting Service in the band 535 - 1 605 kHz is scheduled.

The text of a draft Resolution, relating to the treatment by the IFRB of notices relating to assignments to broadcasting stations in this band during the period between the entry into force of the Final Acts of the present Conference and those of the MF Broadcasting Conference (Region 2), was agreed and is submitted to Committee 6.

J.K. BJÖRNSJÖ  
Chairman of Working Group 6A

Annex : 1



A N N E X

RESOLUTION No. /6A-1/

Relating to Examination by the IFRB of the Notices Referring  
to a Station in the Broadcasting Service in Region 2 in the  
Band /535 - 1 605 kHz/ During the Period Preceding the Entry  
into Force of the Final Acts of the  
Regional Administrative MF Broadcasting Conference (Region 2)

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that a Region 2 Administrative Radio Conference will be convened, in two sessions to draw up a plan for the broadcasting service in the band /535 - 1 605 kHz/;
- b) that the first session of that Conference will be held in March 1980, and the second session shall be convened in November 1981;
- c) that the relevant provisions of Article N12/9 were modified by the present Conference;
- d) that the Regional Administrative MF Broadcasting Conference (Region 2) should adopt provisions to be applied by the Board for notification and recording in the Master Register of frequency assignments included in the Plan; and
- e) that it is therefore necessary to establish a procedure to be applied by the Board concerning the examination of notices referring to broadcasting stations in Region 2 in the band /535 - 1 605 kHz/ in the period between the entry into force of the Final Acts of the World Administrative Radio Conference, Geneva, 1979 and the entry into force of the Final Acts of the Region 2 MF Broadcasting Conference;

resolves

that from the date of entry into force of the Final Acts of the World Administrative Radio Conference, Geneva, 1979, until the date of entry into force of the Final Acts of the Regional Administrative MF Broadcasting Conference (Region 2), the Board shall not examine, with respect to No. 4297/502, frequency assignment notices to a broadcasting station of Region 2 in the band /535 - 1 605 kHz/ and shall record them with no date in Column 2a or in Column 2b; the date in Column 2c being given for information only.



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 771-E

20 November 1979

Original : French

PLENARY MEETING

United Republic of Cameroon

## RESOLUTION

Relating to a World Administrative Radio Conference  
to carry out a general or partial revision of the  
Radio Regulations

The World Administrative Radio Conference, Geneva, 1979,

considering

that it has drawn up a programme of specialized World Administrative Radio Conferences for the coming decade;

considering

the very rapid development of telecommunication technology and the consequences of the application of that technology, particularly with regard to the efficient use of the radio spectrum;

considering

the need for a general or partial revision of the Radio Regulations to ensure the harmonious development of several services not covered by the specialized conferences scheduled by this Conference;

resolves

to invite the Administrative Council to consider the possibility of convening a World Administrative Conference to undertake a general or partial revision of the Radio Regulations in 1989.



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 772-E

20 November 1979

Original : french

## COMMITTEE 5

### REPORT OF WORKING GROUP 5/AD HOC 9

#### TO COMMITTEE 5

Subject : Sharing of the bands 10.6 - 10.68 GHz and 18.6 - 18.8 GHz by the Earth exploration-satellite service (passive sensors) and the space research service (passive sensors) with the fixed, mobile and fixed-satellite services

1. Working Group 5/ad hoc 9 held one meeting, which was attended by representatives of the Administrations of the Federal Republic of Germany, Australia, Brazil, Canada, the United States of America, France, Upper Volta, Japan, the United Kingdom, Senegal, Thailand and the USSR.
2. For the band 10.6 - 10.68 GHz, the Working Group decided unanimously to submit to Committee 5 a slightly amended text for footnote 3783B, the equivalent isotropically radiated power being raised from 35 to 40 dBW.
3. For the band 18.6 - 18.8 GHz, the Working Group decided to submit to Committee 5 two draft footnotes ADD 3800A and ADD 3800B designed to protect passive sensors and a draft Recommendation to the CCIR on the sharing of the band and on the restrictions applicable to the fixed, mobile (except aeronautical mobile) and fixed-satellite services in order to ensure the satisfactory operation of passive sensors.
4. The draft footnotes are reproduced in Annex 1 and the draft Recommendation in Annex 2.

M. CISSE

Chairman of Working Group 5/ad hoc 9

Annexes : 2



A N N E X 1

FOOTNOTE TO BE INCLUDED IN THE TABLE IN DOCUMENT NO. 680

BAND 10.6 - 10.68 GHz

ADD 3783B

In the band 10.6 - 10.68 GHz, the fixed and mobile services shall be limited to a maximum equivalent isotropically radiated power of [ -40 ] dBW and the power delivered to the antenna shall not exceed [ -3 ] dBW. These limits may be exceeded subject to agreement reached under the procedure provided in Article N13A. However, in Japan, the USSR, [ ] Algeria, Saudi Arabia, Australia, Cameroon, Chile, China, Denmark, Spain, Finland, Greece, India, Indonesia, Iran, Iraq, Nigeria, Pakistan, Papua New Guinea, the Netherlands, Portugal, Singapore, Syria, Turkey, [ ] the restrictions on the fixed and mobile (except aeronautical mobile) services are not applicable.

FOOTNOTE TO BE INCLUDED IN THE TABLE IN DOCUMENT No. 681

BAND 18.6 - 18.8 GHz

ADD 3800A

In using the frequency plans for the fixed and mobile services, administrations are invited to take account of passive sensors in the Earth-exploration satellite and space research services operating in the band 18.6 - 18.8 GHz. In this band, administrations should endeavour to limit as far as possible both the power delivered by the transmitter to the antenna and the equivalent isotropically radiated power (e.i.r.p.) in order to reduce the risk of interference to passive sensors to the minimum.

ADD 3800B

In assigning frequencies to stations in the fixed-satellite service in the direction space-to-Earth, administrations are requested to limit as far as possible the power flux-density at the Earth's surface in the band 18.6 - 18.8 GHz, in order to reduce the risk of interference to passive sensors in the Earth exploration-satellite and space research services.

A N N E X 2

DRAFT

RECOMMENDATION TO THE CCIR

Relating to Frequency Sharing by the Earth Exploration-Satellite Service (Passive Sensors) and the Space Research Service (Passive Sensors) with the Fixed, Mobile (except Aeronautical Mobile) and Fixed-Satellite Services in the Band 18.6 - 18.8 GHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that allocations have been made in various frequency bands to the Earth exploration-satellite and space research services for the operation of passive sensors on board spacecraft;
- b) that the allocations made in the band 18.6 - 18.8 GHz are shared with the fixed, mobile (except aeronautical mobile) and fixed-satellite services;
- c) that the sharing criteria contained in CCIR Report 694 could restrict the development of the fixed, mobile (except aeronautical mobile) and fixed-satellite services;

invites the CCIR

- 1. to review the content of CCIR Report 694 in all the Study Groups concerned (particularly Study Groups 4 and 9);
  - 2. to continue the studies which gave rise to Report 609-1, taking into account the requirements of the Earth exploration-satellite service (passive sensors) and the space research service (passive sensors);
  - 3. to study the minimum restrictions which could be applied to the fixed, mobile (except aeronautical mobile) and fixed-satellite (space-to-Earth) services in order to ensure the satisfactory operation of passive sensors;
  - 4. to study the maximum restrictions which might be tolerated by the fixed, mobile (except aeronautical mobile) and fixed-satellite services without jeopardizing the operation of all the services likely to use this frequency band.
-

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 773-E

20 November 1979

Original : English

COMMITTEE 7

Democratic Republic of the Sudan

## REQUEST FOR THE ALLOCATION OF ADDITIONAL CALL SERIES

Because of the vast development in our telecommunication services we expect that our existing call series will be used up very soon, so we therefore request an additional call series to be allocated to our Administration.

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**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 774  
20 November 1979**E**

B.25

PLENARY MEETING**25th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.6	411 + 412	Resolutions AQ; AR; AS; AT; AU Recommendation ZG
C.6	531 + 532	Resolutions AV; AW; AX; AY; AZ; BA; BB; BC; BD; BE; BF; BG; BH; BI Recommendations ZH; ZI; ZJ; ZK

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 40 pages



## RESOLUTION AQ 1

Relating to the Conversion to Single Sideband Technique  
of Stations of the Radiotelephone Maritime Mobile Service  
Operating in the Bands between [1 605] and 4 000 kHz

[ ]

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that radiotelephone stations in the maritime mobile service operating with double sideband emissions in the bands between [1 605] and 4 000 kHz use a [ ] bandwidth of the order 6 kHz;
- b) that these stations will have to use single sideband operation in future;
- c) that, during the period of conversion to single sideband operation, every precaution must be taken to avoid harmful interference between stations operating with a double sideband emissions and those operating with single sideband emissions;

resolves

1. that the transition to single sideband operation in the stations referred to in considering a) above shall be made in accordance with the following provisions:
- 1.1 the carrier frequency of the single sideband channel in the upper part of the previous double sideband channel shall be the same as the carrier frequency of that channel;
  - 1.2 the carrier frequency of the single sideband channel in the lower part of the previous double sideband channel shall be 3 kHz lower than the carrier frequency of the previous double sideband channel when the latter has a carrier frequency at least of 6 kHz above that of the lower adjacent double sideband radiotelephone channel;
  - 1.3 in Region 1, the carrier frequency of the single sideband channel in the lower part of the previous double sideband channel for intership communication shall be 2.5 kHz below the carrier frequency of the previous double sideband channel when the latter has a carrier frequency 5 kHz above that of the lower adjacent double sideband radiotelephone channel;
2. that class [A3H] emissions shall not be used on single sideband channels [ ] in the lower part of previous double sideband channels.

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1 Replaces Resolution No. Mar 4 of the World Administrative Radio Conference, Geneva, 1967.

## RESOLUTION AR 1

**Concerning the Establishment of a Coordinated Worldwide System  
for the Collection of Data relating to Oceanography**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the expressed desire for the establishment of a coordinated worldwide system for the collection of data relating to oceanography;
- b) that in each of the [six] high frequency bands allocated exclusively to the maritime mobile service a frequency band has been designated for use in the collection of data relating to oceanography in accordance with Appendix 15 to the Radio Regulations; [ ]
- c) that use of these frequencies with maximum effectiveness is dependent upon cooperation and coordination among administrations;
- d) that certain administrations expressed the desire that a coordinated worldwide system for the transmission of data relating to oceanography be established on the basis of a coordinated plan in the bands allocated by [this] Conference; [ ]
- e) that, however, certain other administrations wish to use in the near future stations for the collection of data relating to oceanography within the framework of decisions taken on this matter by [this] Conference; [ ]
- f) that, consequently, a coordinated programme for the collection of data relating to oceanography should be established using the frequency bands referred to in b) above;
- g) that the Intergovernmental Oceanographic Commission (IOC) and the World Meteorological Organization (WMO) have been in consultation since 1962 with respect to cooperative efforts in the collection of data relating to oceanography (e.g. the WMO/IOC Panel of Experts on Coordination of Requirements, Geneva, 19-21 July, 1967);

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<sup>1</sup> Replaces Resolution No. Mar 20 of the World Administrative Radio Conference, Geneva, 1967.

resolves

1. that the IOC and WMO be invited to develop jointly, in consultation with the IFRB, and in consultation with administrations of the Members of the Union, as appropriate, a coordinated plan designed to meet existing and future requirements of all interested Members, for use by stations in the collection of data relating to oceanography in a worldwide system, within the framework of provisions made by [this] Conference for such a system; this plan to include the geographical distribution of oceanographic stations, their system of operation, the deployment of frequencies in the system and the manner in which oceanographic information is to be transmitted; [ ]
2. that administrations be encouraged to assign frequencies in conformity with the plan and the recommendations of IOC and WMO for the portion of the worldwide system over which they have jurisdiction;
3. that the IOC and WMO be invited further to assume jointly the responsibility, in consultation with the IFRB, for keeping such a plan current, in the light of changing requirements for data relating to oceanography;
4. that the plan developed under points 1 and 3 above shall be considered at the next Administrative Radio Conference competent to deal with matters relating to the maritime mobile service, to determine what changes, if any, appear necessary to improve its effectiveness.

## RESOLUTION AS 1

Relating to the Implementation of the New Channeling Arrangement for [Al] [ ]  
Morse Radiotelegraphy in the Bands allocated to the Maritime Mobile  
Service between 4 000 and 27 500 kHz

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that Recommendation No. Mar 7 of the World Administrative Radio Conference, Geneva, 1967, requested administrations to study the problems relating to the future use of harmonic relationship in ships' radio equipment;

b) that the World Maritime Administrative Radio Conference, Geneva, 1974, provided for use by ship stations calling and working frequencies for [Al]Morse [ ] telegraphy which are not harmonically related;

c) that it is desirable to implement the new channelling arrangement as soon as possible;

recognizing

a) that there is a need to provide an amortization period for radio equipment dependent upon the harmonic relationship of calling and working frequencies;

b) that developments and advances in technique, and in frequency synthesizers in particular, have led to more stable and reliable radio equipment;

resolves

1. that ship stations dependent upon harmonically related calling and working frequency assignments made prior to 1 January 1976 may continue to use such of their assignments as are within the ship calling and working bands for [Al]Morse telegraphy shown in Appendix 15; [ ]

2. that, as soon as possible, ships should utilize equipment which is capable of operating in accordance with the new channelling arrangement contained in Appendix 15D for the frequencies required for their service;

3. that equipments installed after 1 January 1976 shall be capable of operating in accordance with the new channelling arrangement contained in Appendix 15D for the frequencies required for their service.

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1 Replaces Resolution No. Mar2 - 4 of the World Maritime Administrative Radio Conference, Geneva, 1974.

## RESOLUTION AT 1

**Relating to the Unauthorized Use of Frequencies  
in the Bands allocated to the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that monitoring observations of the use of frequencies in the band 2 170 – 2 194 kHz and the bands allocated exclusively to the maritime mobile service between 4 063 and 25 110 kHz show that a number of frequencies in these bands are still being used by stations of services other than the maritime mobile service, notably by high-powered broadcasting stations, some of which are operating in contravention of No. 6214/422 of the Radio Regulations;
- b) that these stations are causing harmful interference to the maritime mobile service and that a considerable number of emissions, the sources of which could not be positively identified, were observed in these bands;
- c) that radio is the sole means of communication of the maritime mobile service;

considering in particular

- d) that it is of paramount importance that the distress and safety channels be kept free from harmful interference, since they are essential for the protection of the safety of life and property;

resolves to urge administrations

1. to ensure that stations of services other than the maritime mobile service abstain from using frequencies in distress and safety channels and their guard-bands and in the bands allocated exclusively to that service, except under the conditions expressly specified in Nos. 3279/115, 3503/208, 3504/209, 3507/211, 3510/213 or 3919/415 of the Radio Regulations;
2. to continue to make every effort to identify and locate the source of any unauthorized emission capable of endangering human life and property, and to communicate their findings to the IFRB;
3. to participate in the monitoring programmes that the IFRB may organize pursuant to the present Resolution;

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1 Replaces Resolution No. Mar2 – 15 of the World Maritime Administrative Radio Conference, Geneva, 1974.

4. to request their Governments to enact such legislation as is necessary to prevent stations located off their coasts operating in contravention of No. 6214/422 of the Radio Regulations;

requests the International Frequency Registration Board

1. to continue to organize monitoring programmes, at regular intervals, in the distress and safety channels and their guard-bands, and, in the bands allocated exclusively to the maritime mobile service between [4 063 and 25 110 kHz], with a view to identifying the [out-of-band stations], [stations of other services operating in these bands];

[ ]  
[ ]  
[ ]

2. to take the necessary steps with a view to the elimination of the emissions of [out-of-band stations], [stations of other services operating in these bands], which cause or are likely to cause harmful interference to the maritime mobile service;

[ ]  
[ ]

3. to seek, as appropriate, the cooperation of administrations in identifying the sources of out-of-band emissions by all available means, and in securing the cessation of these emissions.

## RESOLUTION AU 1

**Relating to the Establishment of Agreements and Associated Plans for the Broadcasting-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that it is important to make the best possible use of the geostationary-satellite orbit and of the frequency bands allocated to the broadcasting-satellite service;
- b) that the great number of receiving installations using such directional antennae as could be set up for a broadcasting-satellite service may be an obstacle to changing the location of space stations in that service on the geostationary-satellite orbit, from the date of their bringing into use;
- c) that satellite broadcasts may create harmful interference over a large area of the Earth's surface;
- d) that the other services with allocations in the same band need to use the band before the broadcasting-satellite service is set up;

resolves

- 1. that stations in the broadcasting-satellite service shall be established and operated in accordance with agreements and associated plans adopted by World or Regional Administrative Conferences, as the case may be, in which all the administrations concerned and the administrations whose services are liable to be affected may participate;
- [2. that the Administrative Council be requested to examine as soon as possible the question of a World Administrative Conference, and/or Regional Administrative Conferences as required, with a view to fixing suitable dates, places and agenda;] []
- 3. that during the period before the entry into force of such agreements and associated plans the administrations and the IFRB shall apply the procedure contained in Resolution [No. Spa2 - 3]. []

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1 Replaces Resolution No. Spa2 - 2 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971.



## RECOMMENDATION ZG 1

**Relating to the Measures to be taken to prevent  
the Operation of Broadcasting Stations on Board Ships  
or Aircraft outside National Territories**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the operation of broadcasting stations on board ships or aircraft outside national territories is in conflict with the provisions of Nos. 6214/422 and 7439/962 of the Radio Regulations;
- b) that such operation is contrary to the orderly use of the radio frequency spectrum and may result in chaotic conditions;
- c) that the operation of such broadcasting stations may take place outside the jurisdiction of Member countries, thereby making the direct application of national laws difficult;
- d) that a particularly difficult legal situation arises when such broadcasting stations are operated on board ships or aircraft not duly registered in any country;

recommends

- 1. that administrations ask their Governments to study possible means, direct or indirect, to prevent or suspend such operations, and where appropriate, take the necessary action,
- 2. that administrations inform the Secretary-General of the results of these studies and submit any other information which may be of general interest, so that the Secretary-General can inform the Members of the Union accordingly.

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<sup>1</sup> Replaces Recommendation No. 16 of the Administrative Radio Conference, Geneva, 1959.

(MOD)

## RESOLUTION AV 1

Relating to Inter-ship Frequencies in the Bands  
between ~~[1 605]~~ and 3 600 kHz in Region 1

{ }

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that the Master International Frequency Register contains among the initial entries the frequency assignments adopted by the Extraordinary Administrative Radio Conference, Geneva, 1951, made to specific countries for inter-ship communications in the bands between ~~[1 605]~~ and 3 600 kHz in Region 1;

{ }

b) that provisions should be made for the notification and recording of the use of these frequencies for inter-ship communications by administrations of other countries in Region 1;

resolves

1. that the use of the frequencies referred to in a) above by other administrations should be co-ordinated with the administrations concerned, and subsequently notified to the International Frequency Registration Board;

2. that upon such notification the Board shall record these new assignments in the Master International Frequency Register, without any date in Columns 2a or 2b, but with an appropriate note in the Remarks Column followed by the date of receipt of the notice by the Board;

invites administrations

to review the recorded areas of operation of the frequency assignments concerned, with a view to improving sharing possibilities; and

requests the International Frequency Registration Board

to make, where necessary, such suggestions to the administrations concerned as it may be able to offer with a view to achieving the purpose referred to in the immediately preceding paragraph.

<sup>1</sup> Replaces Resolution No. 15 of the Administrative Radio Conference, Geneva, 1959.

(MOD)

RESOLUTION AW 1

**Relating to the Use of Single Sideband Technique  
in the Radiotelephone Maritime Mobile Service Bands  
between {1 605} and 4 000 kHz**

{ }

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) Recommendation No. 28 of the Administrative Radio Conference, Geneva, 1959;
- b) that the World Administrative Radio Conference, Geneva, 1967, decided to require the use of single sideband techniques, except in certain circumstances;
- c) the desirability of replacing double sideband emissions by single sideband emissions as early as possible in the maritime mobile service bands between {1 605} and 4 000 kHz;

{ }

resolves

that, unless otherwise specified in the Final Acts of this Conference, radiotelephone stations in the maritime mobile service operating in the bands between {1 605} and 4 000 kHz shall comply with the following conditions:

{ }

- {1. as from 1 January 1973,} new installations of double sideband equipment in ship stations shall not be permitted, except in the cases covered by Nos. 7945/984, 7948/987 and 6633/1323 of the Radio Regulations; {however, administrations shall endeavour to discontinue the installation of double sideband equipment at the earliest possible date after 1 April 1969;}

{ }

{ }

- { SUP } {2. coast stations shall be capable of single sideband operation at the earliest possible date; furthermore, they shall discontinue double sideband emissions as early as possible, and, in any case, not later than 1 January 1975;}

{ } { }

- 3. until 1 January 1982, coast and ship stations equipped for single sideband operation shall also be equipped to transmit class {A3H} emissions compatible with reception by double sideband equipment. On the carrier frequency 2 182 kHz this requirement with respect to class {A3H} emissions will continue beyond 1 January 1982;

{ }

{ }

1 Replaces Resolution No. Mar 5 of the World Administrative Radio Conference, Geneva, 1967.

4. with the following exceptions, as from 1 January 1982, the use of class {A3A} and {A3J} emissions only shall be authorized: [ ] [ ] [ ]
- class {A3} and {A3H} emissions for ship, survival craft and aircraft stations transmitting with a carrier frequency of 2 182 kHz; [ ] [ ] [ ]
  - class {A3H} emissions for coast stations transmitting with a carrier frequency of 2 182 kHz; [ ]
  - in Regions 1, 3 and in Greenland, in exceptional circumstances, class {A3H} emissions for coast stations sending safety messages on the carrier frequency 2 170.5 kHz; [ ]
  - classes of emission {A2H, A2A and A2J} for coast stations for selective calling on the carrier frequency 2 170.5 kHz; { }
  - the class of emission specified in Appendix 20A to the Radio Regulations for emergency position-indicating radiobeacons (see also No. 6930/1476G of the Radio Regulations);
5. as from 1 January 1982, ship and aircraft stations required to employ single sideband operation on the working frequencies of the maritime mobile service shall use only class {A3H} emissions on the carrier frequency 2 182 kHz. { }

(MOD)

RESOLUTION AX <sup>1</sup>

**Relating to the Manner in which the IFRB shall treat Notifications  
dealing with Frequency Assignments to Oceanographic Stations**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Conference has adopted Resolution **AR**, concerning the establishment of a coordinated worldwide system for the collection of data relating to oceanography; and
- b) that the IFRB requires instructions regarding the notification and registration in the Master International Frequency Register of assignments to oceanographic stations;

resolves

that the IFRB be instructed to accept for registration in the Master International Frequency Register only such notifications, submitted by administrations in accordance with Nos. **4280/486** and **4281/487**, as certain to transmitting and receiving oceanographic stations which are land based and which are in conformity with Resolution **AR**. Such notifications shall be treated by the Board in accordance with No. **4300/505** of the Regulations. These entries in the Master Register shall not prejudice any decisions to be taken by the next Administrative Radio Conference competent to deal with the maritime mobile service.

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<sup>1</sup> Replaces Resolution No. **Mar 19** of the World Administrative Radio Conference, Geneva, 1967.

(MOD)

## RESOLUTION AY 1

**Relating to the Use by all Countries, with equal Rights,  
of Frequency Bands for Space Radiocommunication Services**

The World Administrative Radio Conference, Geneva, 1979,

considering

that all countries have equal rights in the use of both the radio frequencies allocated to various space radiocommunication services and the geostationary satellite orbit for these services;

taking into account

that the radio frequency spectrum and the geostationary satellite orbit are limited natural resources and should be most effectively and economically used;

having in mind

that the use of the allocated frequency bands and fixed positions in the geostationary satellite orbit by individual countries or groups of countries can start at various dates depending on requirements and readiness of technical facilities of countries;

resolves

1. that the registration with the ITU of frequency assignments for space radiocommunication services and their use should not provide any permanent priority for any individual country or groups of countries and should not create an obstacle to the establishment of space systems by other countries;
2. that, accordingly, a country or a group of countries having registered with the ITU frequencies for their space radiocommunication services should take all practicable measures to realize the possibility of the use of new space systems by other countries or groups of countries so desiring;
3. that the provisions contained in paragraphs 1 and 2 of this Resolution should be taken into account by the administrations and the permanent organs of the Union.

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<sup>1</sup> Replaces Resolution No. **Spa2** - 1 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971.

(MOD)

## RESOLUTION AZ 1

**Relating to the Use and Notification of Paired Frequencies  
Reserved for Narrow-Band Direct-Printing Telegraph  
and Data Transmission Systems in the HF Bands allocated  
to the Maritime Mobile Service**

(see Appendix 15A)

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that certain sections of the HF bands allocated to the maritime mobile service have been reserved for narrow-band direct-printing telegraph and data transmission systems for use on a paired frequency basis only;
- b) that the number of paired frequencies in each band is limited;
- c) that although several administrations have systems in operation, the general introduction of such systems is still in the early stages;
- d) that a future competent conference may provide for wider bands for narrow-band direct-printing than those available at present;
- e) that for this reason the World Maritime Administrative Radio Conference, Geneva, 1974, considered it inopportune to draw up a plan at that time but that such a plan might later be rendered necessary by the congested state of channels;
- f) that, however, interim measures have to be taken by administrations and by the IFRB to provide for the orderly introduction of these new paired frequencies;

resolves

- 1. that paired frequencies in the HF bands reserved for narrow-band direct-printing telegraphy between coast stations and ship stations shall be used by these stations, and shall be notified and recorded in the Master International Frequency Register, in the following manner:
  - 1.1 assignments of pairs of frequencies for transmission and reception shall be made solely to coast stations. Ship stations of any nationality shall use by right for their transmissions the receiving frequencies of the coast stations with which they exchange traffic;

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<sup>1</sup> Replaces Resolution No. **Mar2** - 7 of the World Maritime Administrative Radio Conference, Geneva, 1974.

- 1.2 to achieve efficient frequency usage each administration shall choose the pairs of frequencies to be assigned to coast stations according to its requirements, with the assistance of the IFRB;
  - 1.3 the assignments thus selected and brought into service shall be notified to the IFRB on notices as shown in Appendix 1 to the Radio Regulations and administrations shall supply the basic characteristics listed in Section A or B of that Appendix, as appropriate. If the assignments conform to the Table of Frequency Allocations, to the related provisions of the Radio Regulations and to the present Resolution, the Board shall enter them for information in Part 1A of its weekly circular and in the Master Register. No date will be entered in Column 2 of the Master Register and no finding resulting from a technical examination of compatibility with an existing assignment will be issued. However, the date of receipt of the notice by the Board will be entered in Part 1A of the weekly circular and in the Remarks Column of the Master Register. A reference to the present Resolution shall also be entered in the Remarks Column;
  - 1.4 any notice not in conformity with the above-mentioned provisions of the Radio Regulations or with this Resolution shall be returned to the notifying administration by the IFRB, together with any suggestion which the Board may be able to submit in this respect;
  - 1.5 should difficulties arise between countries using the same channel, the matter shall be settled by mutual arrangements between the administrations concerned;
2. that a future competent conference be invited to examine any difficulties which may have arisen in the application of this Resolution and to take a decision, if necessary, on the status to be given to the above-mentioned assignments or on the conditions for drawing up a plan for the bands and systems in question. The entries in the Master Register under this Resolution shall in no way prejudice any decisions which may be taken by the aforementioned conference;
3. that this Resolution shall apply to assignments of paired frequencies for narrow-band direct-printing telegraphy as shown in 1.1 above, notwithstanding any other provisions of the Radio Regulations and existing Resolutions of Administrative Radio Conferences that may conflict with this Resolution.



(MOD)

## RESOLUTION BA 1

**Relating to the Notification of Non-Paired Ship Station  
Frequencies used for Narrow-Band Direct-Printing Telegraph  
and Data Transmission Systems**

(see Appendix 15B)

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that certain sections of the HF bands allocated to the maritime mobile service are reserved for narrow-band direct-printing telegraph and data transmission systems operating on a non-paired frequency basis;
- [ b) that although several administrations have systems in operation, the ] [ ]  
[ general introduction of such systems is still in the early stages;
- c) the World Maritime Administrative Radio Conference, Geneva, 1974, was not in a position to decide the extent to which it was necessary to regulate the orderly use of frequencies for the transmission by ship stations of non-paired direct-printing telegraph signals or on what basis this might be done;
- d) that these questions should be considered by a subsequent competent conference;
- e) that the existing provisions of the Radio Regulations do not provide administrations with appropriate guidance for the period between the coming into force of the Final Acts of the World Maritime Administrative Radio Conference, Geneva, 1974, and the coming into force of those of the conference mentioned in d) above;

resolves

1. that, during the period referred to in e) above, any administration operating or bringing into operation non-paired narrow-band direct-printing telegraph or data transmission systems for ships, shall notify to the International Frequency Registration Board, for recording in the Master International Frequency Register, the frequencies on which ship stations participating in the service will be required to transmit;

---

1 Replaces Resolution No. Mar2 - 8 of the World Maritime Administrative Radio Conference, Geneva, 1974.

2. that these notices concerning frequencies used for reception by coast stations shall not be subject to technical examination by the Board, and that the assignments notified shall be recorded in the Master Register for information only, bearing no date in Column 2, but with a suitable remark in the Remarks Column merely referring to this Resolution;

3. that these entries in the Master Register shall not prejudice any decisions which may be taken by the conference referred to in d) above.

(MOD)

RESOLUTION BB 1

Relating to the Channel Spacing of Frequencies  
allocated to the Maritime Mobile Service  
in the Band [156 - 174] MHz

(see Appendix 18 and Article N57)

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the expanding use of the maritime mobile frequencies in the VHF bands between [156 and 174] MHz;
- b) the increasing demand for VHF channels for port operations;
- c) the increasing demand for VHF channels for public correspondence in the maritime mobile service;
- d) the need for VHF channels for the ship movement service;
- e) the need to provide VHF channels for uses other than radiotelephony, such as facsimile and narrow-band direct-printing telegraphy;
- f) the need to provide VHF channels for communication between helicopters or light aircraft and ships in connection with anti-pollution, search and rescue, ice breaking and the operation of ships;

noting

that, in consequence of the revisions of the Radio Regulations (Geneva, 1959) made by the World Administrative Radio Conference, Geneva, 1967 and the World Maritime Administrative Radio Conference, Geneva, 1974,

- a) the channel spacing for the maritime mobile VHF radiotelephone service is being reduced from 50 kHz to 25 kHz;
- b) additional channels were obtained by interleaving the 25 kHz channels midway between the 50 kHz channels of Appendix 18 to the Radio Regulations, Geneva, 1959, and were numbered from 60 to 88;
- c) the 25 kHz channels should be allocated on an international basis;

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1 Replaces Resolution No. Mar2 - 14 of the World Maritime Administrative Radio Conference, Geneva, 1974.

d) the transition from a channel spacing of 50 kHz to that of 25 kHz was scheduled as follows:

1. date by which modification of transmitters to a maximum deviation of  $\pm 5$  kHz and of receivers to increase the audio gain, where necessary, could commence ..... 1 January 1972
2. date by which the modifications specified in paragraph d) 1 shall have been completed for all existing equipments ..... 1 January 1973
3. date up to which coast stations should have maintained capability to receive transmissions with a maximum deviation of  $\pm 15$  kHz and after which the modification of coast station receivers should have taken place to meet the selectivity requirements for a channel spacing of 25 kHz ..... 1 January 1973
4. date by which all new equipments shall have conformed to 25 kHz standards ..... 1 January 1973
5. date by which all equipments shall conform to 25 kHz standards and all interleaved channels may be generally introduced ..... 1 January 1983

resolves

1. that administrations may, in areas where this is found to be necessary, authorize the use of channels 60 to 88, excluding channels 75 and 76 which were designated as guard-bands for channel 16;
2. that the technical characteristics of equipment for 25 kHz channel spacing in the maritime mobile VHF service shall be in accordance with Appendix 19;
3. that, by 1 January 1983, all equipments shall conform to 25 kHz standards; thereafter, all interleaved channels may be generally introduced.

(MOD)

## RESOLUTION BC 1

**Relating to the Coordination, Notification and Recording  
in the Master International Frequency Register of  
Frequency Assignments to Stations in the  
Broadcasting-Satellite Service in Region 2**

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that a plan will be established for the broadcasting-satellite service in Region 2 in accordance with Recommendation No. Sat - 8; { }

b) that in Region 2 the broadcasting-satellite service should be operated on the basis of the principles contained in Article 12 and Annexes 6 and 7 of these Final Acts; { }

c) that some of the provisions adopted by the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, concerning the broadcasting-satellite service in Regions 1 and 3 may also be applied in Region 2 prior to the entry into force of the plan for that Region to be established pursuant to Recommendation No. Sat - 8; { }

d) that, in the interim period, the procedures described in Resolution No. Spa2 - 3 will continue to apply in Region 2; { }

resolves

1. that an administration intending to bring into use a space station in the broadcasting-satellite service in Region 2 shall, for the purpose of coordination with space systems of other administrations, apply the relevant provisions of Article N11/9A of the Radio Regulations, i.e. Nos. 4100/639AA to 4110/639AI inclusive;

2. that the relevant provisions of Resolution No. Spa2 - 3 shall apply to the coordination, notification and recording of stations in the broadcasting-satellite service in Region 2, wherever a station in the broadcasting-satellite service or the fixed-satellite service in Region 2 is involved; { }

2.1 that an administration notifying a frequency assignment to a space station in the broadcasting-satellite service in Region 2 under paragraph 4.1 of Resolution No. Spa2 - 3 shall also notify a typical receiving earth station; { }

1 Replaces Resolution No. Sat - 5 of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

3. that the coordination, notification and recording procedures for stations in the fixed-satellite service specified in Article 7 of these Final Acts shall also apply to stations in the broadcasting-satellite service in Region 2 with respect to stations in the broadcasting-satellite service for which a frequency assignment appears in the Plan whenever {}

- any portion of the necessary bandwidth of the proposed frequency assignment in Region 2 falls within the necessary bandwidth of a frequency assignment in Region 1 or Region 3, and
- the power flux density which would be produced by the proposed broadcasting-satellite frequency assignment in Region 2 exceeds the value specified in Annex 1; {}

4. that Annex 2 of these Final Acts shall be used in supplying the information referred to in Section B of Resolution No. Spa2 - 3 and Section II of Article 7 of these Final Acts; {}

5. that an individual notice for each frequency assignment shall be drawn up as prescribed in Annex 2 for any frequency assignment notified under paragraph 4.1 of Resolution No. Spa2 - 3 or paragraph 2.1 of this Resolution or Section III of Article 7 of these Final Acts. {}

(MOD)

## RESOLUTION BD 1

**Relating to the Coordination, Notification and Recording  
in the Master International Frequency Register of  
Assignments to Stations in the Fixed-Satellite  
Service with Respect to Stations in the  
Broadcasting-Satellite Service in Region 2**

The World Administrative Radio Conference, Geneva, 1979,

considering

that the Radio Regulations contain no provisions governing the coordination, notification or recording in the Master International Frequency Register of frequency assignments to stations in the fixed-satellite service in the band 11.7 - 12.2 GHz with respect to stations in the broadcasting-satellite service in Region 2;

resolves

that the provisions of Articles N11 and N13/9A of the Radio Regulations shall be applied in such cases until the matter is considered by a competent administrative radio conference.

---

1 Replaces Resolution No. Sat - 6 of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.

(MOD)

## RESOLUTION BE 1

**Relating to the Submission of Requirements  
for the Broadcasting-Satellite Service in Region 2**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the decision taken by the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, that an administrative radio conference for Region 2 should be held ~~[not later than 1982;]~~ [ ]
- b) that the said regional administrative radio conference is to draw up a detailed plan for the orbit spectrum resource available for the broadcasting-satellite services in the frequency band ~~[11.7 - 12.2]~~ GHz, taking into account the need to make equitable provision for the requirements of the other services to which this frequency band is also allocated in Region 2; [ ]
- c) that the plan is to provide for the detailed assignment of the orbital positions and frequency channels available, ensuring that the broadcasting-satellite service requirements of the various administrations are met in an equitable manner satisfactory to all the countries concerned;

invites the IFRB

1. to request all administrations in Region 2 to submit their broadcasting-satellite service requirements to the IFRB not later than one year before the start of the said regional administrative radio conference. These requirements are understood to include the number and boundaries of service areas and the number of channels requested for each of them. They may be updated as required by each administration;
2. to remind administrations, by means of a circular letter and/or telegram six months before the above deadline for submitting requirements, of the need to submit them;
3. to assemble the information submitted by administrations in a form permitting a comparative study thereof and to communicate it to the Secretary-General for publication and despatch to administrations not later than nine months prior to the said regional administrative radio conference.

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1 Replaces Resolution No. Sat - 9 of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977.



(MOD)

## RESOLUTION BF 1

**Relating to the Unauthorized Use of Frequencies  
in the Bands Allocated to the Aeronautical Mobile (R) Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that monitoring observations of the use of the frequencies in the bands between {2 850 and 17 970} kHz allocated exclusively to the aeronautical mobile (R) service show that a number of frequencies in these bands are still being used by stations of services other than the aeronautical mobile (R) service, notably by high-powered broadcasting stations, some of which are operating in contravention of No. 6214/422 of the Radio Regulations;

b) that these stations are causing harmful interference to the aeronautical mobile (R) service and that a considerable number of emissions, the sources of which could not be positively identified, have been observed in these bands;

c) that radio is the sole means of communication available to the aeronautical mobile (R) service and that this service is a safety service;

considering, in particular

d) that it is of paramount importance that channels directly concerned with the safe and regular conduct of aircraft operations be kept free from harmful interference, since they are essential for the protection of the safety of life and property;

resolves to urge administrations

1. to ensure that stations of services other than the aeronautical mobile (R) service refrain from using frequencies allocated to this service other than under the conditions specified in Nos. 3279/115 and 3919/415 of the Radio Regulations;

2. a) to make every effort to identify and locate the source of any unauthorized emission capable of causing harmful interference to the aeronautical mobile (R) service, thereby endangering this safety service;

b) and to communicate their findings to the IFRB;

---

1 Replaces Resolution No. Aer2 - 2 of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978.

3. to participate in the monitoring programmes that the IFRB may organize pursuant to this Resolution;

4. to request their governments to enact such legislation as is necessary to prevent stations located on board aircraft operating in contravention of No. 6214/422 of the Radio Regulations;

requests the IFRB

1. to continue to organize monitoring programmes in the bands exclusively allocated to the aeronautical mobile (R) service with a view to eliminating the emissions of {out-of-band stations} which cause, or are likely to cause, harmful { } interference to the aeronautical mobile (R) service;

2. to take steps to eliminate the emissions of {out-of-band stations} which { } cause, or are likely to cause, harmful interference to the aeronautical mobile (R) service;

3. to seek, as appropriate, the cooperation of administrations in identifying the sources of {out-of-band emissions} by all available means, and in { } securing the cessation of these emissions.

(MOD)

## RESOLUTION BG 1

**Relating to the Implementation of the New Arrangement  
Applicable to Bands Allocated Exclusively to  
the Aeronautical Mobile (R) Service between  
{2 850 and 17 970 kHz}**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the use of each of the frequency bands between {2 850 and 17 970} kHz allocated exclusively to the aeronautical mobile (R) service by the Administrative Radio Conference, Geneva, 1959, was modified by the Extraordinary Administrative Radio Conference, Geneva, 1966;
- b) that the 1966 Conference resolved that administrations shall effect, as soon as possible, a progressive conversion of their radiocommunications in the aeronautical mobile (R) service from double-sideband to single-sideband operation, in consequence of which the use of the above bands has been further modified by the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978 to provide for SSB techniques;
- c) that a considerable number of frequency assignments of both aircraft and aeronautical stations will be transferred from existing frequencies to the new frequencies and channels designated by that Conference;
- d) that changes in frequency assignments should be made as soon as possible so that the advantages of the new channels designated by that Conference may be realized at the earliest opportunity;
- e) that the transfer of assignments should be made with the least possible disruption of the service rendered by each station;
- f) that the transfer of assignments should be made so as to avoid harmful interference between the stations involved during the implementation period;
- e) that the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978 entered into force on 1 September 1979;
- h) that the new Frequency Allotment Plan contained in Appendix 27 Aer2 will enter into force on 1 February 1983;

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<sup>1</sup> Replaces Resolution No. Aer2 - 3 of the World Administrative radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978.

recognizing

- a) that the aeronautical mobile (R) service is primarily a safety service;
- b) that some frequencies have been allotted for worldwide use;
- c) that the implementation of the decisions made by the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978, relating to the new arrangement of the frequency bands allocated to the aeronautical mobile (R) service between [2 850 and 17 970] kHz should follow an orderly procedure for the transfer of existing services from the old to the new assignments; [3]

resolves

- 1. that between the entry into force of the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978, on 1 September 1979 and the entry into force of the new Frequency Allotment Plan contained in Appendix 27 Aer2 on 1 February 1983, channel utilization for any new SSB operation shall be in accordance with the following provisions:
  - 1.1 the carrier (reference) frequency of the single-sideband channel in the upper half of the previous double-sideband channel shall be the same as the carrier (reference) frequency of that channel;
  - 1.2 the carrier (reference) frequency of the single-sideband channel in the lower half of the previous double-sideband channel shall be 3 kHz lower than the carrier (reference) frequency of that channel;
  - 1.3 that, prior to 1 February 1983, aeronautical and aircraft stations fitted with single-sideband equipment may employ either half of the previous double-sideband channel (the single-sideband carrier (reference) frequency being that in 1.1 and 1.2 above);
  - 1.4 channels in the new Plan may be used by any administration provided that no harmful interference occurs to users of channels in the present Plan. For the operational use of the channels concerned administrations should take into account the provisions of No 27/20 of Appendix 27 Aer2 to the Radio Regulations;
- 2. that on 1 February 1983, the frequencies appearing in Appendix 27 to the Radio Regulations, shall be replaced by the frequencies appearing in Part II, Section II, Article 2, Appendix 27 Aer2;

3. that administrations take all the necessary measures with a view to converting to single-sideband operation as soon as possible by not permitting the installation of new double-sideband equipment as from 1 April 1981. Aircraft and aeronautical stations shall be capable of single-sideband operation at the earliest possible date; furthermore, they shall discontinue double-sideband emissions as early as possible, and, in any event, not later than 1 February 1983;

4. that, until 1 February 1983, aeronautical and aircraft stations equipped for single-sideband operation shall also be equipped to transmit class **[A3H]** emissions where required to be compatible with reception by double-sideband equipment; **[ ]**

5. that, unless otherwise specified in the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978, the use of classes of emissions **[A2H, A3J, A7J and A9J]** only shall be authorized as of 1 February 1983. Double-sideband operations may, however, be continued for domestic use until 1 February 1987 provided this operation is conducted in accordance with Nos. 3242/667 and 3249/674 of the Radio Regulations and that no harmful interference is caused to the international aeronautical mobile (R) service operating in the single-sideband mode. Administrations requiring such an extension of the period of full implementation of single-sideband operations are nevertheless, urged to cease double-sideband operations as soon as possible.

(MOD)

## RESOLUTION BH 1

Relating to the Treatment of Notices Concerning Frequency  
Assignments to Aeronautical Stations in the Bands Allocated  
Exclusively to the Aeronautical Mobile (R) Service  
between [2 850 and 17 970] kHz

13

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978, entered into force on 1 September 1979;
- b) that the new Frequency Allotment Plan contained in Appendix 27 Aer2 will enter into force at 00.01 hours UTC on 1 February 1983;
- c) that some administrations may wish to implement certain provisions of the new Frequency Allotment Plan in advance of the latter date when this may be done without causing harmful interference to stations operating in accordance with the present Frequency Allotment Plan;
- d) that it will therefore be necessary to provide an interim procedure to facilitate transition from the existing Frequency Allotment Plan to the new Frequency Allotment Plan:

resolves

- 1. that during the interim period between the date of entry into force of those Final Acts and the date of entry into force of the new Frequency Allotment Plan:
  - 1.1 the provisions of Nos. 4352/553 to 4357/558 of the Radio Regulations shall continue to be applied in the examination of notices concerning frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the allotments of the existing Plan;
  - 1.2 all such assignments shall be recorded in the Master International Frequency Register in accordance with the findings reached by the IFRB;

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<sup>1</sup> Replaces Resolution No. Aer2 - 4 of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978.

1.3 frequency assignments in a channel of the new Plan shall be examined by the IFRB in order to determine whether the protection specified in Appendix 27 **Aer2** (Part I, Section IIA, paragraph 5) is afforded to the allotments in the existing Plan. In so doing the Board shall assume that the frequency will be used in accordance with the sharing conditions between areas specified in Appendix 27 **Aer2**, Part I, Section IIB, paragraph 4;

1.4 all such assignments mentioned in paragraph 1.3 having received a favourable finding shall be recorded in the Master International Frequency Register;

1.5 the date to be entered in Column 2a or 2b of the Master International Frequency Register shall be as follows:

a) if the finding is favourable with respect to Nos. 4353/554 to 4356/557, the date of 29 April 1966 shall be entered in Column 2a;

b) if the finding is favourable with respect to No. 4357/558, the date of 29 April 1966 shall be entered in Column 2b;

c) for all other assignments (including those which may be in conformity with the new Frequency Allotment Plan but not in conformity with the present Frequency Allotment Plan) the date of receipt of the notice by the IFRB shall be entered in Column 2b;

1.6 any assignment which is in accordance with the new Frequency Allotment Plan shall be so indicated by the insertion by the IFRB of an appropriate symbol in the Remarks Column of the Master International Frequency Register;

2. that on the date of the entry into force of the new Frequency Allotment Plan, the IFRB shall examine those frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the bands allocated exclusively to that service between [2 850 and 17 970 kHz] which are contained in the Master International Frequency Register from the point of view of their conformity with the new Frequency Allotment Plan, following the relevant parts of the procedure described in Nos. 4352/553 to 4357/558 of the Radio Regulations and shall record against them in the Master International Frequency Register a date in Column 2a or 2b as follows: { }

2.1 assignments with double-sideband emissions [(A3)] already appearing in the Master Register on the date of the entry into force of the new Frequency Allotment Plan shall retain the date recorded in Column 2a or 2b, as appropriate, until 1 February 1983. A date in Column 2a for a frequency assignment using double-sideband emissions [(A3)] shall be transferred to Column 2b on 2 February 1983. On 1 January 1987 the IFRB shall review the entries and, in consultation with the administrations concerned, cancel those entries which are no longer in use, retaining the others for information only, without a date in Column 2b; { }

2.2 assignments found favourable with respect to Nos. 4352A/553A to 4356/557 shall have the date of 5 March 1978 entered in Column 2a;

2.3 assignments found favourable with respect to Nos. 4352A/553A and 4357/558 shall have the date of 5 March 1978 entered in Column 2b;

2.4 all other assignments shall have the date of 6 March 1978 entered in Column 2b;

3. that, on the date of the entry into force of the new Frequency Allotment Plan, the allotments contained therein shall replace in the Master International Frequency Register the allotments appearing in the existing Frequency Allotment Plan;

invites

administrations to notify to the IFRB as soon as possible the cancellation of frequency assignments released as a consequence of bringing into use the allotments in the new Plan.



B.25-32

(MOD)

## RESOLUTION BI 1

Relating to the Implementation of the Frequency  
Allotment Plan in the Bands Allocated  
Exclusively to the Aeronautical Mobile (R) Service  
Between [ 2 850 and 17 970 kHz ]

{ }

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that the bands allocated exclusively to the aeronautical mobile (R) service between [ 2 850 and 17 970 ] kHz by the Administrative Radio Conference, Geneva, 1959, were modified by the Extraordinary Administrative Radio Conference, Geneva, 1966;

{ }

b) that the Extraordinary Administrative Radio Conference, Geneva, 1966, established procedures to be followed by administrations relating to the implementation of the modifications;

c) that the necessary arrangements were made for the IFRB to carry out these procedures;

recognizing

a) that the aeronautical mobile (R) service is primarily a safety service;

b) that the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978 further modified the said bands to provide for single-sideband techniques;

c) that there is a need for all administrations to implement the modifications made by that Conference with a view to avoiding any harmful interference to the services rendered by stations operating in accordance with the Radio Regulations;

resolves

1. that, not later than ninety days before the entry into force of the new Plan, administrations shall notify the IFRB of the modifications necessary to bring the assignments existing in the Master Register into conformity with this Plan;

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1 Replaces Resolution No. Aer2 - 5 of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978.

2. that the assignments existing in the Master Register on 1 February 1983 which are not in conformity with the decisions of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978 on that date shall be treated as follows:

2.1 within thirty days from 1 February 1983, the IFRB will send relevant extracts from the Master Register to the administrations concerned advising them that, in accordance with the terms of the present Resolution, the assignments in question are to be transferred to the appropriate frequencies within a period of one hundred and eighty days after the dispatch of the extracts;

2.2 if an administration fails to notify the IFRB of the transfer within the prescribed period, the original entry will be retained in the Master Register without a date in Column 2 and with a suitable remark in the Remarks Column. The administrations will be advised of this action;

3. that, if an administration so desires, the IFRB will provide it with all necessary assistance. In so doing, the IFRB will apply the provisions of Nos. 4462/629 to 4466/633 of the Radio Regulations.

(MOD)

## RECOMMENDATION ZH 1

**Relating to Technical Provisions for Maritime Radiobeacons  
in the African Area**

The World Administrative Radio Conference, Geneva, 1979,

considering

the need to facilitate the planning for new maritime radiobeacons in the band [285 - 315]kHz particularly in the neighbouring localities of the European and African areas; {}

recommends

that the administrations of the countries of the African area adopt provisions similar to those contained in the "Regional Arrangement for Maritime Radiobeacons in the European Area of Region 1", Paris, 1951.

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<sup>1</sup> Replaces Recommendation No. 21 of the Administrative Radio Conference, Geneva, 1959.

(MOD)

## RECOMMENDATION ZI 1

Relating to the Examination by World Administrative Radio  
Conferences of the Situation with Regard to Occupation  
of the Frequency Spectrum in Space Radiocommunications

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the frequency bands available for space applications are limited in number and size;
- b) that the possible positions for a satellite whose main purpose is to establish telecommunication links are limited in number and that certain positions are more favourable than others for certain links;
- c) that all administrations should be enabled to establish the space links which they deem necessary;
- d) that the scale and cost of space networks or systems are such that their operation and development must be hindered as little as possible;
- e) that technology is steadily and rapidly evolving and that the best possible use should be made of resources in space radiocommunications;
- f) that administrations should ensure that frequency assignments for space applications are utilized in the most efficient manner possible consistent with developing technology and that such assignments are relinquished when no longer in use;
- g) that despite the provisions of Article N11/9A of the Radio Regulations and the principles adopted by the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971, which provide for full consultation and coordination between administrations with a view to the optimum accommodation of all space systems, it is possible that as the use of frequencies and orbital positions increases, administrations may encounter undue difficulty in one or more frequency bands in meeting their requirements for space radiocommunication;

<sup>1</sup> Replaces Recommendation No. **Spa2** - 1 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971.

recommends

that the next appropriate World Administrative Radio Conference be empowered to deal with the situation described in Considering g), if it arises;

invites

the Administrative Council, in the event of such a situation arising, to include in the agenda for the next appropriate World Administrative Radio Conference specific provisions enabling it to examine all aspects of the use of the frequency band(s) concerned including, inter alia, the relevant frequency assignments recorded in the Master International Frequency Register and to find a solution to the problem.

(MOD)

## RECOMMENDATION ZJ 1

**Relating to Cooperation in the Efficient Use  
of Worldwide Frequencies in the Aeronautical Mobile (R) Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the need to make the most efficient use of worldwide frequencies in the aeronautical mobile (R) service;
- b) that a plan has been adopted for the allotment by areas of worldwide frequencies in the aeronautical mobile (R) service;
- c) the desirability of coordination between administrations within the areas to which the Allotment Plan applies;
- d) the right of an administration to select and notify to the IFRB for recording in the Master International Frequency Register any frequency assignment in a channel allotted to the area in which its country is located;
- e) the role played by the IFRB in regulatory procedures under Article N12/9 of the Radio Regulations;
- f) the role played by the International Civil Aviation Organization in the field of international aeronautical operations;

invites

1. administrations within a worldwide allotment area, as they consider it appropriate, and the ICAO, to seek the advice of the IFRB in determining the best choice of frequencies from a technical viewpoint in order to make the most efficient use of aeronautical mobile (R) worldwide frequencies;
2. administrations within a worldwide allotment area, as they consider it appropriate, to coordinate mutually the use of these frequencies from the viewpoint of aeronautical operations and, in this connection, to bear in mind the benefit that could be gained by obtaining the advice of ICAO in this process;

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1 Replaces Recommendation No. Aer2 - 3 of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978.

B.25-38

3. the IFRB to assist any administration or group of administrations in a worldwide allotment area wishing to coordinate their requirements for worldwide frequencies and to continue its cooperation with ICAO for this purpose;

requests

the Secretary-General to bring this Recommendation to the attention of the International Civil Aviation Organization.

(MOD)

## RECOMMENDATION ZK 1

Relating to the Transition from the Present to  
the New Frequency Allotment Plan in the  
Bands Allocated Exclusively to the  
Aeronautical Mobile (R) Service between  
[2 850 and 17 970 kHz]

{ }

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978, entered into force on 1 September 1979;
- b) that the new Frequency Allotment Plan contained in Appendix 27 Aer2 will enter into force at 00.001 hours UTC on 1 February 1983;
- c) that some administrations may wish to implement certain provisions of the new Frequency Allotment Plan in advance of the latter date when this may be done without causing harmful interference to stations working in accordance with the present Frequency Allotment Plan;
- d) that, following the Extraordinary Administrative Radio Conference, Geneva, 1966, the International Civil Aviation Organization (ICAO), under the provisions of No. 27/20 of Appendix 27 and within the spirit and framework of Resolution [No. Aer 6] of that Conference, developed a transition programme for the aeronautical mobile (R) service to convert the Frequency Allotment Plan in Appendix-26 to that in Appendix 27, { }
- e) that the ICAO transition programme was subsequently provided to the International Frequency Registration Board for distribution to ITU Member administrations; { }
- f) that it will be useful again to adopt a programme to facilitate transition from the existing to the new Frequency Allotment Plan;

1 Replaces Recommendation No. Aer2 - 4 of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978.



B.25-40

recommends

1. that the International Civil Aviation Organization be invited to develop a transition programme, within the framework of Appendix 27 Aer2, for the operational use by aeronautical stations of the frequencies contained in the Frequency Allotment Plan except for those Regional and Domestic Air Route Areas which are not involved in international operations;
2. that the International Civil Aviation Organization be invited to forward the transition programme for the new Frequency Allotment Plan to the International Frequency Registration Board for distribution to administrations;
3. that administrations implement the provisions of the transition programme in coordination with ICAO and in conformity with the principles set forth in No. 27/20 of Appendix 27 Aer2;

requests

the Secretary-General to bring this Recommendation to the attention of the International Civil Aviation Organization.

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 775-E

20 November 1979

Original : English

## PLENARY MEETING

### TWENTYTHIRD REPORT OF COMMITTEE 4

Committee 4 has unanimously decided to modify Recommendation No. Spa2 - 15.

The amended text has been sent to the Editorial Committee for subsequent submission to the Plenary Meeting (see Document No. 776).

N. MORISHIMA  
Chairman of Committee 4



A N N E X

RECOMMENDATION No. Spa2 - 15

**To the CCIR and to Administrations relating to Frequency Bands  
shared between Space Radiocommunication Services and between  
Space and Terrestrial Radiocommunication Services**

(MOD) The World Administrative Radio Conference, Geneva, 1979,  
recognizing

MOD a) the value to the Conference of the material contained in  
the Report of the CCIR Special Preparatory Meeting, Geneva, 1979;

MOD b) that further studies on a wide range of problems dealing with  
space radiocommunications form the subject of CCIR Questions and  
Study Programmes approved by the XIVth Plenary Assembly;

considering however

a) that certain CCIR Recommendations, listed below, call for further  
work and study:

MOD Recommendation 355-2 "Frequency sharing between systems in the  
fixed-satellite service and terrestrial radio services in  
the same frequency bands"

MOD Recommendation 465-1 "Reference earth station radiation pattern for  
use in coordination and interference assessment in  
the frequency range from 2 to about 10 GHz"

MOD Recommendation 466-2 "Maximum permissible level of interference  
in a telephone channel of a geostationary  
satellite network in the fixed-satellite service  
employing frequency modulation with  
frequency-division multiplex, caused by other  
networks of this service"



MOD b) that as a result of the deliberations of this Conference, particularly in relation to the provisions of Articles **N25**, **N26** and **N27**, and to other relevant Articles of the Radio Regulations, further information is required to reply to the following current Questions and Study Programmes of the CCIR:

MOD Question 1-2/4 "Antennae for systems in the fixed-satellite service"

MOD Question 2-3/4 "Technical characteristics of systems in the fixed-satellite service"

MOD Study Programme 2A-3/4 "Feasibility of frequency sharing between systems in the fixed-satellite service and terrestrial services"

SUP Study Programme 2C-1/4

MOD Study Programme 2J-2/4 "Technical factors influencing the efficiency of use of the geostationary-satellite orbit by radiocommunication satellite networks sharing frequency bands allocated to the fixed-satellite service"

SUP c)

SUP d)

e) that it would be useful to have specific numerical values of power flux density from space stations of the broadcasting-satellite service which would permit differentiation between "individual reception" and "community reception" in the broadcasting-satellite service;

f) that frequency sharing between the radionavigation service and the fixed-satellite service (earth-to-space) has been adopted in the frequency band 14.0 to 14.3 GHz, and between the radionavigation-satellite service and the fixed-satellite service (earth-to-space) in the frequency band 14.3 to 14.4 GHz;

recommends

1. that administrations, recognized private operating agencies, and other participants in the work of the CCIR, consider as a matter of priority, the submission of contributions on these subjects, so that draft Recommendations on them can be prepared at the meetings of the relevant Study Groups for consideration by the Plenary Assembly of the CCIR;

2. that the CCIR study or, as appropriate, continue to study:

2.1 the reference antenna patterns for earth station antennae, which may be appropriate for setting minimum standards of performance with a view to recommending specific patterns for this purpose, in order to improve utilization of the bands shared between the fixed-satellite service and terrestrial radiocommunication services, and of the bands shared by space radiocommunication services, and to improve the utilization of the geostationary satellite orbit;

2.2 the reference antenna patterns for satellite antennae, which may be appropriate for setting minimum standards of performance, particularly outside the main beam, in order to improve the utilization of the geostationary satellite orbit and to increase the possibilities for frequency re-use;

2.3 the reference cross-polarization antenna patterns which may be appropriate for setting minimum standards of performance and, in this connection, further study:

2.3.1 the portions of the spectrum within which linear-orthogonal or circular-orthogonal polarizations might be most appropriate;

2.3.2 the relative desirability, taking into account technical and orbit utilization factors, of using orthogonal polarizations within a single satellite as against with two satellites;

2.4 the necessary limitation of spurious emissions and the frequency tolerances to be observed in both the terrestrial and space radiocommunication services insofar as they may affect sharing of frequency bands;

2.5 the criteria of permissible interference for the various space radiocommunication services and terrestrial radiocommunication services sharing the frequency bands allocated by the present Conference, in order to permit the determination of:

2.5.1 the coordination distance and the probability of interference between stations within that distance;

2.5.2 the necessary limits of power flux density set up at the Earth's surface by space stations;

2.6 the maximum permissible level of interference into a geostationary satellite link from any other single interfering geostationary satellite network and from the aggregate of all other geostationary satellite networks, particularly in the case of:

2.6.1 frequency-modulated telephony signals;

2.6.2 frequency-modulated television signals;

2.6.3 digitally-modulated signals

and the most appropriate manner in which permissible interference should be specified in these and other cases;

2.7 the interference criteria applicable to frequency sharing between non-geostationary satellite networks and geostationary satellite networks;

2.8 the possibility of establishing a technical criterion for expressing the efficiency of use of the geostationary satellite orbit;

2.9 the possibility of improving and simplifying the method of determining the coordination area as described in Appendix 28 to the Radio Regulations;

MOD

2.10 the conditions for frequency sharing in those bands allocated to the broadcasting-satellite service by the present Conference with a view to issuing appropriate Recommendations as soon as possible so that administrations and the International Frequency Registration Board shall have the necessary technical data required to carry out examination procedures, in particular regarding Articles N11, N12 and N13 of the Radio Regulations and those in Resolution No. [Spa2 - 3];

SUP

2.11

SUP

2.12

2.13 the power flux densities required for individual and community reception in the broadcasting-satellite service, with a view to specifying numerical values which will differentiate between these types of reception;

2.14 the criteria for frequency sharing between the radionavigation service and the fixed-satellite service (earth-to-space) in the frequency band 14.0 to 14.3 GHz and between the radionavigation-satellite service and the fixed-satellite service (earth-to-space) in the frequency band 14.3 to 14.4 GHz.

[ ]

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 777-E

20 November 1979

Original : English

PLENARY MEETING

Indonesia, Malaysia, the Philippines, Singapore and Thailand

## PROPOSAL FOR THE WORK OF THE CONFERENCE

ADD 3643A

Additional allocation : in Indonesia, Malaysia, the Philippines, Singapore and Thailand, the band 435 - 438 MHz is also allocated to the mobile (except aeronautical mobile) service on a primary basis.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 778-E

20 November 1979

Original : English  
French

## PLENARY MEETING

### MINUTES

### OF THE

### SECOND PLENARY MEETING

Thursday, 8 November 1979, at 1400 hrs

Chairman : Mr. Roberto J.P. SEVERINI (Argentine Republic)

#### Subjects discussed :

#### Document No.

1.	Agenda of the meeting	-
2.	Approval of the Minutes of the First Plenary Meeting	196
3.	First series of texts submitted for first reading (B.1)	424 + Corr.1
4.	Second series of texts submitted for first reading (B.2)	433 + Corr.1
5.	Third series of texts submitted for first reading (B.3)	443 + Corr.1
6.	Fourth series of texts submitted for first reading (B.4)	457
7.	Fifth series of texts submitted for first reading (B.5)	466
8.	Sixth series of texts submitted for first reading (B.6)	491
9.	Seventh series of texts submitted for first reading (B.7)	511
10.	Oral reports by the Chairmen of Committees 2 to 8	-
11.	Statement by the delegate of Greece	-
12.	Statement and addresses : Minister of PTT of the Republic of the Ivory Coast Observer for UNESCO Observer for WHO	-





1. Agenda of the meeting

1.1 The Chairman, referring to the examination of texts submitted by the Editorial Committee, said that presumably points of substance had already been adequately considered in Committee and should not take up the time of the Plenary. Drafting amendments in writing should be handed in to the Chairman of the Editorial Committee.

1.2 The delegate of Algeria pointed out that points of substance which arose would nevertheless have to be discussed in Plenary.

As the Conference was now in its seventh week he considered it would be useful if the Chairmen of Committees could present progress reports to the Plenary.

The delegates of Jordan and Iraq agreed with that suggestion.

1.3 The Chairman of the Editorial Committee, supported by the delegate of Brazil, the Vice-Chairman of the Editorial Committee and the Coordinator of Committees, 4, 5 and 6 considered that the Plenary should first deal with the texts submitted to it for first reading and the Committee Chairmen could make progress reports, if time was available.

It was so agreed.

2. Approval of the Minutes of the First Plenary Meeting (Document No. 196)

The minutes of the first meeting were approved.

3. First series of texts submitted for first reading (B.1) (Document No. 424 and Corr.1)

3.1 The Chairman of the Editorial Committee explained that in some cases wording which was still under discussion in Committee had been placed in square brackets. Once the Plenary had reached a conclusion the final wording would be inserted in the texts submitted for second reading. In Committees 4, 5 and 7 amendments had been submitted to some of the terms in Article 1 which were to be examined by the Coordination Group of which Mr. Kieffer was Chairman. When approved the square brackets would be removed. Frequency band limits had also been placed in square brackets pending a decision by Committee 5 as well as symbols designating emissions. Once Article N3 had been approved in Plenary the new symbols would be inserted in the text. He hoped that the Plenary would approve the proposal by the CCIR in Document No. 5 to replace the expression GMT by UTC. The Corrigendum to Document No. 424 had been drawn up in consultation with Group 6B and should meet the points raised in Committee 6.

Finally, some minor drafting changes to achieve concordance between the English, French and Spanish texts had been made which did not affect the substance.

3.1.1 The Chairman of Committee 4 said that the names of space radiocommunication services should be in square brackets, particularly in Article N25.

3.1.2 The Chairman of Committee 6 stated that Committee 6 had unanimously decided to adopt the term UTC as recommended by the CCIR.

It was decided to replace the term GMT by the term UTC.

The Chairman invited the meeting to consider Document No. 424 and Corrigendum 1 paragraph by paragraph.

3.2 NOC 3242, NOC 3243

Approved.

3.3 MOD 3244

3.3.1 The Chairman of the Editorial Committee said that the square brackets would need to be retained pending a decision on certain definitions by the Coordination Group.

3.3.2 The delegate of Cameroon thought that when there was unanimous agreement on wording in a Committee the square brackets could be removed.

3.3.3 The delegate of Italy considered that the word "latter" should be substituted for the word "receiving" in the last line of the paragraph to make the meaning clear.

3.3.4 The Chairman of Committee 4, supported by the Chairman of the Editorial Committee, strongly endorsed the suggestion, as the reference was to transmitting and receiving equipment.

3.3.5 The delegate of the USSR, supported by the delegates of Argentina and Mexico, said that the Plenary should not engage in protracted discussions on wording in square brackets but come quickly to a decision so that the final wording could be inserted by the Editorial Committee.

3.3.6 The delegate of Iraq drew attention to the provisions of No. 527 of the Malaga-Torremolinos Convention according to which an Editorial Committee was charged with perfecting the form of texts submitted to it without altering the sense. In MOD 3244, however, the substance had been modified. The attention of the Plenary must be drawn to all such cases.

3.3.7 The Chairman of the Editorial Committee said that his Committee had had no intention of altering the substance of texts submitted to it and had made changes of form in order to render the meaning more intelligible to readers whose mother tongue was not English, French or Spanish.

3.3.8 The delegate of Denmark, supported by the delegate of Switzerland, proposed that the text of MOD 3244 be referred back to Committee 4 in the light of the point raised by the delegate of Italy.

It was so agreed.

3.4 MOD 3245

3.4.1 The delegate of Italy observed that frequency sharing was not a signal processing method.

3.4.2 The delegate of the United States of America said the point could be met if the words "and other" were inserted after the words "signal processing".

3.4.3 The delegate of Denmark, supported by the Chairman of Committee 4 and the delegates of the United Kingdom and Yugoslavia, was in favour of deleting the words "frequency sharing" which was not a technical characteristic, the subject of Article N4/12.

3.4.4 The delegate of Syria considered that the whole of the last sentence should be dropped.

It was agreed to delete the words "frequency sharing" in MOD 3245.

3.4.5 The delegate of Iran proposed that practical and economic considerations be specified in respect of equipment to be used in a station.

The proposal was rejected in view of the lack of support.

MOD 3245, as amended, was approved.

3.5 NOC 3246

Approved.

3.6 MOD 3247 and ADD 3247A

3.6.1 The delegate of Canada said that the word "permissible" should be changed to "permitted" in both paragraphs.

It was so agreed.

3.6.2 The delegate of Venezuela said that "admisibles" in the Spanish text should be changed to "permitidos" or "permisibles" to bring the paragraphs into line with the English text.

It was so agreed.

MOD 3247 and ADD 3247A, as amended, were approved.

3.7 MOD 3248, MOD 3249, ADD 3249A, ADD 3249B, ADD 3249C

Approved.

3.8 MOD 3250

3.8.1 The delegate of India said that his Administration felt that as a general principle it was not appropriate for CCIR Recommendations to have mandatory status anywhere in the Radio Regulations; he therefore suggested that the words "as far as is practicable" should be placed between the words "shall" and "be" in the same sentence.

The delegate of Spain supported that proposal.

It was so agreed.

MOD 3250, as amended, was approved.

3.9 MOD 3251

Approved.

3.10 3252 to 3276 - NOT allocated

3.11 Article N25 : Section I, (MOD) 6001, MOD 6002, NOC 6002.1, NOC 6002.2

Approved.

3.12 MOD 6003

3.12.1 The delegate of India proposed that the figure 15 GHz be placed in square brackets until such time as Committee 5 had reached a decision in respect of the upper limit of the frequency bands.

It was so agreed.

MOD 6003, as amended, was approved.

3.13 NOC 6003.1, NOC 6003.2

Approved.

3.14 MOD 6004

3.14.1 The delegate of India proposed that square brackets be placed around the figure 15 GHz as in the preceding provision.

It was so agreed.

MOD 6004, as amended, was approved.

3.15 ADD 6004.1

3.15.1 The Chairman of Committee 6 drew attention to a typing error in the French text only; "CCIT" should read "CCIR".

ADD 6004.1 was approved.

3.16 Section II

MOD 6005, MOD 6006, MOD 6006.1, NOC 6007, NOC 6008, MOD 6009 and ADD 6009.1

Approved.

3.17 MOD 6010

3.17.1 The delegate of Kenya said that in view of the possible revision of the Table, he assumed that the footnotes relating to 6010 and 6009 would also be included in square brackets.

3.17.2 The Chairman of the Editorial Committee said that the matter would be taken into account when the documents were prepared for second reading.

MOD 6010 was approved.

3.18 ADD 6010.1

Approved.

3.19 MOD 6011

3.19.1 The Chairman of Committee 4 observed that the square brackets should be retained pending a decision on the Frequency Allocation Table.

MOD 6011 was approved.

3.20 ADD 6011.1

Approved.

3.21 6012 to 6036 - NOT allocated

3.22 RECOMMENDATION A

The Chairman of the Editorial Committee suggested that since Committee 6 intended to reconsider the Recommendation, and would probably convert it into a Resolution, Recommendation A should not be considered for the time being.

It was so agreed.

3.23 Article N9/8, Title, ADD Section I, NOC 3951 and NOC 3592

Approved.

3.24 MOD 3953 (Corr.1, Document No. 424)

3.24.1 The delegate of Roumania said that he would prefer to see the words "les fiches de notification", which appeared in Document No. 424, retained in the final version.

It was agreed that the matter should be left to the Editorial Committee.

3.24.2 The delegate of Venezuela asked whether the IFRB would automatically publish information concerning associated orbital locations of geostationary satellites with its Frequency Lists.

3.24.3 The Chairman of Committee 6 said that the provision dealt only with the recording of information contained in frequency assignment notices. Information about associated orbital locations of geostationary satellites would be included in the published lists when notified.

MOD 3953 was approved.

3.25 ADD 3953A (Corr.1 to Document No. 424)

Approved.

3.26 NOC 3954, NOC 3955, NOC 3956, NOC 3957, NOC 3958, NOC 3959, NOC 3960, ADD 3960A, ADD 3960A1, NOC 3961, MOD 3962, NOC 3963, ADD 3963A, ADD 3963B, SUP 3964 and MOD 3965

Approved.

3.27 3966 to 3990 - NOT allocated

3.28 SUP Article N10/11

Approved.

3.29 ADD Section II

3.30 NOC 3991, NOC 3992, NOC 3993, NOC 3994, NOC 3995, NOC 3996, NOC 3997, ADD 3997A, NOC 3998

Approved.

3.31 3999 to 4098 - NOT allocated

3.32 Resolution AA

3.32.1 The Chairman of the Editorial Committee drew attention to the square brackets around the words "of the intent" in paragraph b) under "recognizing" in the English text only.

3.32.2 The delegate of Iraq suggested that the words "of the intent" be deleted from the English text.

3.32.3 The delegate of the United Kingdom said that his Administration saw a difference between the interpretation of the intent of the Radio Regulations and the interpretation of the Radio Regulations; since the appropriate World Administrative Radio Conference would have had reasons, which could be found in the records, for drafting the Radio Regulations as they did, it was important that the intention of that Conference should be understood. He was therefore in favour of retaining the words "of the intent".

3.32.4 The delegate of India supported the Iraqi proposal on the grounds that any interpretation of the Radio Regulations would automatically include the intent.

It was decided that the words "of the intent" should be deleted from the English text.

3.32.5 The delegate of Roumania, supported by the delegate of France, proposed that "resolves 2" be reworded to make it clear that the CCIR would not be bound by the Rules of Procedure of the IFRB.

It was so agreed.

3.32.6 The delegate of Zambia proposed that the words "either matter", in the same paragraph, be replaced by "in either case the matter ..." for the sake of clarity.

It was so agreed.

Resolution AA, as amended, was approved.

The first series of texts (B.1) (Document No. 424), as amended was approved on first reading.

4. Second series of texts submitted for first reading (B.2) (Document No. 433 and Corrigendum No. 1)

4.1 The Chairman of the Editorial Committee introduced the second series of texts, drawing attention to minor typographical errors in the French language version. He observed that square brackets had been placed round the frequency bands in respect of which a decision had yet to be taken by Committee 5.

4.2 Chapter NLX

The chapter heading was approved.

4.3 Article N34

Approved.

4.4 Article N35

4.4.1 The delegate of Iraq, supported by the delegates of the People's Democratic Republic of Yemen and Qatar, proposed that the phrase "including the sea waterways of the Indian Ocean extending north of 15° N" should be inserted after the words "latitude 15° N" in MOD 6634.

4.4.2 The delegate of Cameroon considered that the proposal, which related to a question of substance, should be referred to the appropriate Committee rather than be discussed in the Plenary Meeting.

4.4.3 The Chairman of Committee 8 said he doubted whether his Committee would be able to consider any proposal affecting the substance of a provision without violating its terms of reference.

4.4.4 The delegate of Venezuela supported that view and considered that the proposal might more appropriately be discussed by a future mobile Conference.

4.4.5 The delegate of the United Kingdom agreed. The present Conference had no power to alter Article N35, except where such changes were consequential upon decisions taken in respect of Articles which it was entitled to consider.

4.4.6 The delegate of Iraq withdrew the proposal but reserved his delegation's right to revert to the matter at the appropriate time.

4.4.7 The delegate of the Federal Republic of Germany said that, as a result of discussions which had taken place in Working Group 5D, the uses of the bands 1 544 - 1 545 MHz (space-to-Earth) and 1 645.5 - 1 646.5 MHz (Earth-to-space) by the aeronautical mobile-satellite and maritime mobile-satellite services was limited to distress and safety operations. Although that conclusion had not yet been approved officially by Committee 5, he proposed that a new point, to be placed provisionally between square brackets, should be inserted immediately after MOD 6659, mentioning those frequency bands and bearing the reference "(See No. 3695A)".

Article N35 was approved with that amendment.

4.5 Article N36/36

4.5.1 The delegate of the People's Democratic Republic of Yemen proposed an amendment designed to improve the wording of the opening phrase of NOC 6794.

4.5.2 The Chairman requested the previous speaker to discuss his proposal, which appeared to be stylistic in nature, with the Chairman of the Editorial Committee.

Article N36/36 was approved on that understanding.

4.6 Article N37

4.6.1 At the proposal of the Vice-Chairman of Committee 7, it was decided to defer consideration of Article N37 until Committee 7 had completed its work on the question of medical transport.

4.7 Article N38

Approved.

With the exception of Article N37, the second series of texts (B.2) (Document No. 433 and Corrigendum No. 1), as amended, was approved on first reading.

5. Third series of texts submitted for first reading (Document No. 443 and Corrigendum No. 1)

5.1 The Chairman of the Editorial Committee said that Document No. 443 contained a number of typographical errors which would be corrected by the Secretariat.

5.2 Chapter NX

The chapter heading was approved.

5.3 Article N40/22

Approved.

5.4 Article N41

5.4.1 The delegate of Brazil questioned the need to retain the reference to principal shipping and air routes in NOC 7168.

5.4.2 The Chairman of Committee 8 said that the question raised by the Brazilian delegate had been discussed by Committee 8, which had reached the conclusion that the Conference was not empowered to take any action in that respect, because the training syllabus for radiotelegraph operators would be affected if the reference in question were deleted.

5.4.3 The delegate of Finland, referring to MOD 7164 and MOD 7174, said that the word "flight" had been substituted for the word "voyage" in both provisions. In the view of his delegation, that change had the effect of altering the meaning of the provisions and he therefore proposed that the word "voyage" be restored in both cases.

5.4.4 The delegate of the United Kingdom said that the change mentioned by the previous speaker had been made in order to take account of the fact that the Article now referred exclusively to the aeronautical mobile service.

5.4.5 The delegate of Canada, supported by the delegate of Finland, considered that the use of the word "flight" instead of the word "voyage" might have repercussions for the syllabus of the first- and second-class radiotelegraph operator's certificates, both of which entitled their holders to operate ship stations as well as aircraft stations. Accordingly, it might be preferable not to alter the existing text but to leave the matter for a future aeronautical conference to consider.

5.4.6 The Chairman said that unless formal support was expressed for the proposal by the delegate of Finland, he would take it that delegations wished the word "flight" to be retained in both MOD 7164 and MOD 7174.

It was so agreed.

Article N41 was approved.

5.5 The delegate of Papua New Guinea observed that a proposal for the definition of a radiocommunication service was to be submitted to the Conference for adoption. The Editorial Committee should be requested to give very careful consideration to the word "service" as it was used in both Article N40 and Article N41, so as to ensure that there was no conflict of terminology between those texts and that of the definition.

5.6 The Chairman said that due account would be taken of those comments by the Editorial Committee.

5.7 Article N42

Approved.

5.8 Article N43/21

5.8.1 The Chairman of Committee 8, replying to a question by the delegate of Italy concerning MOD 7261, said that he understood the expression "territorial waters" to comprise also the air space above such waters.

5.8.2 The Observer for ICAO expressed the view that the word "territories", which included both the land areas and the territorial waters of a State, might advantageously be substituted for the words "territorial waters".

5.8.3 The delegate of the United States said that the re-arrangement of the Radio Regulations into chapters and articles dealing with separate services had resulted in a number of anachronisms and inadequacies which a future mobile services conference would certainly wish to rectify. The task of the present Conference, and in particular Committee 8, was to clarify texts, for instance by removing unnecessary language, without however altering the substance of the provisions concerned. While he had no objection to the specific alteration proposed to MOD 7261, he considered that extreme caution should be exercised in order to avoid introducing any changes of substance in the Articles currently under consideration.

5.8.4 The delegate of the United Kingdom said that he was in general agreement with the previous speaker. With regard to the specific question of replacing the words "territorial waters" in MOD 7261, the correct English phrase to use would be "within their territorial limits".

5.8.5 The Chairman requested interested delegations to take the matter up with the Chairman of the Editorial Committee.

Article N43/21 was approved on that understanding.

5.9 Article N44

Approved subject to replacement of "Greenwich Mean Time (GMT)" by "Coordinated Universal Time (UTC)" in MOD 7287.

5.10 Article N45

Approved.



5.11 Article N46

5.11.1 The delegate of the People's Democratic Republic of Yemen questioned the appropriateness of the reference to "an aircraft station at sea" in MOD 7349.

5.11.2 The Chairman of Committee 8 said that the phrase in question was another instance of the type of inconsistency resulting from the re-arrangement to which the United States delegate had referred earlier. Proposals to change the wording had been made in Committee 8, but it had felt that such modifications did not come within the Committee's terms of reference.

Article N46 was approved.

5.12 Article N48/37

5.12.1 The delegate of Iran said that the words "Red Crescent and Red Lion and Sun" should be inserted after "Red Cross" in ADD 7408.2, in accordance with a decision taken by Committee 5.

5.12.2 The Chairman requested the delegate of Iran to consult with the Chairman of the Editorial Committee.

Article N48/37 was approved on that understanding.

5.13 Articles N49 and N50

Approved.

The third series of texts (B.3) (Document No. 443 and Corrigendum No. 1), as amended, was approved on first reading.

The meeting was suspended at 1725 hours and resumed at 1800 hours.

6. Fourth series of texts submitted for first reading (B.4) Document No. 457)

6.1 The Chairman of the Editorial Committee said that, in the document, the letters "GMT" should be amended to read "UTC" (see, for example, page B.4-19).

The document was then examined page by page and was approved on first reading.

7. Fifth series of texts submitted for first reading (B.5) (Document No. 446)

7.1 The Chairman of the Editorial Committee drew attention to a number of corrections to be made to Document No. 446.

7.2 MOD 8685 and MOD 8686

7.2.1 After comments by the representative of the ICS and the delegate of the United Kingdom, it was decided to substitute the word "mobile" for "ship" in the third line of both numbers.

7.3 MOD 8762 1250A  
Mar2

7.3.1 The Chairman of Committee 8 said that the value "4 125 kHz" had not been inserted after "frequency" in the fourth line of the English text.

The necessary correction would be made.

Document No. 466 was approved on first reading.

8. Sixth series of texts submitted for first reading (B.6) (Document No. 491)

8.1 The Chairman of the Editorial Committee said that the Chairman of Working Group 6B had requested the Committee to review the text of Resolution AD (pages B.6-12 and B.6-13) to ensure correct alignment of the three languages. Examination of the text should therefore be postponed until the Editorial Committee had completed that task.

It was so decided.

8.2 ADD 4730, ADD 4731, ADD 4732, ADD 4733, ADD 4733.1, ADD 4734, ADD 4735, ADD 4735.1, ADD 4736

Approved.

8.3 ADD 4737

8.3.1 The delegate of Iran recalled that Committee 6 had decided that any period exceeding a certain number of days should be expressed in months in the Radio Regulations. The period of 120 days should therefore be converted into months.

It was so decided.

8.4 ADD 4739, ADD 4740, ADD 4741, ADD 4742 and ADD 4743

8.4.1 The delegate of the United Kingdom, replying to a request by the delegate of Papua-New Guinea for clarification of the terms "resolve the problem" and "solution of the problem" in the above numbers, said that the problem concerned was defined in No. 4739 and gave further explanation.

8.4.2 The Chairman of Committee 6, on being asked for his opinion by the Chairman, said that the French text was correct and that the delegate of Papua-New Guinea could check with the Chairman of the Editorial Committee whether the English text of the numbers should be amended.

It was so agreed.

8.5 ADD 4740.1 and ADD 4750.1

8.5.1 The Chairman of Committee 6 explained that those two numbers should be placed in square brackets because his Committee was awaiting the decision to be reached on Resolution Spa2 - 6.

It was so agreed.

8.5.2 Following a comment made by the delegate of the Philippines, it was decided that, in the final document, the footnotes should be placed at the bottom of the page.

8.6 MOD 5059

8.6.1 Following a comment by the delegate of Iraq who considered that the words "provided this does not contravene the rules of international law" should be added at the end of the number, and a statement by the Vice-Chairman of the IFRB, it was agreed to refer the number to Working Group 6A and then to Committee 6 for further study.

8.6.2 The Chairman pointed out an error of numbering in ADD 5071A, Spanish version, which should be corrected.

#### Article N20/15

8.7 The delegate of Algeria said that the Article was likely to be amended by work being done currently in the Groups of Committee 6. He therefore proposed that the meeting should examine the Article but that the whole text should be placed in square brackets.

The proposal was approved.

8.8 MOD 5133

8.8.1 The delegate of Kenya considered that the words between commas from the second to the fourth lines should be deleted, and a short discussion took place in which the Chairman of the Editorial Committee, the Chairman of Committee 6 and the delegate of the United States took part.

8.8.2 The delegate of Algeria then proposed that MOD 5133 should be referred to Committee 6 for examination.

It was so decided.

8.9 ADD 5133A

8.9.1 Following a suggestion by the delegate of Brazil, it was decided to add the words "if necessary" after "matter".

8.10 Recommendation D<sup>1</sup>

The Recommendation was approved.

Document No. 491 was thus approved on first reading.

9. Seventh series of texts submitted for first reading (B.7) (Document No. 511)

9.1 At the request of the delegate of Iran, the Editorial Committee was requested to replace the words "Red Lion and Red Sun" by "Red Lion and Sun" on the first page and wherever else it might be necessary in the English text. The Chairman of the Editorial Committee stated that in the French text the words "Croissant Rouge", which had been omitted, should be added.

9.2 Resolution AE

9.2.1 At the request of the delegate of Iran, it was decided to fix a deadline for the completion of the study requested from the CCIR by replacing in the first two lines on page 2, the words "if possible to the next Plenary Assembly" by "not later than its XVith Plenary Assembly".

Resolution AE, as amended, was approved.

9.3 Resolution AF

Subject to the amendments to the English text already decided on and the replacement of the words "Red Lion and Red Sun" by "Red Lion and Sun", Resolution AF was approved.

9.4 Chapter NVI

The title of the chapter was approved.

9.5 Article N21/17

The Article was approved.

9.6 Article N22/18

9.6.1 MOD 5221

9.6.1.1 At the request of the Chairman of Committee 7, it was decided to add "5230A" to the exceptions mentioned at the end of the paragraph.

9.6.1.2 The use of the word "administration" in Nos. 5221 and 5226 gave rise to a detailed discussion, in which the delegates of eighteen countries took part. As a result, it was decided to replace the word "administration" by "Government". In addition, the Editorial Committee was requested to standardize the various other related texts, including No. 7704, where the term "administration" was used in the same sense as in Nos. 5221 and 5226. At the request of the delegate of Cuba, it was agreed to use the term "entidad" instead of "empresa" in the Spanish text.

No. 5221 was approved with the amendments mentioned above.

9.7 (MOD) 5222, NOC 5223, MOD 5224, MOD 5225, MOD 5226 (subject to standardization), MOD 5227 NOC 5228, ADD 5228A (became 5230A and not 5320A as in the French text), NOC 5229, MOD 5230, ADD 5230A

The above provisions were approved.

9.8 Article N30/41 - Section I (titles), MOD 6354, MOD 6355, ADD 6355A, (MOD) 6356, MOD 6357, MOD 6358, MOD 6359, MOD 6360, MOD 6361

The above provisions were approved.

9.9 Section II - ADD 6361A and 6362

9.9.1 The delegate of Canada explained that in Committee 7 a proposal by his country to amend No. 6362 had been left in abeyance pending a definition of the term "permissible level of interference". Committee 7 had not yet resumed consideration of the proposal. A great deal of time had already been spent on the question whether it was necessary for the Regulations to include that expression, which would undoubtedly be very useful in the future, when the necessary criteria had been established. In order to save time and avoid prolonging discussion in the Committee, his delegation withdrew its proposal.

9.9.2 The delegate of the United Kingdom proposed that, Canada having withdrawn its proposal, the old text should be restored and marked "NOC".

It was so decided.

9.10 Article N31

The Article was approved.

9.11 Article N32/42

The Article was approved, subject to maintenance of the present provision NOC 6427, bearing in mind the withdrawal of the Canadian proposal.

9.12 Article N33

It was decided to approve the reference "PENDING", i.e., to suspend consideration of the whole of the text pending the results of the work of the Committees concerning the proposals submitted.

10. Oral reports by the Chairmen of Committees 2 to 8

10.1 The Chairman of Committee 2 (Credentials) observed that the submission of oral reports by Committee Chairmen was not normal practice; the deadline for the submission of Committee 2's written report had been fixed at 19 November. A Working Group had examined 111 credentials on 13 and 15 October and 19 more on 7 November, making a total of 130, out of 140 Members of the Union represented at WARC.

10.2 The Chairman of Committee 3 (Budget Control) said that the work of his Committee was dealt with in three summary records, which had already been circulated; the fourth meeting had been held on Tuesday, 6 November. On 30 October the Conference budget had shown a margin of 21,000 Swiss francs.

10.3 The Chairman of Committee 4 (Technical Regulations) said that his Committee had held eight meetings. It had three Working Groups, 4A, 4B and 4C. Working Groups 4A and 4C had finished their work; Working Group 4B was still meeting. Committee 4 might be able to finish its work by the end of the week, on the evening of Saturday, 10 November.

10.4 The Chairman of Committee 5 (Frequency Allocations) said that his Committee had held nine plenary meetings. Its four ad hoc Groups had practically all finished their work, while six Working Groups were still meeting, except Group 5E, which had finished. To sum up, with some twenty meetings of Working Groups and ten or so of Committee 5 itself, it would have finished its work by Tuesday, 20 November.

10.5 The Chairman of Committee 6 (Regulatory Procedures) said that his Committee had held eight meetings, during which it had considered and approved the documents submitted to it by its two Working Groups, 6A and 6B. The latter had finished its work. A large proportion of the documents it had prepared had been approved during the current plenary meeting. Working Group 6A and some ad hoc Groups were still meeting. Committee 6 would have to hold two more meetings in order to be able to finish its work by the end of the week.

10.6 The Chairman of Committee 7 (General Administrative Committee) said that his Committee had held eight meetings. Its Working Group 7A (Medical Transports) had finished its work and Working Group 7B (Definitions) would submit its report on the afternoon of Friday, 9 November. However, Committee 7 still had work to do, e.g., as regards the service documents for future conferences and on the Resolutions and Recommendations.

10.7 The Chairman of Committee 8 (Restructure of the Radio Regulations) said that his Committee had finished its work some two weeks earlier. No further meetings would be necessary unless difficulties arose as a result of decisions taken by other Committees on questions of substance. All Committee 8 documents had already been through the Editorial Committee and had been considered at the current plenary meeting.

11. Statement by the delegate of Greece

The delegate of Greece made the following statement :

"A number of delegations in Committee 5 and at Working Group level had expressed their concern at the lack of additional allocations to the maritime mobile service, particularly in the MF and HF bands.

The delegate of Australia, when introducing Document No. 463, expressed the view that the failure of this Conference to deal adequately with the requirements for the maritime mobile service will be one of the major shortcomings of WARC 1979. A similar problem certainly exists for the broadcasting requirements in the HF bands.

Mr. Chairman, we think it is not too late. The deliberations of Working Groups 5BA (MF) and 5BB (HF) are not yet completed and a decision by this plenary session to alter the course of this Conference could still avert disaster.

All nations, whether landlocked or maritime, depend to a greater or lesser degree on shipborne trade. Unless ships have the necessary radiocommunications back-up, they cannot continue to operate.

We therefore ask for the support of all delegations present to achieve the objective of the justified and necessary increase in spectrum space requested for the maritime mobile service.

In the same spirit, the needs of the HF broadcasting service should also be examined in order to alleviate to the greatest possible extent the present congestion in the HF broadcasting bands".

12. Statement and addresses

12.1 H.E. Kone Bangali, Minister of Posts and Telecommunications of the Republic of the Ivory Coast, transmitted to the Conference the statement reproduced in Annex 1.

12.2 The Observer for the United Nations Educational, Scientific and Cultural Organization delivered the address reproduced in Annex 2.

12.3 The Observer for the World Health Organization delivered the address reproduced in Annex 3.

The meeting rose at 2130 hours.

The Secretary-General :

M. MILI

The Chairman :

R.J.P. SEVERINI

Annexes : 3

A N N E X 1

STATEMENT BY THE MINISTER OF PTT OF THE REPUBLIC OF THE IVORY COAST

Mr. Chairman,  
Mr. Secretary-General of the International Telecommunication Union,  
Distinguished Delegates,

At the present juncture in your deliberations, deep reflection and the peaceful confrontation of ideas will certainly take precedence over all other considerations.

However, since no Administration - I was about to say no country - can remain unaware of the importance of this Conference, I should like in these few words to emphasize that the Ivory Coast and its Chief of State, His Excellency President Félix HOUPOUET BOIGNY, fully share with you the ideals of the International Telecommunication Union : the strengthening of the bonds of universal friendship and cooperation through telecommunications. Owing to the numerous and increasing requirements of both the developed and the developing countries, the use of the radio frequency spectrum is a delicate problem and one of extreme importance, a solution to which requires on the part of each member of our Union a spirit of sacrifice and an unfailing determination to cooperate in the outstandingly important telecommunication sectors such as aeronautical and maritime navigation, radio and television broadcasting, astronomy and national security, to give only an incomplete list.

As you know, telecommunications are playing an increasingly important role in the development of countries through their intimate connection with economic growth and the considerable part they play in the decentralization and deconcentration of national activities.

The industrialized countries, equipped with long-standing experience and powerful scientific, financial and human resources, are in a position to develop and modernize their own telecommunication networks rapidly through the invention and application of new techniques.

However, the progress thus achieved must also be extended to the other countries, and particularly the developing countries, since wherever man is able to correspond with his fellow man, irrespective of country, race or political regime, telecommunications must be able to cross frontiers in order to bring them into contact at all times and in all places.

Thus the world's present era of interdependence and planet-wide cooperation calls inescapably for the sharing by all, for the common benefit, of certain natural resources possessed by the human community as a whole.

Despite various setbacks, your Assembly is an encouraging illustration of the fact that this determination to bring about a method of sharing on a just and peaceful basis does in fact exist in all nations.

Although in 1959 Africa played virtually no part in your deliberations, today it is represented at this august Assembly by about fifty or so independent States having a wide range of requirements in this complex and varied field of telecommunications which acts as a stimulus to their development.

We take the view that the Radio Regulations should be revised in such a way as to secure for these various countries and for the developing countries as a whole easy and equitable access to the common, natural and limited natural resources represented by the radio frequency spectrum and the geostationary orbit, for the public telecommunication network as well as for sound and television broadcasting and aeronautical and maritime navigation.

For its part, the Ivory Coast considers that its interests must be safeguarded within the framework of the deliberations of this Assembly.

The general objectives at which it has been aiming since 1960 lie in this direction and relate in particular to :

- meeting telephone and telex requirements in order to establish widespread and up-to-date communication facilities;
- further automation of national telephone and telex networks;
- fitting these networks into the world-wide telecommunication network;
- the gradual provision of new services in mobile radiotelephony and telematics;
- offering the general public a service to promote development through information and training;
- the development of the national fleet, in a country which has a seaboard and therefore a rightful ambition to open itself up to the outside world by the sea;
- finally, the diversification of its transport facilities by an air network capable of meeting development requirements more efficiently.

We would hope that these development objectives, benefitting all, may be likewise achieved by all the countries members of the Union through equitable and effective participation in the operation of world-wide radiocommunications.

To make this possible, it is highly desirable that your Conference should solve, in a spirit of cooperation, the problems arising in connection with the use of the increasingly congested frequency spectrum; my country is ready to make its humble contribution to this process.

The Ivory Coast proposals which will be submitted by my delegation for this purpose are the outcome of numerous consultations carried out at various levels, subregional and regional, and they take account of the specific requirements of the African region, the main characteristics of which consist in :

- the attempt to bring about the exclusive world-wide allocation of frequencies with a view to the more efficient use and the separation of services whose combined presence in the same band might cause mutual interference;
- a more vigorous management of these frequencies, having regard to the legitimate and unexcessive rights of the developing countries as a whole;
- a re-distribution of the globe into regions so as to take better account of the concerns of the African countries for the organization, development and operation of the telecommunication networks of their Continent;
- a non-exclusive use of the geostationary orbit since, after INTELSAT, INTERSPUTNIK, EUROSAT, etc. ... "AFROSAT" can no longer be regarded as a figment of the imagination but as a reality of the not too distant future.

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\* \*

I pray that you will all be granted the gift of insight, wisdom and an unshakeable spirit of cooperation so that the World Radio Conference, Geneva, 1979, might become above all a forum of science and technology giving rise, in your common awareness, to clearly defined criteria leading in the future to improve radiocommunications on this Earth of men.



A N N E X 2

ADDRESS DELIVERED BY THE OBSERVER FOR UNESCO

Mr. Chairman,  
Mr. Secretary-General,  
Your Excellencies,  
Ladies and Gentlemen,

It is an honour for me to speak before this Assembly.

Mr. Amadou MAHTAR M'BOW, the Director-General of UNESCO, has asked me to express his regret at being unable to speak to you personally and, on his behalf and on behalf of UNESCO, I should like to extend very best wishes for the success of the World Administrative Radio Conference which, under the auspices of the International Telecommunication Union, has for several weeks been engaging in work whose capital importance is already unanimously recognized.

Like every one of you, UNESCO is fully aware of the historic importance of this Conference. Let me begin by congratulating the International Telecommunication Union - with which UNESCO has always had very cordial and fruitful working relations - on having brought together so many eminent specialists whose hard and complex task it is to reorganize and regulate on a new basis the international flow of information for the coming decades. The decisions you are preparing to take are already shaping the future message traffic in tomorrow's world.

My Organization has a direct interest in the work of this Conference because, at its Twentieth General Conference in 1978, the Member States entrusted UNESCO with the task of promoting the free flow and a wider and more balanced dissemination of information with a view to strengthening peace and international understanding. We know, however, that such objectives can be achieved only in so far as we are able to bring about greater reciprocity in the distribution of the information infrastructures. This would appear to be the sine qua non for achieving greater justice in the sphere of communications and, accordingly, the Member States of UNESCO today recognize that a more balanced distribution of communication channels is one of the cornerstones of any new world order as regards information and communications.

Since the very inception of UNESCO, its essential mandate has been to promote education, science, culture and the free exchange of ideas and knowledge. Having made communication one of its principal programme objectives, I think that UNESCO can legitimately claim to have contributed to the present universal recognition of communication processes as one of the basic functions which make man a social being.

Indeed, scientific theory has demonstrated that without communication there can be no social structure, that each social structure is the product of the predominant forms of communication and that the capacity to utilize codes and channels is directly proportional to each nation's degree of independence and sovereignty. Since lack of communication - that is to say, failure to understand the other and, therefore, ignorance - is at the root of much conflict, it must be concluded that mutual knowledge and balanced, unfettered communication, cannot but foster understanding between men and promote the peace of mankind.

The fact that technology must go hand in hand with ethical and political reflection as to its consequences for the destiny of mankind, leads us overwhelmingly to conclude that our two Organizations are equally interested in the outcome of this Conference : you, in the essential technical aspects of communication and we, in its social and cultural implications.

Mr. Chairman,  
Ladies and Gentlemen,

Permit me to point to a fact with which you are all quite familiar. Since the outset, UNESCO has always favoured a direct or indirect many-faceted discussion of the relationships between social and cultural aspects of communication on the one hand, and economic development on the other.

As Assistant Director-General of a part of UNESCO which combines culture with communication, I should like to offer you a few brief reflections on how we gauge the import of the decisions you are taking at this Conference.

First, our General Conferences have on different occasions discussed the main problems relating to the present communication structures and systems. A short list of the more important of such problems would include the adaptation and adoption of suitable technologies in the developing countries, the strengthening of domestic message production capacities in general, the distribution, control and use of radio frequencies, and transmission rates for press dispatches. All the countries of the world, without exception, are now fully aware of the magnitude and importance of these and other problems. Suffice it to recall that at the last UNESCO General Conference in December 1978, the Declaration on the Role of the Mass Media was adopted by acclamation by the 146 States Members of the Organization. Such unanimity illustrates better than anything else the spirit of cooperation which is beginning to prevail among the nations of the world, rising above differences between economic and social systems, and the express determination to understand the aspirations of those countries which are least favoured in the communication field.

Another really significant fact was the unanimous recognition, also expressed by the General Conference, of the need for a new world order as regards information and fairer and more efficient communication. Then again, the United Nations General Assembly did not confine itself, at its 33rd session, to supporting the resolutions taken at the Twentieth UNESCO General Conference : in other resolutions also adopted unanimously, it stressed its support for the idea of and the need for a new world order in information and communication; accordingly, it requested the specialized agencies in the United Nations system to cooperate with and assist the developing countries in identifying and dismantling obstacles to the establishment of greater reciprocity in the flow of information.

The same spirit prevailed during the two Intergovernmental Conferences on Communication Policies in Latin America and the Caribbean and in Asia and Oceania, organized by UNESCO. Those Conferences enabled Member States in those regions to express, in 1976 and 1979, their own political will as regards the overall problems of communication, in the same way as this Conference will surely work out the technical decisions which will make that will operative, without incompatibility and in the desire to harmonize political urging with technological decision.

Then again, the Final Declaration of the Conference of Heads of State or Government of Non-Aligned Countries, held at Havana from 3 to 8 September last, indicated the decisions which those countries are about to take in order to develop their own information system and communication media capable of strengthening and increasing the independence of national sources of information and enabling them to participate actively and more fully in communication and cooperation systems at the international level. It also recognized the positive role being played by UNESCO in the study of communication problems and in its efforts to introduce a more balanced exchange of news between the developed and the developing countries.

Mr. Chairman,  
Ladies and Gentlemen,

If I have ventured to recall the keywords of the resolutions to which I have just referred, that is to say "new order", "fairer" and "more efficient", it is because I believe that the World Administrative Radio Conference organized by the International Telecommunication Union is taking place at a time of tremendous sensitization at the world level to the problems of communication. Political will, the availability of suitable media and the ability to harness modern technology properly and justly, should enable us gradually to achieve that new order to which we all aspire. In this era of technology, however, we have to realize that technology has its limits, both quantitative and qualitative. So far, it is the quantitative limits that have apparently been responsible for the still huge gap between the developed and the developing worlds. Yet it is precisely through a more balanced sharing of this intrinsically limited technological availability - that is to say by a decision which is both technical and political - that we shall be able to meet the world's economic, social and cultural aspirations. It was the need for a global approach to these problems that led the Member States in 1976 to request UNESCO to study the underlying problems of communication in their entirety.

In order to meet that request, the Director-General of UNESCO decided, among other things, to set up an International Commission on communication problems, consisting of eminent specialists under the chairmanship of Mr. Sean McBride. This Commission, which operates independently, will be submitting its final report in a few weeks' time to the Director-General, who in turn will present it at the XXIst General Conference in September 1980 after circulating it to the Member States, intergovernmental and non-governmental organizations and to the international community.

Mr. Chairman,  
Ladies and Gentlemen,

Such decisions and studies illustrate the extent to which mankind has, over the years, become aware of the vast potential of technological resources that can be mobilized in the interests of change and more balanced development. I should add, however, that the speed of such progress is such that, directly or indirectly, it is having the deplorable effect of enlarging instead of reducing the disparities between nations.

The belief that a better shared ability to communicate can play a vital role in the cause of understanding, justice and peace, has once and for all become a part of mankind's precise aspirations, those plans for the future which assert themselves at a given point in history and remain rooted in the mind of man until they are brought to fulfilment.

Today, we are facing a problem which is at the very core of our concern : how to strike a proper balance between the justified desire of many countries to modernize and the need to safeguard their own cultural identity. The communication media unquestionably play an outstanding role in any modernization process; they should, but do not always, play a similar role in safeguarding and nourishing cultural identity.

In his statement to the United Nations Conference on Science and Technology for Development, held last August in Vienna, Mr. Mahtar M'Bow, our Director-General, said that no people could experience true progress or secure its future unless it acquired an independent capacity for scientific and technical creation capable of charting a course towards internal development rooted in its own culture.

What is really at stake, therefore, is the effect of the interaction between technological factors and their socio-cultural implications. The International Telecommunication Union and UNESCO have never lost sight of the effects of such interaction within their own spheres of competence; this explains the close collaboration which has been established between our two organizations and which we are determined to strengthen and broaden.

Here too, in the near future we shall have to rely on the active cooperation of our Member States if, in the exercise of our respective responsibilities, we are to maintain and strengthen a universal degree of awareness capable of producing solutions to a problem as complex as the one we are here to discuss. Only a strengthening of such cooperation will enable us to pursue our efforts to bring about balanced communication and the framing of a universal communication law - in the strict sense of the word - capable of satisfying the human community as a whole. At the outside, peace will never become a reality or sprout from the very minds of men and women everywhere unless we prove ourselves capable of giving them the means of expressing themselves and making themselves understood in a spirit of mutual respect and equality.

The universal ideal of justice is changing in step with the historical progress of mankind and, today, we must simply recognize that the aspiration to a balanced sharing of the communication media has become a part of modern man's ideal of justice. To the man of today, therefore, this notion is one of the fundamental conditions of peace.

While thanking you for your attention and apologizing for having taken so much of your time, Mr. Chairman, I should like, on behalf of UNESCO which I am representing here, to wish success to your Conference, whose decisions of capital importance will have an exceptional bearing on the future of justice and peace on our planet.

A N N E X 3

ADDRESS DELIVERED BY THE OBSERVER FOR WHO

Mr. Chairman,  
Distinguished Delegates,  
and Colleagues,

We appreciate the opportunity to present the views of the World Health Organization on the importance of telecommunications to our member governments in bringing health care to all their people.

During the past five years, WHO has begun several projects promoting the use of two-way radio for remotely located health workers who would otherwise be completely isolated. This year, we observed the utility of satellite communications in serving health needs in the vast Pacific basin. WHO also has used mass media, particularly film and broadcast radio, to reach large numbers of people with health information and health education programmes through our member countries. We are convinced that such technologies as low-cost radio and communication satellites can provide an invaluable service to widely dispersed populations, particularly where conventional telephone networks are nonexistent, ill-maintained and beyond their means.

Many other innovative, public service telecommunications experiments have been made by other organizations. A number of these experiments have depended upon satellite communications, such as the NASA Applications Technology series, the joint US-Canadian CTS/Hermes, and the Franco-German Symphonie series. The range of telecommunications experiments included voice and television broadcasting, two-way radio, teleconferencing, text and data transmission, facsimile, and two-way video.

Of eighteen innovative satellite-based projects recently surveyed, more than 70 % included a medical or health application, and 33 % were primarily devoted to telemedicine and medical education. However, only one project out of the eighteen has made a successful transition to operational status. Two Alaska-based projects made a partial transition, and two Pacific projects are continuing as experiments, but all the rest have been terminated.<sup>1)</sup>

While it is unreasonable to expect all such experiments to become operational, it seems surprising that more have not been able to make the transition, in view of the large resources and populations involved. One reason for this failure may be that most of the experiments were designed to serve rural, island, and other thin-route applications - the very environments which do not have reliable, low-cost telephone or television coverage. A major obstacle in providing an operational service to such users has been traditional methods of financing telecommunications systems, which favour densely populated routes.

The Western Pacific Regional Office of WHO has been investigating the new communications possibilities opened up by satellite technology. In the Pacific Basin, staff members have participated in satellite-based seminars under the auspices of the PEACESAT and University of the South Pacific networks.<sup>2)</sup> Our Western Pacific Regional Office wants to make regular use of satellite communications, not only for occasional discussions, but in support of formal courses for health workers spread out over millions of square kilometres of the Pacific, and to provide for continuing education, and consultations regarding health matters.

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1) "Satellite Applications for Public Service : Project Summaries", Clearinghouse on Development Communication, 1414 22nd Street, N.W., Washington, D.C. 20037, April 1979.

2) H. Ohlman, "The University of the South Pacific and Satellite Communications", European Conference on the Role and Value of the New Communications Techniques in Post-Secondary Education", Council of Europe, Strasbourg, September 1979 (to be published).

Today, all Pacific users are completely dependent on ATS-1, the first Applications Technology Satellite, which was launched in 1966 with a two-year design lifetime.

Contingency plans for operational satellite systems to serve these needs are being studied. However, no regular telecommunication service offers anything similar to the voice teleconferencing facility of ATS-1. The closest approximation would involve separate connections with each participant, at a cost which rises with the number of participating locations. In contrast, the ATS-1 area beam reaches thousands of locations, each of which participate actively, but on a scheduled basis.

We feel confident that the members of the World Administrative Radio Conference will consider the needs of widely dispersed populations for reliable, low-cost telecommunications, understanding that services which have evolved to meet the needs of developed, highly urbanized countries may not be applicable to the social or economic realities of the developing world. The revision of the Radio Regulations on which you are working should help to ease unnecessary restraints on telecommunications resources for health, education and other areas vital to integrated rural development.

We wish your Conference success in its unique and difficult goal of meeting the needs of all the world for better communications.

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# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 779-E

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WORKING GROUP 6A

## **NINTH REPORT FROM DRAFTING GROUP 6A1**

The Drafting Group has considered a draft revised Article N12 submitted by ad hoc Group 2 to Working Group 6A.

In the drafting of the revised version of Article N12, this ad hoc Group had taken into account the twelve basic principles contained in Document No. 488.

The text of this revised Article is attached hereto, for consideration by Working Group 6A.

J.K. BJØRNSJØ  
Chairman of Drafting Group 6A1



A N N E X

ARTICLE N12/9

Spa2

**Notification and Recording in the Master International Frequency  
Register of Frequency Assignments<sup>1</sup> to Terrestrial  
Radiocommunication Stations<sup>2</sup> / 2A /**

**Section I. Notification of Frequency Assignments**

MOD 4280 486  
Spa2

§ 1. (1) Any frequency assignment<sup>3</sup> to a fixed, land, broadcasting,<sup>4</sup> radionavigation land, radiolocation land or standard frequency station, or to a ground-based station in the meteorological aids service, shall be notified to the International Frequency Registration Board:

- a) if the use of the frequency concerned is capable of causing harmful interference to any service of another administration;<sup>5</sup> or
- b) if the frequency is to be used for international radiocommunication; or
- c) if it is desired to obtain international recognition of the use of the frequency.<sup>5</sup>

ADD 4280A

(1A) Similar notice<sup>6)</sup> shall be given when an Administration desires to request the assistance of the Board in selecting a frequency assignment to a station of the fixed service in any of the bands allocated exclusively or on a shared basis, to that service between 3 000 kHz and 27 500 kHz, or when an Administrations wishes to use for the same type of station a predetermined frequency assignment; in the latter case, the Administration indicates the reasons on which the request is based together with the possible modifications which could be made to the characteristics of its assignment, and the Board will take account of this information when searching for a satisfactory solution. For this purpose an individual notice shall be drawn up as specified in Appendix 1. It is recommended that the notifying Administration should provide the additional information called for in that Appendix, together with such further information as it may consider appropriate. The procedure to be followed is given in Nos. 4326A - 4326M.

ADD 4280A.1

<sup>6</sup> See Resolution No. / DC /.

A.N12/9

<sup>1</sup> The expression *frequency assignment*, wherever it appears in this Article, shall be understood to refer either to a new frequency assignment or to a change in an assignment already recorded in the Master International Frequency Register (hereinafter called *Master Register*).

A.N12/9

<sup>2</sup> For the notification and recording in the Master International Frequency Register of frequency assignments to radio astronomy and space radiocommunication stations, see Article N13/9A.

ADD / A.N12/9

(2A) For notification and recording of frequency assignments to terrestrial stations in the frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3) and 11.7 - 12.5 GHz (in Region 1), so far as their relationship to the broadcasting-satellite service in the bands is concerned, see also Article N13B. 7

4280.1 486.1  
Spa2

<sup>3</sup> In the case where a frequency is used by numerous stations under the jurisdiction of the same administration, see Appendix I (Section E, II, Column 5a, paragraphs 2c and 2d).

4280.2 486.2  
Spa2

<sup>4</sup> With respect to assignments to broadcasting stations in the bands allocated exclusively to the broadcasting service between 5 950 kHz and 26 100 kHz, see Article N15/10.

4280.3 486.3  
Spa2

<sup>5</sup> The attention of administrations is specifically drawn to the application of the provisions of Nos. 4280/486 a) and 4280/486 c) in those cases where they make a frequency assignment to a terrestrial station, located within co-ordination area of an earth station (see No. 4160/492A), in a band which terrestrial radiocommunication services share with equal rights with space radiocommunication services in the frequency spectrum above 1 GHz.

NOC

4281 487  
Spa

(3) Similar notice shall be given for any frequency to be used for the reception of mobile stations by a particular land station in each case where one or more of the conditions specified in No. 4280/486 are applicable.

listed in Appendix / 1D /, which are

MOD

4282 488

(4) Specific frequencies prescribed by these Regulations for common use by stations of a given service (for example, international distress frequencies 500 kHz and 2 182 kHz, frequencies of ship radiotelegraph stations operating in their exclusive high frequency bands, etc.), shall not be notified to the Board.



/-ADD 4282A. (4A) Frequency assignments to a station shall be notified by the Administration of the country on whose territory <sup>1</sup> the station is located, unless specifically stipulated otherwise by special arrangements in accordance with the relevant provisions of the Convention communicated to the Union by the Administrations. ]

MOD 4283 489 § 2. (1) For any notification under Nos. 4280/486 or 4281/487 an individual notice for each frequency assignment shall be drawn up as prescribed in [Sections A or B] of Appendix I, which specify the basic characteristics to be furnished, according to the case. It is recommended that the notifying administration should also supply the additional data called for in that Appendix, together with such further data as it may consider appropriate.

information

information

ADD 4283A. (1A) Notices concerning assignments to stations of the fixed service in the bands allocated to that service between 3 000 kHz and 27 500 kHz, that are submitted under No. 4280/486 or 4280A shall also indicate by the class of operation, whether the assignment is :

A - for regular operational use; or

B - for use as a standby to some other means of telecommunication; or

C - for occasional use on a reserve basis and not requiring protection from harmful interference.

/-ADD 4282A.1 <sup>1</sup>If a notice is received from an Administration for a frequency assignment to a station located on a territory over which there is a dispute of sovereignty, an entry in the Master Register, after examination by the Board, does not signify recognition of the sovereignty of a country over the territory in question. ]

MOD

4284 490  
Spa2

(2) When stations of the same service, such as the land mobile service, use a band of frequencies above 28 000 kHz in a specific area or areas, an individual notice should be drawn up, as prescribed in Section C of Appendix 1, which specifies the basic characteristics to be furnished, for each frequency on which there are assignments within the band: however, the particulars should relate only to a typical station. This does not apply

- a) to broadcasting stations, or
- b) to other terrestrial stations to which the provisions of Sub-Section IIE of this Article apply, or
- c) to other stations of the fixed or mobile service which operate in frequency bands listed in Table II of Appendix 28 with equivalent isotropically radiated power exceeding the corresponding values listed in the table, or
- d) to the terrestrial stations in the frequency bands listed in Nos. [ 6009/470D, 6010/470DA and 6011/470DB ].

under Nos. 4280/486, 4281/487 or 4284/490

MOD

4285 491  
Spa2  
months

§ 3. (1) Whenever practicable, each notice should reach the Board before the date on which the assignment is brought into use. It must reach the Board not earlier than three ~~ninety~~ days before the date on which it is to be brought into use, but in any case not later than ~~two months~~ thirty days after the date it is actually brought into use. ~~However, for a frequency assignment to one of the terrestrial stations mentioned in Sub-Section IIE of this Article or in No. 4146/639AQ, the notice must reach the Board not earlier than three years and not later than ninety days before the date on which the assignment is to be brought into use.~~ thirty days

ADD

4285A

(1A) A notice under No. ADD 4280A must reach the Board not earlier than one year before the date on which the requested frequency is to be brought into use.

ADD 4285B.

(1B) A notice concerning a frequency assignment to one of the terrestrial stations mentioned in Sub-Section IIE of this Article or in No. 4146/639AQ and 4146A must reach the Board not earlier than three years and not later than three months before the date on which the assignment is to be brought into use.

4280A and 4285A

Except for cases covered by Nos. 4286A,

~~two months~~ three monthsMOD 4286 492  
Spa2

(2) Any frequency assignment, the notice of which reaches the Board more than thirty days after the notified date of bringing into use, or in the case of a terrestrial station mentioned in Sub-Section [IIE] of this Article, any frequency assignment, the notice of which reaches the Board less than ninety days before it is brought into use, shall, where it is to be recorded, bear a remark in the Master Register to indicate that it is not in conformity with No. 4285/491 or 4285B.

against an assignment to a

However, such a remark will not be made in the Master Register in case of a terrestrial station to which none of the conditions stipulated in Nos. 4280/486 applies, but which is required to be notified under the provision of No. 4146/639AQ as a result of coordination for or notification of an earth station assignment.

which has not been notified under No. 4280/486

after its entry  
into useSUP 4287/492GB §4.  
Spa2

NOC      4288 493      § 5. (1) Whatever the means of communication, including telegraph, by which a notice  
            Spa2      is transmitted to the Board, it shall be considered complete if it contains at least those  
                         appropriate basic characteristics specified in Appendix 1.

SUP      4289 494 (2)  
            Spa

NOC      4290 495      § 6.      When a service or regional agreement has been concluded, the Board shall be  
                         informed of the details of this agreement.

**Section II. Procedure for the Examination of Notices and the Recording  
of Frequency Assignments in the Master Register**

MOD      4291 496      § 7.      Any notice submitted under Nos. 4280/486,  
                         4281/487 and 4284/490 which does not contain at least those basic  
                         characteristics specified in Appendix 1 shall be returned by the  
                         Board, by airmail, to the notifying administration with the  
                         reasons therefor unless the information not provided is immediately  
                         forthcoming in response to an enquiry of the Board. The Board  
                         shall advise the administration by telegram when a notice is  
                         returned under this provision.

MOD      4292 497      § 8.      Upon receipt of a complete notice, the  
                         Board shall include the particulars thereof, with the date of  
                         receipt, in a weekly circular to be published within a period of  
                         forty days after receipt of the notice and sent by airmail to  
                         all administrations. When the Board is not in a position to  
                         comply with this time-limit, it shall, as soon as possible, so  
                         inform the administrations concerned giving the reasons therefor.

MOD 4293 498 § 9. The circular shall contain the full particulars, of all such notices received since the publication of the previous circular and shall constitute the acknowledgement to each notifying Administration of the receipt of the complete notice. Notices submitted under No. 4280A in the form of a request for assistance from the Board shall be grouped together and specially identified.

ADD 4293A For the purpose of Nos. 4292/497 and 4293/498, notices submitted under No. 4280A in the form of a request for assistance from the Board shall be grouped together and specially identified.

MOD 4294 499 § 10. Complete notices shall be considered by the Board in the order specified in ~~No. 4289/494~~. The Board cannot postpone the formulation of a finding unless it lacks sufficient data to render a decision in connection therewith: moreover, the Board shall not act upon any notice which has a technical bearing on an earlier notice still under consideration by the Board, until it has reached a finding with respect to such earlier notice.

of their receipt, however, notices submitted under No. 4208A shall be treated immediately upon receipt.

[URS/63A/27 ADD 4294A The results of the Board's consideration of complete notices shall be published in the weekly circular within 60 days from the date of receipt of such notices, except in cases where the Board has failed to reach a finding because of a technical link with an earlier notice. In such cases the Board shall notify the Administration which has submitted the notice being considered by the Board for which the finding is held up and shall communicate to it particulars of the notice causing the delay.]

Spa2

Sub-Section IIA. Procedure to be followed in cases not covered by Sub-Sections IIB to [IIE] of this Article

which are dealt with in  
Nos. 4326A - 4326M

No. 4280A ←

MOD 4295 500

§ 11. (1) Except for notices referred to in Nos. ~~4336/541, 4344/547, 4351/552, 4359/561 and 4366/568~~, the Board shall examine each notice with respect to

MOD 4296 501  
Spa2

a) its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations with the exception of those relating to the probability of harmful interference which are the subject of the following paragraphs :

MOD 4297 502

b) the probability of harmful interference to the service rendered by a station for which a frequency assignment already recorded in the Master Register:

1) bears a date in Column 2a (see No. 4439/607); or

2) is in conformity with the provisions of No. 4296/501 and bears a date in Column 2b (see No. 4440/608), but has not, in fact, caused harmful interference to any frequency assignment with a date in Column 2a or to any assignment in conformity with No. 4296/501 with an earlier date in Column 2b; or

NOC 4298 503

c) the probability of harmful interference to the service rendered by a station for which a frequency assignment already recorded in the Master Register ~~[with the exception of those with a symbol [C] in Column 13c,]~~

- 1) is in conformity with the provisions of No. 4296/501 and either bears a symbol<sup>1</sup> in Column 2d (see No. 4442/610), or was recorded in the Master Register with a date in this column as a result of a favourable finding with respect to No. 4298/503: *or*
- 2) is in conformity with the provisions of No. 4296/501 and was recorded in the Master Register with a date in Column 2d after an unfavourable finding with respect to No. 4298/503, but has not, in fact, caused harmful interference to any frequency assignment previously recorded in the Master Register and which is in conformity with No. 4296/501.

ADD 4298A

In conducting the examination under No. 4297/502 or No. 4298/503, the Board shall apply protection criteria for class of operation A higher than for class of operation B. The Board shall disregard the probability of interference to frequency assignments of class of operation C.

MOD 4299 504

(2) ~~The Board shall not make the examination specified in No. 4297/502 where the notice refers to a broadcasting station in Region 2 in the band 535-1 605 kHz.~~ When the notice relates to a frequency above 28 000 kHz, the Board shall only make the examination specified in No. 4298/503 at the request of an administration directly concerned or affected when co-ordination has not been possible between the administrations involved.

NOC 4300 505

(3). Where appropriate, the Board shall also examine the notice with respect to its conformity with a regional or service agreement. The procedure to be followed in connection with frequency assignments made pursuant to such an agreement shall be as specified in Nos. 4296/501 and 4297/502 or 4298/503 except that the Board shall not consider the question of the probability of harmful interference among the parties to such agreement. Similarly, the Board shall not consider the probability of harmful interference to the assignments of any administration with which co-ordination has been effected.

4298.1 503.1

<sup>1</sup> This symbol indicates an assignment notified pursuant to No. 272 of the Agreement of the Extraordinary Administrative Radio Conference, Geneva, 1951, or, in the frequency bands above 27 500 kHz, an assignment for which the notice was received by the Board before 1 April 1952.

MOD      4301 506      § 12. Depending upon the findings of the Board subsequent to the examination prescribed in Nos. 4296/501 and 4297/502 or 4298/503, further action shall be as follows:

and the result of the action undertaken by the Board pursuant to / Nos. 4298A, 4326A and 4326AA\_7

NOC      4302 507      § 13. (1) *Finding Favourable with Respect to No. 4296/501 in cases where the Provisions of Nos. 4297/502 or 4298/503 are not applicable (see No. 4299/504).*

NOC      4303 508      (2) The assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt of the notice by the Board.

NOC      4304 509      § 14. (1) *Finding Favourable with Respect to Nos. 4296/501 and 4297/502 or 4298/503.*

NOC      4305 510      (2) The assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt of the notice by the Board.



NOC        4306 511

(3) However, should the examination show that the probability of harmful interference for certain hours, seasons, or periods of solar activity is slightly greater than is considered desirable, a remark shall be included in the Master Register to show that there exists a slight probability of harmful interference and hence precautions must be taken in the use of the assignment to avoid harmful interference to assignments already recorded in the Master Register.

NOC        4307 512

§ 15. (1) *Finding Favourable with Respect to No. 4296/501 but Unfavourable with Respect to Nos. 4297/502 or 4298/503.*

NOC        4308 513

(2) The notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem in respect of those administrations it has identified.

NOC        4309 514

(3) Should the notifying administration resubmit the notice with modifications which result, after re-examination, in a favourable finding by the Board with respect to Nos. 4297/502 or 4298/503, the assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the original notice. The date of receipt by the Board of the resubmitted notice shall be indicated in the Remarks Column.

MOD 4310/515

(4) The notifying administration may resubmit the notice either unchanged, or with modifications which decrease the probability of harmful interference. In cases where such modifications do not permit the application of No. 4309/514 and the Board's finding remains unchanged, should the notifying administration insist upon reconsideration of its notice and state that it has brought its assignment into use, the Board shall :

ADD 4310A

a) publish the notice together with the information received from the administration under No. 4310 in the weekly circular indicating all the administrations which are likely to be affected,

ADD 4310B

b) simultaneously send a telegram to each of the administrations referred to in No. 4310A asking them to inform the Board :

- if the recorded assignment is still in use and, if so whether it is being used with the notified basic characteristics;
- of any harmful interference that occurs within a period of two months from the date of publication of the weekly circular referred to in No. 4310A.

ADD 4310BA

c) take appropriate action in conformity with Nos. 5144 to 5146, if the assignment, which is the basis of the unfavourable Finding, had been submitted under No. 4280A,

ADD 4310C            d) if, on expiry of the period referred to in No. 4310B the Board has received no report of harmful interference it shall record the assignment in the Master Register; the date to be entered in the appropriate part of Column 2 according to the relevant provision of Section III of this Article shall be the date of receipt by the Board of the original notice.

ADD 4310D            e) if the Board receives a report that harmful interference has occurred during the two months mentioned in No. 4310B, it shall immediately return the notice to the notifying administration informing it of the reported interference and shall make such suggestions as it may be able to offer for the elimination of the interference.

ADD 4310E            (4A) If a complaint of harmful interference is received by the Board after the recording of an assignment under the provisions of No. 4310C, the Board shall investigate the matter and, where appropriate, shall enter a special remark against such an assignment to show that it will not be taken into account when acting upon any later notice.

MOD 4311/516 (5) If, as a result of the information received under No. 4310B, the Board \_\_\_\_\_ is able to reach a favourable finding with respect to Nos. 4297/502 or 4298/503 with regard to any assignment recorded under the provisions of No. 4310/515, the appropriate changes shall be made in respect of the entry of that assignment in the Master Register. If the finding remains unfavourable, the Board shall enter suitable remarks in the Master Register for the entry or entries concerned which describe the situation as it has been found by the Board to exist.

SUP 4312/517 (6)

NOC 4313 518

(7) Should the notifying administration resubmit the notice with modifications which increase the probability of harmful interference, and should the Board's finding remain unchanged, the resubmitted notice shall be treated under No. 4308/513.

NOC 4314 519

§ 16. (1) *Finding Unfavourable with Respect to No. 4296/501 in cases where the Provisions of Nos. 4297/502 or 4298/503 are not applicable (see No. 4299/504).*

MOD 4315 520

(2) Where the notice includes a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, the assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the notice.

subject to the provisions of No. 4443/611.

NOC 4316 521

(3) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, it shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.

SUP 4317 522

(4)

NOC 4318 523

*§ 17. (1) Finding Unfavourable with Respect to No. 4296/501 in cases where the Provisions of Nos. 4297/502 or 4298/503 are applicable.*

NOC 4319 524

(2) Where the notice includes a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, it shall be examined immediately with respect to Nos. 4297/502 or 4298/503, and the provisions of Nos. 4320/525 or 4321/526 applied, as appropriate.

MOD 4320 525

(3) If the finding is favourable with respect to Nos. 4297/502 or 4298/503 the assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the notice.

subject to the provisions of No. 4443/611.

MOD 4321/526

(4) If the finding is unfavourable with respect to Nos. 4297/502 or 4298/503, the notice shall be returned immediately by airmail to the notifying administration. Should the administration insist upon reconsideration of the notice, the assignment shall be recorded in the Master Register. However, this entry shall be made only if the notifying administration informs the Board that the assignment has been in use for at least sixty days without any complaint of harmful interference having been received. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the original notice. The date of receipt by the Board of the advice that no complaint of harmful interference has been received shall be indicated in the Remarks Column. The procedure set forth in Nos. 4310/515 to 4310E shall be applied. Any entry in the Master Register shall be made subject to the provisions of No. 4443/611. The notice shall be recorded with an appropriate remark referring to No. 4443/611 for information only.

the frequency assignment

MOD 4322 527

(5) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, it shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.

together

is

SUP 4323 528

(6)

SUP 4324 529

(7)

SUP 4325 530

(8)

SUP 4326 531 (9)

ADD 4326bis §17A Procedure to be followed in respect of Notices under No. 4280A.

ADD 4326A (1) In the case of a notice under No. 4280A relating to the selection of a frequency assignment for regular operational use (class of operation A), the Board shall as quickly as possible, select an appropriate frequency which shall :

- a) be capable of providing the service required;
- b) be in conformity with Nos. 4296/501 and 4297/502 or 4298/503 as appropriate to ensure a favourable finding;
- c) be free from harmful interference from any assignment recorded in the Master Register which is itself in conformity with Nos. 4296/501 and 4297/502 or 4298/503 as appropriate.

ADD 4326AA In the case of a notice submitted under No. 4280A relating to a predetermined frequency, the notifying Administration may request the Board, in addition to the examination under Nos. 4296/501, 4297/502 or 4298/503 to examine the notice to assess the probability of harmful interference to the assignment from assignments recorded in the Master Register. The Board shall advise the notifying Administration of the results of the examination and where necessary shall make suggestions to avoid any possible harmful interference to the assignment.



- ADD 4326B                    When applying the provisions of Nos. 4326A and 4326AA, and, in case of difficulty, the procedure given below shall be followed :
- ADD 4326BA                a) the Board shall first seek access to one of the least loaded parts of an appropriate band, without considering the possibility of adjustment to any existing recorded assignment;
- ADD 4326BB                b) if necessary the Board shall consult the Administration having sent a notice under No. 4280A as to the possibility of modifying the characteristics of the required assignment;
- ADD 4326BC                c) should action under a) and b) fail, and should the requesting Administration find the selected frequency acceptable, the Board shall consider whether the required assignment could be found by suppressing or downgrading an existing recorded assignment. The enquiries to be made in such an event are those described in Section VII of this Article;
- ADD 4326BD                d) should action under c) fail, the Board shall then seek alternative means of finding the required assignment in such a way as to involve the minimum necessary modification of the characteristics of any existing recorded assignment;
- ADD 4326BE                e) for the purposes of the action envisaged under d) the Board shall concentrate its enquiries upon the older recorded assignments for which the Board believes there to be satisfactory alternative means of telecommunications;
- ADD 4326BF                f) the Board, having identified in such a case the minimum modification to the characteristics of an existing recorded assignment that would be needed to accommodate a new assignment requested under No. 4280A, shall invoke the relevant provisions of the Convention and shall seek the assistance of the appropriate administration to agree to make, at the appropriate stage, that modification to its recorded assignment;
- ADD 4326BG                g) should action under f) fail, the Board shall bring to the attention of the Administration concerned that in such a case there is then an obligation to reduce the assigned bandwidth, if operationally feasible, or to move the assigned frequency by an amount not exceeding the assigned bandwidth of the recorded frequency assignment on the condition that no harmful interference is caused to adjacent frequency assignments;
- ADD 4326BH                h) the Administration concerned shall then either :
- 1) give its agreement to effect the necessary modification to its existing recorded assignment together with the date upon which these will be effected, or;
- 2) give any reasons why the necessary modifications cannot be made;

- ADD 4326BI i) in the event of such a case remaining unresolved within three months of the request for an assignment being made under No. 4280A, the Board shall publish a report on the matter for the information of all Members of the Union;
- ADD 4326BJ j) the Board shall, when appropriate during this procedure, consult the Administration requesting an assignment under No. 4280A as to the acceptability of the selected frequency.
- ADD 4326BK k) if, in application of this paragraph, an Administration agrees to a change in the basic characteristics of its frequency assignment, that change shall be recorded in the Master Register without change in the original date or dates.
- ADD 4326C Administrations are urged to afford all possible assistance through their monitoring stations to help the Board in the successful discharge of its duties under this paragraph.
- ADD 4326D §17B. 1) Result of the Action of the Board under No. 4326A relating to a request for Assistance under No. 4280A.
- ADD 4326E 2) Having selected a frequency under No. 4326A the Board shall forthwith submit the selected frequency by telegram for the approval of the notifying administration, and shall make a provisional entry in the Master Register in accordance with No. 4332/537. The date of receipt of the request to the Board under No. 4280A shall be entered in the appropriate part of Column 2.
- ADD 4326F 3) The notifying administration, upon receipt of the telegram mentioned in No. 4326E, shall promptly examine the matter and in the event of non-acceptance of the selected frequency shall notify the Board thereof and shall give its reasons for such rejection.

- ADD 4326G 4) In the circumstances mentioned in No. 4326F, the Board shall cancel that entry and inform the Administration concerned accordingly. In such a case, if the notifying Administration requests, the Board shall make a further attempt to select an acceptable frequency but the request shall be regarded as a new notice under No. 4280A.
- ADD 4326H 5) The notifying administration, upon accepting a frequency selected by the Board, shall, as soon as possible, inform the Board thereof.
- ADD 4326I 6) If the Board receives no reply within two months to its telegram seeking approval for the selected frequency sent under No. 4326E, the provisional entry shall be cancelled and the Board shall inform the Administrations accordingly.
- ADD 4326J §17C. Result of the Action of the Board under No. 4326B relating to a request for Assistance under No. 4280A
- ADD 4326K Having selected a frequency under No. 4326B, if the necessary modifications to the previously recorded assignment are accepted in accordance with No. 4326BH-h) 1), the selected assignment shall be treated in accordance with No. 4326D.

ADD 4326L

Having selected a frequency under No. 4326B, if the necessary modification to this previously recorded assignment cannot be made as the result of action under sub-paragraph 2 of No. 4326BH and if the selected frequency is still acceptable to the requesting Administration, the Board shall make an entry in the Master Register in the name of the requesting Administration. The date of receipt of the request sent to the Board under No. 4280A is entered in the appropriate part of Column 2.

ADD 4326M

Any harmful interference which results from the simultaneous use of both assignments should be resolved by consultations between the Administrations concerned.

NOC 4327 532

**§ 18. (1) *Change in the basic Characteristics of Assignments already recorded in the Master Register.***

MOD 4328 533

(2) A notice of a change in the basic characteristics of an assignment already recorded, as specified in Appendix 1 (except those entered in Columns 3, 4a and 11 of the Master Register), shall be examined by the Board according to Nos. 4296/501 and 4297/502, 4298/503 or 4299/504, as appropriate, and the provisions of Nos. 4302/507 to 4326/531 inclusive applied. Where the change should be recorded, the assignment shall be amended according to the notice.

2c,

or the date of bringing into use

MOD 4329 534

(3) However, in the case of a change in the basic characteristics of an assignment - (except a change of the assigned frequency which exceeds half of the frequency band originally assigned, as defined in No. 3138/89) which is in conformity with No. 4296/501, should the Board reach a favourable finding with respect to Nos. 4297/502 or 4298/503, or find that the change does not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date in the appropriate part of Column 2. In addition, the date of receipt by the Board of the notice relating to the change shall be entered in the Remarks Column.

ADD 4329A

(3A) The projected date of bringing into use of a frequency assignment may be extended on request of the notifying Administration by three months. In the case where the Administration states that, due to exceptional circumstances, it needs a further extension of this period, such extension may be provided but it shall in no case exceed six months from the original projected date of bringing into use.

MOD 4330 535  
Spa

§ 19. In applying the provisions of the whole of ~~this Sub-Section~~ Sub-Sections IIA to IID, any resubmitted notice which is received by the Board more than ~~one hundred and eighty days~~ after the date of its return by the Board shall be considered as a new notice.

six months

NOC 4331 536

§ 20. (1) *Recording of Frequency Assignments notified before being brought into use.*

NOC      4332 537

(2) If a frequency assignment notified in advance of bringing into use has received favourable findings by the Board with respect to Nos. 4296/501 and 4297/502 or 4298/503 it shall be entered provisionally in the Master Register with a special symbol in the Remarks Column indicating the provisional nature of that entry.

MOD      4333 538

(3) Within thirty days (see No. 4285/491) after the date of bringing into use either as originally notified or as modified in application of No. 4329A, the notifying Administration shall confirm that the frequency assignment has been brought into use. When the Board is informed that the assignment has been brought into use, the special symbol shall be deleted from the Remarks Column.

MOD      4334 539

(4) If the Board does not receive this confirmation within the period referred to in No. 4333/538, the entry concerned shall be cancelled. The Board shall consult the Administration concerned before taking such action.

MOD 4335 540  
Mar2

(5) The provisions of Nos. 4332/537 to 4334/539 do not apply to frequency assignments which are in conformity with the Allotment Plans appearing in Appendices 25 Mar2/26 and 27 Aer2 to these Regulations; such frequency assignments shall be entered in the Master Register on receipt of the notice by the Board.

and 27 Rev.

NOC

Sub-Section IIB. Procedure to be followed for Coast Radiotelephone Stations operating in the Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz

NOC 4336 541  
Mar2

§ 21. (1) Examination of Notices concerning Frequency Assignments to Coast Radiotelephone Stations in the Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Coast Radiotelephone Stations (see No. 4295/500).<sup>4</sup>

NOC 4337 542  
Mar2

(2) The Board shall examine each notice covered by No. 4336/541:

NOC 4338 542A  
Mar2

a) with respect to the provisions of No. 4296/501 and in particular those of No. 8219/1351C:

NOC 4339 542B  
Mar2

b) in order to determine whether the notified assignment is in conformity with an allotment in the Allotment Plan contained in Appendix 25 Mar2 to these Regulations.

SUP 4336.1 541.1

- NOC      **4340** 543  
                 Mar2      (3) Any frequency assignment for which the finding is favourable with respect to Nos. **4338/542A** and **4339/542B** shall be recorded in the Master Register (see also No. **4335/540**). The date to be entered in Column 2a shall be that determined according to the relevant provisions of Section III of this Article.
- NOC      **4341** 543A  
                 Mar2      (4) Any frequency assignment for which the finding is unfavourable with respect to No. **4338/542A** shall be examined with respect to Nos. **4315/520** and **4316/521**. The date to be entered in Column 2b shall be determined according to the relevant provisions of Section III of this Article.
- NOC      **4342** 545  
                 Mar2      (5) In the case of a notice which has received a favourable finding with respect to No. **4338/542A** but unfavourable with respect to No. **4339/542B**, the Board shall examine this notice with respect to the probability of harmful interference to the service rendered by a radiotelephone coast station for which a frequency assignment:
- a) is in conformity with an allotment in the Allotment Plan and is already recorded in the Master Register or may be so recorded in the future: *or*
  - b) was recorded in the Master Register on a frequency specified in Appendix **[17 Rev.]** as a result of a favourable finding with respect to No. **4342/545**: *or*
  - c) was recorded in the Master Register on a frequency specified in Appendix **[17 Rev.]** after an unfavourable finding with respect to No. **4342/545**, but has not, in fact, caused harmful interference to any frequency assignment to a coast radiotelephone station previously recorded in the Master Register.
- NOC      **4343** 546  
                 Mar2      (6) According to the finding of the Board with respect to No. **4342/545**, further action shall be in accordance with the provisions of Nos. **4304/509** to **4313/518** inclusive, or Nos. **4327/532** to **4329/534** inclusive, as appropriate, it being understood that in those provisions No. **4342/545** shall be read for No. **4297/502**.



NOC      4344 547      § 22. (1) *Examination of Notices concerning Frequencies used for Reception by Coast Radiotelephone Stations in the Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Ship Radiotelephone Stations (see Nos. 4281/487 and 4295/500).*  
Mar2

NOC      4345 548      (2) The Board shall examine each notice covered by No. 4344/547:  
Mar2

NOC      4346 548A      a) with respect to the provisions of No. 4296/501 and in particular those of  
Mar2      No. 8220/1351D:

NOC      4347 548B      b) in order to determine whether the notified assignment corresponds to a  
Mar2      frequency associated, according to Appendix [17 Rev.] with a frequency  
allotted to the notifying administration in the Allotment Plan contained in  
Appendix [25 Mar2] to these Regulations.

NOC      4348 549      (3) Any frequency assignment for reception by a coast radiotelephone station for  
Mar2      which the finding is favourable with respect to Nos. 4346/548A and 4347/548B shall be  
recorded in the Master Register. The date to be entered in Column 2a shall be that determined  
according to the relevant provisions of Section III of the present Article.

SUP      4344.1 547.1  
Mar2

NOC      **4349 549A**  
             Mar2      (4) Any frequency assignment for reception by a coast radiotelephone station for which the finding is unfavourable with respect to No. **4346/548A** shall be examined with respect to Nos. **4315/520** and **4316/521**. The date to be entered in Column 2b shall be that determined according to the relevant provisions of Section III of this Article.

NOC      **4350 551**  
             Mar2      (5) Any assignment of a frequency for reception by a coast radiotelephone station which has received a favourable finding with respect to No. **4346/548A** but unfavourable with respect to No. **4347/548B** shall be recorded in the Master Register. The date to be entered in Column 2b shall be that determined according to the relevant provisions of Section III of the present Article.

NOC      **Sub-Section IIC. Procedure to be followed for Aeronautical  
Stations operating in the Bands allocated exclusively to the  
Aeronautical Mobile Services between [2 850 and 18 030] kHz**

NOC      **4351 552**      § 23. (1) *Examination of Notices concerning Frequency Assignments to Aeronautical Stations in the Aeronautical Mobile (R) Service in the Bands allocated exclusively to that Service between [2 850 and 17 970] kHz (see No. 4295/500).*

NOC      **4352 553**      (2) The Board shall examine each notice covered by No. **4351/552** to determine whether:

NOC      **4352A** 553A  
                 Aer2

a) the notice is in conformity with the provisions of No. 4296/501 ;

NOC      **4353** 554  
                 Aer

b) the frequency corresponds to one of the frequencies specified in Column I of the Allotment Plan for the aeronautical mobile (R) service contained in Part II, Section II, Article 2 of Appendix **[27 Aer2]** or the assignment is the result of a permissive change from one class of emission to another and the necessary bandwidth is within the channelling arrangement provided for in Appendix **[27 Aer2]**;

NOC      **4354** 555

c) the limitations of use set forth in Column 3 of the Plan have been appropriately observed;

NOC      **4355** 556  
                 Aer

d) the notice is in conformity with the technical principles of the Plan set forth in Appendix **[27 Aer2]**;

NOC      **4356** 557  
                 Aer2

e) the area of use is within the boundaries of the Areas as set forth in Column 2 of the Plan;

NOC      **4356A** 557A  
                 Aer2

(3) A notice which is not in conformity with the provisions of No. 4352A/553A shall be examined with respect to Nos. 4315/520 and 4316/521. The date to be entered in Column 2b shall be determined in accordance with the relevant provisions of Section III of this Article.

NOC      4357    558  
                 Aer2

(4) In the case of a notice in conformity with the provisions of Nos. 4352A/553A to 4355/556, but not with those of No. 4356/557, the Board shall examine whether the protection specified in Appendix [27 Aer2] (Part I, Section IIA, paragraph 5) is afforded to the allotments in the Plan. In doing so, the Board shall assume that the frequency will be used in accordance with the "Sharing conditions between areas" specified in Appendix [27 Aer2] Part I, Section IIB, paragraph 4.

NOC      4358    560  
                 Aer

(5) All frequency assignments referred to in No. 4351/552 shall be recorded in the Master Register according to the findings reached by the Board. The date to be entered in Column 2a or 2b shall be that determined according to the relevant provisions of Section III of this Article.

NOC      4359    561

*§ 24. (1) Examination of Notices concerning Frequency Assignments to Aeronautical Stations in the Aeronautical Mobile (OR) Service in the Bands allocated exclusively to that Service between [3 025 and 18 030] kHz (see No. 4295/500).*

NOC      4360    562

(2) The Board shall examine each notice covered by No. 4359/561 to determine whether:

NOC      4361    563

a) the assignment is in conformity with the primary allotments in the Allotment Plan for the aeronautical mobile (OR) service and the conditions specified in Appendix [26] (Parts III and IV);

NOC 4362 564

- b) the assignment is in conformity with or satisfies the requirements for secondary allotments in the Allotment Plan for the aeronautical mobile (OR) service and the conditions specified in Appendix ~~26~~ (Part III, Section II, paragraph 4, sub-paragraph d), and Part IV). In applying these provisions, the Board shall assume that the frequency will be used on a day-time basis:

NOC 4363 565

- c) the assignment is the result of a permissive change from one class of emission to another, its occupied bandwidth is within the channelling arrangement provided for in Appendix ~~26~~ (Part III, Section II, paragraphs 1 and 2), and it meets all the conditions for a primary or secondary allotment in the Plan, except that the assigned frequency does not correspond numerically with one of the frequencies specified therein.

NOC 4364 566

- (3) The technical criteria to be employed by the Board in its examination of these notices shall be those in Appendix ~~26~~ (Part III).

NOC 4365 567

- (4) All frequency assignments referred to in No. 4359/561 shall be recorded in the Master Register according to the findings reached by the Board. The date to be entered in Column 2a or 2b shall be that determined according to the relevant provisions of Section III of this Article.

NOC

**Sub-Section IID. Procedure to be followed for  
Broadcasting Stations operating in the Bands allocated  
exclusively to the Broadcasting Service between [5 950 and 26 100] kHz**

MOD 4366 568

**§ 25. (1)** Frequency Assignments to Broadcasting Stations in the Bands allocated exclusively to the Broadcasting Service between [5 950 and 26 100] kHz shall be dealt with in accordance with the provisions of Article N15/10 and shall be included only in the annual list referred to in No. 4892/655, which shall be considered as a supplement to the International Frequency List.

SUP 4367 569

(2)

SUP 4368 570

(3)

NOC

Spa2

**Sub-Section IIE. Procedure to be followed in cases where Terrestrial Stations are in the same frequency Band as, and within the co-ordination area of, an existing earth station or one for which co-ordination has been effected or initiated**

NOC

4369 570AA  
Spa

§ 26.

The Board shall examine each notice:-

MOD

4370 570AB  
Spa

- a) with respect to its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations with the exception of those relating to the co-ordination procedure and the probability of harmful interference which are the subject of the following sub-paragraphs;

NOC

4371 570AC  
Spa

- b) with respect to its conformity with the provisions of No. 4160/492A relating to co-ordination of the use of the frequency assignment with the other administrations concerned;

NOC

4372 570AD  
Spa2

- c) where appropriate, with respect to the probability of harmful interference to the service rendered by an earth receiving station for which a frequency assignment already recorded in the Master Register is in conformity with the provisions of No. 4587/639BM and if the corresponding frequency assignment to the space transmitting station has not, in fact, caused harmful interference to any frequency assignment in conformity with Nos. 4296/501 or 4370/570AB, as appropriate, previously recorded in the Master Register. 7

MOD

4372/570AD

- c) with respect to the probability of harmful interference, when the coordination under No. 4160/492A has not been successfully effected; this examination shall take into account the frequency assignments for reception already recorded in the Master Register in application of Nos. 4606/639CD, 4607/639CG, 4611/639CK or 4615/639CO. 7

NOC     **4373 570AE**     § 27.     Depending upon the findings of the Board subsequent to the examination  
         Spa           prescribed in Nos. **4370/570AB**, **4371/570AC** and **4372/570AD**, further action shall be as  
                         follows:

NOC     **4374 570AF**     § 28. (1) *Finding Unfavourable with Respect to No. 4370/570AB.*  
         Spa

MOD     **4375 570AG**     (2) Where the notice includes a specific reference to the fact that the station will be  
         Spa2           operated in accordance with the provisions of No. **3279/115**, and

the finding is favourable with respect to Nos. **4371/570AC** or **4372/570AD**,  
as appropriate, the assignment shall be recorded in the Master Register. The date of receipt  
by the Board of the notice shall be entered in Column 2d.

subject to the provisions of  
No. **4443/611**.

SUP     **4376 570AGA**     (3)

MOD     **4377 570AGB**     (4) If the finding is unfavourable with respect to Nos. **4371/570AC** or  
         Spa2           **4372/570AD**, as appropriate, the notice shall be returned immediately by airmail to the  
                         notifying administration with the reasons of the Board for this finding.  
Should the administration insist upon reconsideration of the  
notice, the assignment shall be recorded in the Master Register  
with the understanding that the provisions of No. **4443/611** shall  
be applied. The date of receipt by the Board of the original  
notice shall be entered in Column 2d.



SUP 4378 570AGC (5)  
Spa2

MOD 4379 570AH  
Spa2

(6) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115, it shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board ~~may be~~ able to offer with a view to the satisfactory solution of the problem.

together

is

SUP 4380 570AI (7)  
Spa2

MOD 4381 570AJ  
Spa2

(8) If the notifying administration resubmits the notice with a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115, it shall be treated ~~[in accordance with the provisions of Nos. 4375/570AG and 4376/570AGA or No. 4377/570AGB, as appropriate.]~~

as a new notice

SUP      4382 570AK      (9)  
             Spa2

NOC      4383 570AL      § 29. (1) *Finding Favourable with Respect to No. 4370/570AB.*  
             Spa

NOC      4384 570AM      (2) Where the Board finds that the co-ordination procedure mentioned in  
             Spa      No. 4371/570AC has been successfully completed with all administrations whose earth  
                         stations may be affected, the assignment shall be recorded in the Master Register. The date  
                         of receipt by the Board of the notice shall be entered in Column 2d.

MOD      4385 570AN      (3) Where the Board finds that the coordination procedure  
             Spa      mentioned in No. 4371/570AC has not been applied and

ADD      4385A      a) if the notifying administration requests the Board to effect  
                         the required coordination, the Board shall take the appropriate  
                         action; if the Board's efforts toward securing agreement are  
                         successful it shall so inform the administrations concerned and  
                         shall treat the notice in accordance with No. 4384/570AM;

ADD      4385B      b) if the Board's efforts toward securing agreement in  
                         application of Nos. 4385A or 4170/492D are unsuccessful, or if, when  
                         notifying the assignment, the administration states that it has been  
                         unsuccessful and does not request the Board to effect the required  
                         coordination, the Board shall examine the notice with respect to  
                         the provisions of No. 4372/570AD. At the same time, the Board shall  
                         so inform the administrations concerned.

MOD 4386 570AO ~~(4)~~ c) if the notifying administration does not request the Board Spa to effect the required coordination, the notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this action together with such suggestions as the Board is able to offer with a view to the satisfactory solution of the problem.

NOC 4387 570AP (5) Where the notifying administration resubmits the notice and the Board finds that Spa the co-ordination procedure mentioned in No. 4371/570AC has been successfully completed with all administrations whose earth stations may be affected, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column.

MOD 4388 570AQ (6) Where the notifying Administration resubmits the notice Spa with a request that the Board effect the required coordination, it shall be treated in accordance with the provisions of Nos. 4385/570AN, 4385A or 4385B. However, in any subsequent recording of the assignment, the date of receipt by the Board of the resubmitted notice shall be entered in the Remarks Column.

-SUP      **4389 570AR**      (7)  
                 Spa

NOC      **4390 570AS**      § 30. (1) *Finding Favourable with Respect to Nos. 4370/570AB and 4372/570AD.*  
                 Spa

NOC      **4391 570AT**      (2) The assignment shall be recorded in the Master Register. The date of receipt by the  
                 Spa      Board of the notice shall be entered in Column 2d.

NOC      **4392 570AU**      § 31. (1) *Finding Favourable with Respect to No. 4370/570AB but Unfavourable with*  
                 Spa      *Respect to No. 4372/570AD.*

MOD      **4393 570AV**      (2) The notice shall be returned immediately by airmail to the notifying administration  
                 Spa      with the reasons of the Board for this finding ~~and~~ with such suggestions as the Board ~~may be~~ is  
                 able to offer with a view to the satisfactory solution of the problem.

together

NOC 4394 570AW  
Spa (3) Should the notifying administration resubmit the notice with modifications which result, after re-examination, in a favourable finding by the Board with respect to No. 4372/570AD, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the resubmitted notice shall be indicated in the Remarks Column.

MOD 4395 570AX  
Spa2 (4) Should the notifying administration resubmit the notice, either unchanged, or with modifications which decrease the probability of harmful interference, but not sufficiently to permit the provisions of No. 4394/570AW to be applied, and should that administration insist upon reconsideration of the notice, but should the Board's finding remain unchanged, the assignment shall be recorded in the Master Register. However, this entry shall be made only if the notifying administration informs the Board that the assignment has been in use for at least ~~one hundred and twenty days~~ without any complaint of harmful interference having been received. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the advice that no complaint of harmful interference has been received shall be indicated in the Remarks Column. ~~The period of one hundred and twenty days shall count from the date indicated in No. 4378/570AGC.~~

4 months counting from the date  
when both are in service

NOC 4396 570AZ  
Spa § 32. (1) *Change in the Basic Characteristics of Assignments already recorded in the Master Register.*

sections A or B,

notified under  
No. 4283/489

MOD 4397 570BA  
Spa2 (2) A notice of a change in the basic characteristics of an assignment already recorded, as specified in Appendix 1 (except those entered in Columns 3 and 4a of the Master Register) shall be examined by the Board according to Nos. 4370/570AB and 4371/570AC and, where appropriate, No. 4372/570AD and the provisions of Nos. 4374/570AF to 4395/570AX inclusive applied. Where the change should be recorded, the original assignment shall be amended according to the notice.

or a notice under No. 4283/489  
concerning an assignment  
recorded under No. 4284/490  
(Appendix 1, Section C)

2c,

NOC 4398 570BB  
Spa

(3) However, in the case of a change in the basic characteristics of an assignment which is in conformity with No. 4370/570AB, should the Board reach a favourable finding with respect to No. 4371/570AC, and, where its provisions are applicable, with respect to No. 4372/570AD, or find that the change does not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date in Column 2d. In addition, the date of receipt by the Board of the notice relating to the change shall be entered in the Remarks Column.

ADD 4398A

(3A) The projected date of bringing into use of a frequency assignment may be extended on request of the notifying administration by three months. In the case where the administration states that, due to exceptional circumstances, it needs a further extension of this period, such extension may be provided but it shall in no case exceed six months from the original projected date of bringing into use.

NOC 4399 570BC  
Spa2

§ 33. In applying the provisions of this Sub-Section, any resubmitted notice which is received by the Board more than two years after the date of its return by the Board, shall be considered as a new notice.

NOC 4400 570BD  
Spa

§ 34. (1) *Recording of Frequency Assignments notified before being brought into use.*

NOC 4401 570BE  
Spa

(2) If a frequency assignment notified in advance of bringing into use has received a favourable finding by the Board with respect to Nos. 4370/570AB and 4371/570AC and, where appropriate, with respect to No. 4372/570AD, it shall be entered provisionally in the Master Register with a special symbol in the Remarks Column indicating the provisional nature of that entry.

MOD 4402 570BF

(3) Within thirty days after the date of bringing into use, either as originally notified or as modified in application of No. 4398A, the notifying administration shall confirm that the frequency assignment has been brought into use. When the Board is informed that the assignment has been brought into use, the special symbol shall be deleted from the Remarks Column.

NOC 4403 570BG  
Spa2

(4) In the circumstances described in No. 4395/570AX, and as long as an assignment which received an unfavourable finding cannot be resubmitted as a consequence of the provisions of No. 4378/570AGC, the notifying administration may ask the Board to enter the assignment provisionally in the Master Register, in which event a special symbol to denote the provisional nature of the entry shall be entered in the Remarks Column. The Board shall delete this symbol when it receives from the notifying administration, at the end of the period specified in No. 4395/570AX, the information relating to the absence of complaint of harmful interference.

MOD 4404 570BH

(5) If the Board does not receive this confirmation within the period referred to in No. 4402/570BF the entry concerned shall be cancelled. The Board shall consult the Administration concerned before taking such action.

NOC

### Section III. Recording of Dates and Findings in the Master Register

MOD 4405 571

§ 35. In any case where a frequency assignment is recorded in the Master Register, the finding reached by the Board shall be indicated by a symbol in Column 13a. In addition, ~~a remark indicating~~ the reasons for ~~any~~ unfavourable finding shall be inserted in the Remarks Column.

reaching an

MOD 4406 572  
Spa

§ 36. The procedure for recording dates in the appropriate part of Column 2 of the Master Register which shall be applied according to the frequency bands and services concerned is described in the following Nos. 4407/573 to 4436/604 for frequency assignments referred to in Sub Sections IIA to IID.

NOC 4407 573  
Mar2

§ 37. (1) *Frequency Bands:*

10	-	2 850	kHz
3 155	-	3 400	kHz
3 500	-	3 900	kHz in Region 1
3 500	-	4 000	kHz in Region 2
3 500	-	3 950	kHz in Region 3
4 219.4	-	4 349.4	kHz
6 325.4	-	6 493.9	kHz
8 435.4	-	8 704.4	kHz
12 652.3	-	13 070.8	kHz
16 859.4	-	17 196.9	kHz
22 310.5	-	22 561	kHz

MOD 4408 574

(2) For any assignment to which the provisions of Nos. 4305/510, 4306/511 or 4309/514 apply, the relevant date shall be entered in Column 2a of the Master Register; however for class of operation B assignments to stations of the fixed service the relevant date shall be entered in Column 2b.

NOC 4409 575

(3) For any assignment to which the provisions of Nos. 4310/515, 4313/518, 4315/520, 4317/522, 4320/525, 4321/526, 4325/530 or 4326/531 apply, the relevant date shall be entered in Column 2b of the Master Register.



SUP 4410 576 (4)

MOD 4411 577  
Mar2 § 38. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Coast Radiotelephone Stations.*

NOC 4412 578  
Mar2 (2) If the finding is favourable with respect to Nos. 4338/542A and 4339/542B, the date of 7 June 1974 shall be entered in Column 2a.

NOC 4413 580  
(3) For all other cases referred to in No. 4336/541, the relevant date shall be entered in Column 2b (see Nos. 4305/510, 4309/514, 4310/515, 4313/518, 4328/533 and 4329/534).

SUP 4411.1 577.1  
Mar2

NOC 4414 581

(4) For assignments to stations other than radiotelephone coast stations, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

MOD 4415 582  
Mar2

§ 39. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between*  
*[4 000 and 23 000] kHz for Ship Radiotelephone Stations.*

NOC 4416 583  
Mar2

(2) If the finding is favourable with respect to Nos. 4346/548A and 4347/548B, the date of 7 June 1974 shall be entered in Column 2a.

NOC 4417 585

(3) In all other cases covered by No. 4344/547, the date of receipt of the notice by the Board shall be entered in Column 2b.

NOC 4418 586

(4) For assignments other than assignments of frequencies for reception by radiotelephone coast stations, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

SUP 4415.1 582.1  
Mar2

NOC      4419 587      § 40. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between*  
*[4 000 and 25 110] kHz for Radiotelegraph Ship Stations (see No. 4282/488).*

NOC      4420 588      (2) For assignments to stations other than radiotelegraph ship stations, the relevant  
date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

NOC      4421 589      § 41. (1) *Frequency Bands allocated exclusively to the Aeronautical Mobile (R) Service*  
*between [2 850 and 17 970] kHz.*

MOD      4422 590  
Aer      (2) If the finding is favourable with respect to Nos. 4353/554 to 4356/557, the date of  
[ 5 March 1978 ] shall be entered in Column 2a.

MOD      4423 591  
Aer      (3) If the finding is favourable with respect to No. 4357/558, the date of  
[ 5 March 1978 ] shall be entered in Column 2b.

MOD 4424 592

(4) In all other cases covered by No. 4351/552, the date of 6 March 1978 shall be entered in Column 2b by the Board.

NOC 4425 593

(5) For assignments to stations other than aeronautical stations in the aeronautical mobile (R) service, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

NOC 4426 594

§ 42. (1) *Frequency Bands allocated exclusively to the Aeronautical Mobile (OR) Service between 3 025 and 18 030 kHz.*

NOC 4427 595

(2) If the finding is favourable with respect to No. 4361/563, the date of 3 December 1951 shall be entered in Column 2a.

NOC 4428 596

(3) If the finding is favourable with respect to No. 4362/564, the date of 3 December 1951 shall be entered in Column 2b.

NOC 4429 597

(4) If the provisions of No. 4363/565 are found to be applicable, the date of 3 December 1951 shall be entered in Column 2a for a primary allotment, or in Column 2b for a secondary allotment.

NOC 4430 598

(5) In all other cases covered by No. 4359/561, the date of receipt of the notice by the Board shall be entered in Column 2b.

NOC 4431 599

(6) For assignments to stations other than aeronautical stations in the aeronautical mobile (OR) service, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

SUP 4432 600 543 (1)

SUP 4433 601 (2)

SUP 4434 602 (3)

NOC 4435 603

§ 44. (1) *Frequency Bands between ~~3 950 kHz~~ <sup>[4 000]</sup> kHz in Region 2) and ~~28 000~~ <sup>[28 000]</sup> kHz other than those allocated exclusively to the Aeronautical Mobile Service, Maritime Mobile Service, Broadcasting Service or Amateur Service, and Frequency Bands above ~~28 000~~ <sup>[28 000]</sup> kHz.*

NOC 4436 604

(2) For any frequency assignment which is to be recorded under the provisions of Section II of this Article, the relevant date shall be entered in Column 2d of the Master Register.

NOC 4437 605

§ 45. *Date to be entered in Column 2c.*

MOD 4438 606

The date to be entered in Column 2c shall be the date of putting into use notified by the administration concerned (see Nos. 4285/491 and 4286/492). However, in cases covered by No. 4366/568, the date to be entered in this column shall be either the date of implementation of the schedule from which the assignment was extracted, or the notified date of putting into use, whichever is the later.

NOC

#### Section IV. Categories of Frequency Assignments

MOD 4439/607

§ 46 (1) Any frequency assignment which bears a date in Column 2a of the Master Register shall have the right to international protection from harmful interference; so shall class of operation A assignments to stations of the fixed service in the appropriate bands between 3 000 kHz and 27 500 kHz recorded as a result of a favourable finding with respect to Nos. 4296/501 and 4298/503, in particular those resulting from the application of No. 4280A.

NOC 4440 608

(2) Any frequency assignment which bears a date in Column 2b is recorded in the Master Register in order that administrations may take into account the fact that the frequency assignment concerned is in use. This recording shall not give the right to international protection to the frequency assignment concerned, except as provided for in No. 4297/502, sub-paragraph 2).

NOC 4441 609

(3) For frequency assignments having dates in two parts of Column 2, the date in Column 2c is given for information only.

NOC 4442 610

[ (4) The existence of a symbol in Column 2d for a particular frequency assignment and of a date in that column for another assignment is not in itself to be considered as having any significance. ]

MOD 4443 611

(5) If harmful interference to the reception of any station whose assignment is in accordance with No. 4296/501 is actually caused by the use of a frequency assignment which is not in conformity with No. 4296/501, the station using the latter frequency assignment ~~must immediately eliminate this harmful interference~~

or 4370/570AB

shall

- thereof,  
immediately eliminate  
this harmful interference

MOD 4444 611A  
Spa2

(6) If harmful interference to the reception of any station whose assignment is in accordance with No. 4587/639BM is actually caused by the use of a frequency assignment which is not in conformity with Nos. 4296/501 or 4370/570AB, the station using the latter frequency assignment ~~must~~, upon receipt of advice thereof, immediately eliminate this harmful interference.

shall

NOC

**Section V. Review of Findings**

NOC 4445 612

**§ 47. (1) The review of a finding by the Board may be undertaken:**

- at the request of the notifying administration,**
- at the request of any other administration interested in the question, but only on the grounds of actual harmful interference,**
- on the initiative of the Board itself when it considers this is justified.**

NOC 4446 613  
Spa

**(2) The Board, in the light of all the data at its disposal, shall review the matter, taking into account Nos. 4296/501 or 4370/570AB and Nos. 4297/502, 4298/503, 4371/570AC or 4372/570AD, as appropriate, and shall render an appropriate finding, informing the notifying administration prior either to the promulgation of its finding or to any recording action.**

NOC 4447 614

**§ 48. If a review of an unfavourable finding has been requested by the notifying administration on the grounds of special assistance to meet an urgent and essential need in a case where harmful interference has been experienced, the Board shall consult immediately the administrations concerned and shall make such suggestions as will facilitate the operation of the assignment of the administration which asked for special assistance; such amendments as result from this consultation shall be made to the Master Register.**



NOC 4448 615  
Spa § 49. (1) After actual use for a reasonable period of an assignment which has been entered in the Master Register on the insistence of the notifying administration, following an unfavourable finding with respect to Nos. 4297/502, 4298/503 or 4372/570AD, as appropriate, this administration may request the Board to review the finding. Thereupon the Board shall review the matter, first having consulted the administrations concerned.

NOC 4449 616 (2) If the finding of the Board is then favourable, it shall enter in the Master Register the changes that are required so that the entry shall appear in the future as if the original finding had been favourable.

NOC 4450 617 (3) If the finding with regard to the probability of harmful interference remains unfavourable, no change shall be made in the original entry.

SUP 4451 618 § 50.

ADD 4451A

In the event of a deletion or modification of any recorded frequency assignment which had been the cause of an unfavourable finding and had led a later assignment to be recorded under No. 4310/515, the Board shall review, and, where appropriate, modify that unfavourable finding with respect to Nos. 4297/502 or 4298/503.

ADD 4451B

To provide a basis for the review of an entry in the Master Register made in accordance with No. 4310/515, the Board shall, when examining the relevant notice, determine the date upon which the review is to be made. If by that date no complaint of harmful interference has been received by the Administration concerned, the Board shall automatically reverse the original unfavourable finding with respect to No. 4297/502 or No. 4298/503.

MOD

Section VI. Maintenance of the Master Register

ADD 4451C

**§ 50A Modification, Cancellation and Review of Entries  
in the Master Register**

NOC 4452 619

**§ 51. In case of permanent discontinuance of the use of any recorded frequency assignment, the notifying administration shall inform the Board within three months of such discontinuance, whereupon the entry shall be removed from the Master Register.**

NOC 4453 620 § 52. Whenever it appears to the Board from the information available that a recorded assignment has not been brought into regular operation in accordance with the notified basic characteristics, or is not being used in accordance with those basic characteristics, the Board shall consult the notifying administration and, subject to its agreement, shall either cancel or suitably modify the entry.

NOC 4454 621 § 53. If, in connection with an enquiry by the Board under Nos. 4311/516 or 4453/620, the notifying administration has failed to supply the Board within ninety days with the necessary or pertinent information, the Board shall disregard the assignment concerned when acting upon any later notice, until such time as it has been informed that the assignment is being used as notified, or until it has received the information required. The Board shall make suitable entries in the Remarks Column of the Master Register to indicate the situation, and in particular the period when the assignment was not taken into account by the Board.

SUP 4455 622 § 54.

ADD 4454A. § 54A.(1) Periodic examination of the Master Register.

- ADD 4454B (2) The Board shall institute a long-term programme of periodic reviews of each section of the Master Register with the aim of improving and maintaining its accuracy.
- ADD 4454C (3) For the purpose of the reviews mentioned in No. 4454B the Board shall send to each Administration, for revision and return, a national extract of the Master Register relating to the particular section under review. The Board shall at the same time draw the attention of Administrations to any assignment to a station in the fixed service in frequency bands between 3 000 kHz and 27 500 kHz for which other means of telecommunications are believed to be available.
- ADD 4454D (4) Administrations shall, having regard to the need to improve and maintain the accuracy of the Master Register, cooperate in these periodic reviews by deleting any unused assignment and, where appropriate, by modifying the remaining entries.
- ADD 4454E (5) The Board shall include in its annual report to Administrations a section relating to the work done under this provision, the results achieved, and the programme for the following year.

NOC

**Section VII. Studies and Recommendations**

NOC      **4456 623**      **§ 55. (1) If it is requested by any administration, particularly by an administration of a country in need of special assistance, and if the circumstances appear to warrant, the Board, using such means at its disposal as are appropriate in the circumstances, shall conduct a study of the following problems of frequency utilization:**

NOC      **4457 624**      **a) in cases arising under No. 4307/512 as to a possible alternative frequency assignment to avoid probable harmful interference;**

NOC      **4458 625**      **b) in cases where a need arises for additional frequency assignments within a specified portion of the radio spectrum;**

NOC      **4459 626**      **c) in cases where, due to harmful interference, two or more frequencies of the same megacycle order are being used alternately to maintain communication on a circuit requiring only one frequency of that order; and**

NOC      **4460 627**      **d) in cases of alleged contravention or non-observance of these Regulations, or of harmful interference.**

NOC 4461 628

**(2) The Board shall thereupon prepare and forward to the administrations concerned a report containing its finding and recommendations for the solution of the problem.**

ADD 4461A

(2A) On receiving the Board's recommendations for the solution of the problem, an Administration shall promptly acknowledge the receipt by telegram and shall subsequently indicate the action it intends to take. In cases when the Board's suggestions or recommendations are unacceptable to the Administrations concerned, further efforts should be made by the Board to find an acceptable solution to the problem.

NOC 4462 629

**§ 56. If the Board finds, in particular following a request from an administration of a country in need of special assistance, that a change in the basic characteristics, including a change of frequency within a specific frequency range, of one or more assignments in conformity with the provisions of No. 4296/501 will:**

NOC 4463 630

**a) accommodate a new assignment; or**

NOC 4464 631

**b) facilitate the solution of a problem of harmful interference; or**

NOC 4465 632

**c) otherwise facilitate the more effective use of a particular portion of the radio spectrum; and**

NOC      4466 633      if such change is acceptable to the administration or administrations concerned, the change in basic characteristics shall be recorded in the Master Register without change in the original date or dates.

NOC      4467 634      § 57. In a case where, as a result of a study, the Board submits to one or more administrations suggestions or recommendations for the solution of a problem, and where no answer has been received from one or more of these administrations within a period of thirty days, the Board shall consider that the suggestions or recommendations concerned are unacceptable to the administrations which did not answer. If it was the requesting administration which failed to answer within this period, the Board shall close the study.

NOC

**Section VIII. Miscellaneous Provisions**

NOC      4468 635      § 58. The provisions of Sections V, VI (excepting No. 4452/619) and VII of this Article shall not be applied to frequency assignments in conformity with the Allotment Plans contained in Appendices 25 Mar2, 26 and 27 Aer2 to these Regulations.

Mar2

MOD

4469 635A  
Spa2

§ 59. (1) If it is requested by any administration, particularly by an administration of a country in need of special assistance, ~~and if the circumstances appear to warrant~~, the Board using such means at its disposal as are appropriate in the circumstances, shall render the following assistance:

- a) verification of the diagram showing the co-ordination area referred to in No. 4141/639AN;
- b) computation of the interference level, as referred to in No. 4167/492B;
- c) any other assistance of a technical nature for completion of the procedures in this Article.

- NOC      4470 635B      (2) In making a request to the Board under No. 4469/635A, the administration shall  
         Spa2      furnish the Board with the necessary information.
- MOD      4471 636      § 60. The technical standards of the Board shall be based upon the relevant provisions of these Regulations and the Appendices thereto, the decisions of Administrative Conferences of the Union, as appropriate, the Recommendations of the CCIR, the state of the radio art and the development of new transmission techniques, account being taken of exceptional propagation conditions which may prevail in certain regions (for example, particularly pronounced ducting).
- MOD      4472 637      § 61. The Board shall inform all Administrations of its findings and the reasons therefor, together with all changes made to the Master Register, through its weekly circular. Such a publication shall be made within forty-five days of the date of publication of the complete notice in the weekly circular referred to in No. 4292/497. When the Board is not in a position to comply with the time-limit referred to above it shall, as soon as possible, so inform the Administration concerned giving the reasons therefor.
- ADD      4472A      The weekly circular of the IFRB shall be published in the working languages of the Union as defined in the Convention. In carrying out the various procedures stipulated in the Radio Regulations, the Board shall use the weekly circular as a means of communicating with Administrations to the maximum extent practicable.



NOC      4473 638      § 62.      The Board shall inform administrations, at appropriate intervals, of the cases of special assistance which were studied under Nos. 4447/614 and 4456/623 to 4467/634 inclusive of these Regulations.

MOD      4474 639      § 63.      In case a Member or ~~Associate Member~~ of the Union avails itself of the provisions of Article 50 of the Convention, the Board shall, upon request, make its records available for such proceedings as are prescribed in the Convention for the settlement of international disputes.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 780-E

21 November 1979

Original : English

## COMMITTEE 5

### REPORT OF SUB-WORKING GROUP 5BA13 TO COMMITTEE 5\*)

1. 5BA13 undertook to review the LF/MF RARC 1975 Resolution No. 7, Recommendation No. 7 and the Resolution presented by Japan in Document No. 623.
2. The first meeting held on 19 November was attended by the following delegations :  
  
Japan, New Zealand, United Kingdom, Italy, Norway, Finland, Sweden, China, Iran, Australia, Nigeria, Spain and Canada.  
  
The second meeting held on 20 November 1979 was not attended by Nigeria but the Netherland and the United States of America also participated.
3. The brackets still contained in Resolution [LF] are contingent upon the decisions of Committee 5 on the Table of Frequency Allocations in the frequency band [148.5 - 283.5] kHz and the date of the signing ceremony of this World Administrative Radio Conference.
4. Footnote ADD 3468B (in Annex 2) for the appropriate portion of the Table of Frequency Allocations, referring to the Resolution, is needed to make the reference to Article N13A operative.
5. The Annexes to this document were accepted by all members present at the second meeting with the exception of China and Japan who wished to reserve their right to come back in Committee 5. In addition, Iran also reserved its right to come back on resolves 1.b) and 2.b).
6. Iran wishes not to have its proposal for a footnote as contained in Document No. 494 discussed until Committee 5 reached a decision on this document.

W.G. LONGMAN

Chairman of Sub-Working Group 5BA13

Annexes : 2

\*) In accordance with the decision taken by Working Group 5BA, this report is submitted directly to Committee 5.



A N N E X 1

RESOLUTION No. /LF/

Relating to the Use of LF Bands shared between  
the Broadcasting Service and the  
Aeronautical Radionavigation Service

The World Administrative Radio Conference, Geneva, 1979,

noting

that the use of the LF bands by broadcasting stations could adversely affect the stations of other radiocommunication services to which these bands are allocated in all Regions, and particularly stations in the aeronautical radionavigation service involving the safety of human life;

considering

- a) that the Plan contained in Annex 1 to the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975, includes a number of new broadcasting transmitters in these bands and increases in the power of transmitters already in use, thereby considerably increasing the probability of harmful interference to the safety services;
- b) Resolution No. 7 and /Recommendation No. 2/ of that Conference, which /are/ is superseded and abrogated by this Resolution;
- c) that the Report of the CCIR Special Preparatory Meeting for the World Administrative Radio Conference, 1979 concluded, in 4.4.4.1 that within a particular Region, harmful interference will result to the aeronautical radionavigation service by the sharing of the same band with the broadcasting service; the possibility of such interference between Regions also exists and that further study of this matter will therefore be necessary to determine the full extent of the problem;
- d) that the present Conference, has considered the Regional and inter-Regional sharing between these services and has increased the inter-Regional sharing /and has maintained the Regional sharing/;

taking into account

the provisions of No. 117 of the Radio Regulations;



resolves

1.a) that any changes or additions to the LF portion of the Plan shall be brought into use in accordance with resolves 1.b), 1.c) and 3, that Administrations shall advise the IFRB of the date of implementation and the technical characteristics of frequency assignments which are in accordance with the Plan two years prior to the implementation and the IFRB shall publish for information only this data in a special section of the weekly circular; however, this additional procedure does not in any way affect the procedure contained in Article 4 of the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975;

1.b) that if such changes or additions in accordance with the provisions of the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975 would not increase the probability of harmful interference to the assignments of aeronautical radiobeacons, they may be brought into use;

1.c) that if such changes or additions in accordance with the provisions of the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975 would increase the probability of harmful interference to the assignments of aeronautical radiobeacons, they may be brought into use only with the agreement of the Administrations whose frequency assignments to such aeronautical radiobeacon stations, in conformity with the Table of Frequency Allocations, have been recorded in the Master Register;

2.a) that changes to existing assignments or new assignments to aeronautical radiobeacon stations shall be brought into use in accordance with resolves 2.b), 2.c) and 3;

2.b) that if such changes or additions to aeronautical radiobeacon assignments would not increase the probability of harmful interference to the assignments of existing or planned broadcasting services, they may be brought into use;

2.c) that if such changes or additions to aeronautical radiobeacon assignments would increase the probability of harmful interference to the assignments of existing or planned broadcasting services, they may be brought into use only with the agreement of the Administrations whose frequency assignments to such broadcasting stations, in conformity with the Table of Frequency Allocations, have been recorded in the Master Register;

3. that the procedure for seeking the agreement under resolves 1.c) and 2.c) shall be that contained in Article N13A;

4. that Administrations and the IFRB shall apply this Resolution as of [ ] date of signing of Final Acts, World Administrative Radio Conference, 1979\_7;

requests the Secretary-General

to communicate this Resolution to the Secretary-General of the International Civil Aviation Organization;

invites

1. the International Civil Aviation Organization to study the problem of interference with respect to aeronautical radionavigation radiobeacons and forward any conclusions to the CCIR;
2. the CCIR to expedite its studies to improve LF radio propagation prediction methods and its studies regarding sharing criteria between the different radiocommunication services.

A N N E X 2

PROPOSED FOOTNOTE IN TABLE / 148.5 - 283.5 / kHz

ADD 3468B

For the use of stations in the band / 148.5 - 283.5 / see  
Resolution No. / LF /.

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**CONFERENCE ADMINISTRATIVE  
MONDIALE  
DES RADIOCOMMUNICATIONS**

(Genève, 1979)

Addendum N° 1 au <sup>✓</sup>  
Document N° 781(Rév.1)-F/E/S  
1er décembre 1979B.26(Rév.1)  
(Add.1)SEANCE PLENIERE  
PLENARY MEETING  
SESION PLENARIA

Page B.26-10(Rév.1) ajouter, après la définition du terme 4.19 :

ADD 3077A

4.19bis Station terrienne aéronautique : Station terrienne du service fixe par satellite, ou, dans certains cas, du service mobile aéronautique par satellite, située en un point déterminé du sol, et destinée à assurer la liaison de connexion du service mobile aéronautique par satellite.

Page B.26-10(Rev.1) add, after the definition of term 4.19 :

ADD 3077A

4.19bis Aeronautical Earth station : An Earth station in the fixed-satellite service, or, in some cases, in the aeronautical mobile-satellite service, located at a specified fixed point on land to provide a feeder link for the aeronautical mobile-satellite service.

Página B.26-10(Rev.1) añadir, después la definición del término 4.19:

ADD 3077A

4.19bis Estación terrena aeronáutica: Estación terrena del servicio fijo por satélite, o, en algunos casos, del servicio móvil aeronáutico por satélite instalada en tierra, en un punto determinado, con el fin de establecer un enlace de conexión en el servicio móvil aeronáutico por satélite.



**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 781(Rev.1)  
28 November 1979**E**

B.26(Rev.1)

PLENARY MEETING**26th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first  
reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
Coord. C.4/5/7	702	
C.4	426 + 427	
C.4	428 + 429	
C.4	471 + 472	
C.5	606 + 605	
C.4	607 + 608	
C.7	707 + 708	
C.7	864	
		Article N1
		Terms and Definitions

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 27 pages



**THE RADIO REGULATIONS**

ADD

**PREAMBLE**

ADD 3000

The application of the provisions of these Regulations by the permanent organs of the International Telecommunication Union does not imply the expression of any opinion whatsoever on the part of the Union concerning the sovereignty or the legal status of any country, territory or geographical area.

**PART A****CHAPTER NI**

NOC

**Terminology****ARTICLE N1/1**

NOC

**Terms and Definitions**

MOD

**Introduction**

MOD 3001 1

For the purposes of these Regulations, the following terms shall have the meanings defined below. These terms and definitions do not, however, necessarily apply for other purposes. Definitions identical to those contained in the International Telecommunication Convention (Malaga-Torremolinos, 1973) are marked (CONV.).

Note: If in the text of a definition below, a term is printed in italics, this means that the term itself is defined in this Article.

NOC

**Section I. General Terms**

ADD 3001A

1.1 Administration: Any governmental department or service responsible for discharging the obligations undertaken in the Convention of the International Telecommunication Union and the Regulations (CONV.).

MOD 3002 2

1.2 Telecommunication: Any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems (CONV.).



NOC	3006	8	1.3	<u>Radio</u> : A general term applied to the use of <u>radio waves</u> (CONV.).
MOD	3005	7	1.4	<u>Radio Waves</u> or <u>Hertzian Waves</u> : Electromagnetic waves of frequencies arbitrarily lower than 3 000 GHz, propagated in space without artificial guide.
NOC	3004	9	1.5	<u>Radiocommunication</u> : <u>Telecommunication</u> by means of <u>radio waves</u> (CONV.).
MOD	3025	21D Spa2	1.6	<u>Terrestrial Radiocommunication</u> : Any <u>radiocommunication</u> other than <u>space radiocommunication</u> or <u>radio astronomy</u> .
MOD	3024	21C Spa2	1.7	<u>Space Radiocommunication</u> : Any <u>radiocommunication</u> involving the use of one or more <u>space stations</u> or the use of one or more <u>reflecting satellites</u> or other objects in space.
MOD	3026	45	1.8	<u>Radiodetermination</u> : The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of <u>radio waves</u> .
NOC	3027	48	1.9	<u>Radionavigation</u> : <u>Radiodetermination</u> used for the purposes of navigation, including obstruction warning.
NOC	3028	54	1.10	<u>Radiolocation</u> : <u>Radiodetermination</u> used for purposes other than those of <u>radionavigation</u> .
NOC	3068	66	1.11	<u>Radio Direction-Finding</u> : <u>Radiodetermination</u> using the reception of <u>radio waves</u> for the purpose of determining the direction of a <u>station</u> or object.
NOC	3120	74	1.12	<u>Radio Astronomy</u> : Astronomy based on the reception of <u>radio waves</u> of cosmic origin.
ADD	3120A		1.13	<u>Coordinated Universal Time (UTC)</u> : Time scale, based on the second (SI), as defined and recommended by the CCIR <sup>1</sup> , and maintained by the Bureau International de l'Heure (BIH).

<sup>1</sup> the full definition is contained in CCIR Recommendation 406-2.

For most practical purposes associated with the Radio Regulations, UTC is equivalent to solar mean time at the prime meridian (0° longitude), formerly expressed in GMT.

- ADD 3023A 1.14 Industrial, Scientific and Medical (ISM) Applications: Operation of equipment or appliances designed to generate and use locally radio-frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of telecommunications.
- MOD Section II. Specific Terms Related to Frequency Management
- ADD 3023B 2.1 Allocation (of a frequency band): Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.
- ADD 3023C 2.2 Allotment (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent Conference, for use by one or more administrations for a radiocommunication service in one or more identified countries or geographical areas and under specified conditions.
- ADD 3023D 2.3 Assignment (of a radio frequency or radio frequency channel): Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under prescribed conditions.
- MOD Section III. Radio Services
- ADD 3023E 3.1 Radiocommunication Service: A service as defined in this Section involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes.
- In these Regulations, unless otherwise stated, any radiocommunication service relates to terrestrial radiocommunication.
- (MOD) 3036 22 3.2 Fixed Service: A radiocommunication service between specified fixed points.

MOD	3102	84AG Spa2	3.3 <u>Fixed-Satellite Service:</u> A <u>radiocommunication service</u> between <u>earth stations</u> at specified fixed points when one or more <u>satellites</u> are used; in some cases this service includes <u>satellite-to-satellite links</u> , which may also be effected in the <u>inter-satellite service</u> ; the fixed-satellite service may also include <u>feeder links</u> for other <u>space radiocommunication services</u> .
MOD	3038	24	3.4 <u>Aeronautical Fixed Service:</u> A <u>radiocommunication service</u> between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.
NOC	3101	84ATF Spa2	3.5 <u>Inter-Satellite Service:</u> A <u>radiocommunication service</u> providing links between artificial earth <u>satellites</u> .
(MOD)	3100	84ATE Spa2	3.6 <u>Space Operation Service:</u> A <u>radiocommunication service</u> concerned exclusively with the operation of <u>spacecraft</u> , in particular <u>space tracking</u> , <u>space telemetry</u> and <u>space telecommand</u> .

These functions will normally be provided within the service in which the space station is operating.

(MOD)	3072	30	3.7 <u>Mobile Service *:</u> A <u>radiocommunication service</u> between <u>mobile stations</u> and <u>land stations</u> , or between <u>mobile stations</u> .
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\* See Resolution CD

MOD	3115	84AGA Spa2	3.8 <u>Mobile-Satellite Service:</u> A <u>radiocommunication service:</u> <ul style="list-style-type: none"> <li>- between <u>mobile earth stations</u> and one or more <u>space stations</u>, or between <u>space stations</u> used by this service; <u>or</u></li> <li>- between <u>mobile earth stations</u> by means of one or more <u>space stations</u>.</li> </ul>
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This service may also include feeder links necessary for its operation.

NOC	3087	42	3.9 <u>Land Mobile Service:</u> A <u>mobile service</u> between <u>base stations</u> and <u>land mobile stations</u> , or between <u>land mobile stations</u> .
NOC	3119	84AGD Spa2	3.10 <u>Land Mobile-Satellite Service:</u> A <u>mobile-satellite service</u> in which <u>mobile earth stations</u> are located on land.

- |       |      |               |   |
|-------|------|---------------|---|
| MOD   | 3079 | 36<br>Mar2    | 3.11 <u>Maritime Mobile Service: A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.</u>   |
| (MOD) | 3117 | 84AGC<br>Spa2 | 3.12 <u>Maritime Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.</u>   |
| NOC   | 3084 | 37<br>Mar2    | 3.13 <u>Port Operations Service: A maritime mobile service in or near a port, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons.</u><br><br>Messages which are of a <u>public correspondence</u> nature shall be excluded from this service. |
| (MOD) | 3086 | 37A<br>Mar2   | 3.14 <u>Ship Movement Service: A safety service in the maritime mobile service other than a port operations service, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the movement of ships.</u><br><br>Messages which are of a <u>public correspondence</u> nature shall be excluded from this service.   |
| MOD   | 3076 | 33            | 3.15 <u>Aeronautical Mobile Service: A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.</u>  |
| (MOD) | 3116 | 84AGB<br>Spa2 | 3.16 <u>Aeronautical Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.</u>  |
| NOC   | 3040 | 28            | 3.17 <u>Broadcasting Service: A radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission (CONV.).</u>   |

(MOD) 3103	84AP Spa2	3.18 <u>Broadcasting-Satellite Service:</u> A <u>radiocommunication service</u> in which signals <u>transmitted or retransmitted by space stations</u> are intended for direct reception by the general public.
In the broadcasting-satellite service, the term "direct reception" shall encompass both <u>individual reception</u> and <u>community reception</u> .		
(MOD) 3049	46	3.19 <u>Radiodetermination Service:</u> A <u>radiocommunication service</u> for the purpose of <u>radiodetermination</u> .
MOD 3111	84APC Spa2	3.20 <u>Radiodetermination-Satellite Service:</u> A <u>radiocommunication service</u> for the purpose of <u>radiodetermination</u> involving the use of one or more <u>space stations</u> .
(MOD) 3051	49	3.21 <u>Radionavigation Service:</u> A <u>radiodetermination service</u> for the purpose of <u>radionavigation</u> .
MOD 3112	84AQ Spa2	3.22 <u>Radionavigation-Satellite Service:</u> A <u>radiodetermination-satellite service</u> used for the purpose of <u>radionavigation</u> .
This service may also include <u>feeder links</u> necessary for its operation.		
MOD 3055	53	3.23 <u>Maritime Radionavigation Service:</u> A <u>radionavigation service</u> intended for the benefit and for the safe operation of ships.
MOD 3114	84AQB Spa2	3.24 <u>Maritime Radionavigation-Satellite Service:</u> A <u>radionavigation-satellite service</u> in which <u>earth stations</u> are located on board ships.
MOD 3054	52	3.25 <u>Aeronautical Radionavigation Service:</u> A <u>radionavigation service</u> intended for the benefit and for the safe operation of aircraft.
MOD 3113	84AQA Spa2	3.26 <u>Aeronautical Radionavigation-Satellite Service:</u> A <u>radionavigation-satellite service</u> in which <u>earth stations</u> are located on board aircraft.
(MOD) 3056	55	3.27 <u>Radiolocation Service:</u> A <u>radiodetermination service</u> for the purpose of <u>radiolocation</u> .
NOC 3042	76	3.28 <u>Meteorological Aids Service:</u> A <u>radiocommunication service</u> used for meteorological, including hydrological, observations and exploration.

MOD	3106	84ASA Spa2	<p>3.29 <u>Earth Exploration-Satellite Service:</u> A <u>radiocommunication service between earth stations and one or more space stations</u>, which may include links between <u>space stations</u>, in which:</p> <ul style="list-style-type: none"> <li>- information relating to the characteristics of the Earth and its natural phenomena is obtained from <u>active sensors or passive sensors on earth satellites</u>;</li> <li>- similar information is collected from air-borne or earth-based platforms;</li> <li>- such information may be distributed to <u>earth stations</u> within the system concerned;</li> <li>- platform interrogation may be included.</li> </ul> <p>This service may also include <u>feeder links</u> necessary for its operation.</p>
NOC	3107	84AT Spa2	<p>3.30 <u>Meteorological-Satellite Service:</u> An <u>earth exploration-satellite service</u> for meteorological purposes.</p>
MOD	3046	80	<p>3.31 <u>Standard Frequency and Time Signal Service:</u> A <u>radiocommunication service</u> for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.</p>
MOD	3109	84ATB Spa2	<p>3.32 <u>Standard Frequency and Time Signal-Satellite Service:</u> A <u>radiocommunication service using space stations on earth satellites</u> for the same purposes as those of the <u>standard frequency and time signal service</u>.</p> <p>This service may also include <u>feeder links</u> necessary for its operation.</p>
NOC	3099	84ATD Spa2	<p>3.33 <u>Space Research Service:</u> A <u>radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes</u>.</p>
MOD	3044	78	<p>3.34 <u>Amateur Service:</u> A <u>radiocommunication service</u> for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.</p>

NOC	3108	84ATA Spa2	3.35 <u>Amateur-Satellite Service: A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.</u>
NOC	3121	75	3.36 <u>Radio Astronomy Service: A service involving the use of radio astronomy.</u>
MOD	3029	69 Spa2	3.37 <u>Safety Service: Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property (CONV.).</u>
(MOD)	3030	84	3.38 <u>Special Service: A radiocommunication service, not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to public correspondence.</u>

MOD **Section IV. Radio Stations and Systems**

NOC	3031	21	4.1 <u>Station: One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a radiocommunication service, or the radio astronomy service.</u>
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Each station shall be classified by the service in which it operates permanently or temporarily.

MOD	3034	21E Spa2	4.2 <u>Terrestrial Station: A station effecting terrestrial radiocommunication.</u>
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In these Regulations, unless otherwise stated, any station is a terrestrial station.

MOD	3033	21B Spa2	4.3 <u>Earth Station: A station located either on the Earth's surface or within the major portion of the Earth's atmosphere and intended for communication:</u>
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- with one or more space stations; or
- with one or more stations of the same kind by means of one or more reflecting satellites or other objects in space.

NOC	3032	21A Spa2	4.4 <u>Space Station: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.</u>
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(MOD)	3075	41	4.5 <u>Survival Craft Station: A mobile station in the maritime mobile service or the aeronautical mobile service intended solely for survival purposes and located on any lifeboat, life-raft or other survival equipment.</u>
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NOC	3037	23	4.6	<u>Fixed Station: A station in the fixed service.</u>
NOC	3039	25	4.7	<u>Aeronautical Fixed Station: A station in the aeronautical fixed service.</u>
NOC	3074	32	4.8	<u>Mobile Station: A station in the mobile service intended to be used while in motion or during halts at unspecified points.</u>
ADD	3115A		4.9	<u>Mobile Earth Station: An earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points.</u>
NOC	3073	31	4.10	<u>Land Station: A station in the mobile service not intended to be used while in motion.</u>
MOD	3088	43	4.11	<u>Base Station: A land station in the land mobile service.</u>
NOC	3089	44	4.12	<u>Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent.</u>
NOC	3080	38	4.13	<u>Coast Station: A land station in the maritime mobile service.</u>
ADD	3118A		4.14	<u>Coast Earth Station: An earth station in the fixed-satellite service located at a specified fixed point on land, or in some cases in the maritime mobile-satellite service, to provide a feeder link for the maritime mobile-satellite service.</u>
(MOD)	3081	39	4.15	<u>Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station.</u>
NOC	3118	84AGCA Mar2	4.16	<u>Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship.</u>
NOC	3082	39A Mar2	4.17	<u>On-Board Communication Station: A low-powered mobile station in the maritime mobile service intended for use for internal communications on board a ship, or between a ship and its lifeboats and life-rafts during lifeboat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling and mooring instructions.</u>
NOC	3085	38A Mar	4.18	<u>Port Station: A coast station in the port operations service.</u>



MOD	3077	34 Spa	4.19 <u>Aeronautical Station: A land station in the aeronautical mobile service.</u>
			In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.
MOD	3078	35 Spa	4.20 <u>Aircraft Station: A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft.</u>
ADD	3116A		4.21 <u>Aircraft Earth Station: A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft.</u>
NOC	3041	29	4.22 <u>Broadcasting Station: A station in the broadcasting service.</u>
NOC	3050	47	4.23 <u>Radiodetermination Station: A station in the radiodetermination service.</u>
NOC	3053	51	4.24 <u>Radionavigation Mobile Station: A station in the radionavigation service intended to be used while in motion or during halts at unspecified points.</u>
NOC	3052	50	4.25 <u>Radionavigation Land Station: A station in the radionavigation service not intended to be used while in motion.</u>
NOC	3058	57	4.26 <u>Radiolocation Mobile Station: A station in the radiolocation service intended to be used while in motion or during halts at unspecified points.</u>
NOC	3057	56	4.27 <u>Radiolocation Land Station: A station in the radiolocation service not intended to be used while in motion.</u>
NOC	3069	67	4.28 <u>Radio Direction-Finding Station: A radiodetermination station using radio direction-finding.</u>
NOC	3070	68	4.29 <u>Radiobeacon Station: A station in the radionavigation service the emissions of which are intended to enable a mobile station to determine its bearing or direction in relation to the radiobeacon station.</u>
NOC	3071	68A Mar	4.30 <u>Emergency Position-Indicating Radiobeacon Station: A station in the mobile service the emissions of which are intended to facilitate search and rescue operations.</u>
MOD	3047	81	4.31 <u>Standard Frequency and Time Signal Station: A station in the standard frequency and time signal service.</u>
NOC	3045	79	4.32 <u>Amateur Station: A station in the amateur service.</u>

NOC	3122	75A	4.33	<u>Radio Astronomy Station: A station in the radio astronomy service.</u>
NOC	3035	83	4.34	<u>Experimental Station: A station utilizing radio waves in experiments with a view to the development of science or technique.</u>
				<u>This definition does not include amateur stations.</u>
NOC	3083	40	4.35	<u>Ship's Emergency Transmitter: A ship's transmitter to be used exclusively on a distress frequency for distress, urgency or safety purposes.</u>
NOC	3059	58	4.36	<u>Radar: A radiodetermination system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined.</u>
NOC	3060	59	4.37	<u>Primary Radar: A radiodetermination system based on the comparison of reference signals with radio signals reflected from the position to be determined.</u>
NOC	3061	60	4.38	<u>Secondary Radar: A radiodetermination system based on the comparison of reference signals with radio signals retransmitted from the position to be determined.</u>
MOD	3062	60A Mar2	4.39	<u>Radar beacon (racon): A transmitter-receiver associated with a fixed navigational mark which, when triggered by a radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information.</u>
NOC	3063	61	4.40	<u>Instrument Landing System (ILS): A radionavigation system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing.</u>
NOC	3064	62	4.41	<u>Instrument Landing System Localizer: A system of horizontal guidance embodied in the instrument landing system which indicates the horizontal deviation of the aircraft from its optimum path of descent along the axis of the runway.</u>
NOC	3065	63	4.42	<u>Instrument Landing System Glide Path: A system of vertical guidance embodied in the instrument landing system which indicates the vertical deviation of the aircraft from its optimum path of descent.</u>

NOC	3066	64	4.43	<u>Marker Beacon:</u> A transmitter in the <u>aeronautical radionavigation service</u> which radiates vertically a distinctive pattern for providing position information to aircraft.
MOD	3067	65	4.44	<u>Radio Altimeter:</u> <u>Radionavigation</u> equipment, on board an <u>aircraft</u> or <u>spacecraft</u> , used to determine the height of the aircraft or the <u>spacecraft</u> above the Earth's surface or another surface.
NOC	3043	77	4.45	<u>Radiosonde:</u> An automatic radio transmitter in the <u>meteorological aids service</u> usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data.
(MOD)	3090	84AF Spa2	4.46	<u>Space System:</u> Any group of cooperating <u>earth stations</u> and/or <u>space stations</u> employing <u>space radiocommunication</u> for specific purposes.
NOC	3091	84AFA Spa2	4.47	<u>Satellite System:</u> A <u>space system</u> using one or more artificial earth <u>satellites</u> .
NOC	3092	84AFB Spa2	4.48	<u>Satellite Network:</u> A <u>satellite system</u> or a part of a <u>satellite system</u> , consisting of only one <u>satellite</u> and the cooperating <u>earth stations</u> .
MOD	3093	84AFC Spa2	4.49	<u>Satellite Link:</u> A radio link between a transmitting <u>earth station</u> and a receiving <u>earth station</u> through one <u>satellite</u> .  A satellite link comprises one up-link and one down-link.
MOD	3094	84AFD Spa2	4.50	<u>Multi-Satellite Link:</u> A radio link between a transmitting <u>earth station</u> and a receiving <u>earth station</u> through two or more <u>satellites</u> , without any intermediate <u>earth station</u> .  A multi-satellite link comprises one up-link, one or more satellite-to-satellite links and one down-link.
ADD	3094A		4.51	<u>Feeder Link:</u> A radio link from an <u>earth station</u> at a specified fixed point to a <u>space station</u> , or vice versa, conveying information for a <u>space radiocommunication service</u> other than for the <u>fixed-satellite service</u> .

MOD

**Section V. Operational Terms**

ADD 3094B

5.1 Public Correspondence: Any telecommunication which the offices and stations must, by reason of their being at the disposal of the public, accept for transmission (CONV.).

MOD 3007 10

5.2 Telegraphy \*: A form of telecommunication which is concerned in any process providing transmission and reproduction at a distance of documentary matter, such as written or printed matter or fixed images, or the reproduction at a distance of any kind of information in such a form. For the purposes of the Radio Regulations, unless otherwise specified therein, telegraphy shall mean a form of telecommunication for the transmission of written matter by the use of a signal code.

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\* See Resolution CD.

MOD 3010 13

5.3 Telegram: Written matter intended to be transmitted by telegraphy for delivery to the addressee. This term also includes radiotelegrams unless otherwise specified (CONV).

In this definition the term telegraphy has the same general meaning as defined in the Convention.

MOD 3011 14  
Mar2

5.4 Radiotelegram: A telegram, originating in or intended for a mobile station or a mobile earth station transmitted on all or part of its route over the radiocommunication channels of the mobile service or of the mobile-satellite service.

MOD 3012 14A  
Mar2

5.5 Radiotelex Call: A telex call, originating in or intended for a mobile station or a mobile earth station, transmitted on all or part of its route over the radiocommunication channels of the mobile service or the mobile-satellite service.

MOD 3008 11

5.6 Frequency-Shift Telegraphy: Telegraphy by frequency modulation in which the telegraph signal shifts the frequency of the carrier between predetermined values.

MOD 3016 20

5.7 Facsimile: A form of telegraphy for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

In this definition the term telegraphy has the same general meaning as defined in the Convention.

MOD	3013	17	5.8	<u>Telephony</u> *: A form of <u>telecommunication</u> set up for the transmission of speech or, in some cases, other sounds.
				<hr/>
				* See Resolution CD.
MOD	3014	18 Mar2	5.9	<u>Radiotelephone Call</u> : A telephone call, originating in or intended for a <u>mobile station</u> or a <u>mobile earth station</u> , transmitted on all or part of its route over the <u>radiocommunication channels</u> of the <u>mobile service</u> or of the <u>mobile-satellite service</u> .
(MOD)	3019	4	5.10	<u>Simplex Operation</u> : Operating method in which transmission is made possible alternately in each direction of a <u>telecommunication channel</u> , for example, by means of manual control. 1
(MOD)	3019.1	4.1		1 In general, <u>duplex operation</u> and <u>semi-duplex operation</u> require two frequencies in <u>radiocommunication</u> ; <u>simplex operation</u> may use either one or two.
(MOD)	3020	5	5.11	<u>Duplex Operation</u> : Operating method in which transmission is possible simultaneously in both directions of a <u>telecommunication channel</u> . 1
(MOD)	3020.1	5.1		1 In general, <u>duplex operation</u> and <u>semi-duplex operation</u> require two frequencies in <u>radiocommunication</u> ; <u>simplex operation</u> may use either one or two.
(MOD)	3021	6	5.12	<u>Semi-Duplex Operation</u> : A method which is <u>simplex operation</u> at one end of the circuit and <u>duplex operation</u> at the other. 1
(MOD)	3021.1	6.1		1 In general, <u>duplex operation</u> and <u>semi-duplex operation</u> require two frequencies in <u>radiocommunication</u> ; <u>simplex operation</u> may use either one or two.
MOD	3015	19	5.13	<u>Television</u> : A form of <u>telecommunication</u> for the transmission of transient images of fixed or moving objects.
NOC	3104	84APA Spa2	5.14	<u>Individual Reception</u> (in the <u>broadcasting-satellite service</u> ): The reception of <u>emissions</u> from a <u>space station</u> in the <u>broadcasting-satellite service</u> by simple domestic installations and in particular those possessing small antennae.

NOC	<b>3105</b>	84APB Spa2	5.15 <u>Community Reception</u> (in the broadcasting-satellite service): The reception of <u>emissions</u> from a <u>space station</u> in the <u>broadcasting-satellite service</u> by receiving equipment, which in some cases may be complex and have antennae larger than those used for <u>individual reception</u> , and intended for use: <ul style="list-style-type: none"> <li>- by a group of the general public at one location; <u>or</u></li> <li>- through a distribution system covering a limited area.</li> </ul>
MOD	<b>3017</b>	15	5.16 <u>Telemetry</u> : The use of <u>telecommunication</u> for automatically indicating or recording measurements at a distance from the measuring instrument.
MOD	<b>3018</b>	16	5.17 <u>Radiotelemetry</u> : <u>Telemetry</u> by means of <u>radio waves</u> .
MOD	<b>3095</b>	84AW Spa	5.18 <u>Space Telemetry</u> : The use of <u>telemetry</u> for the transmission from a <u>space station</u> of results of measurements made in a <u>spacecraft</u> , including those relating to the functioning of the <u>spacecraft</u> .
ADD	<b>3018A</b>		5.19 <u>Telecommand</u> : The use of <u>telecommunication</u> for the transmission of signals to initiate, modify or terminate functions of equipment at a distance.
(MOD)	<b>3097</b>	84AY Spa	5.20 <u>Space Telecommand</u> : The use of <u>radiocommunication</u> for the transmission of signals to a <u>space station</u> to initiate, modify or terminate functions of equipment on a space object, including the <u>space station</u> .
NOC	<b>3098</b>	84AZ Spa	5.21 <u>Space Tracking</u> : Determination of the <u>orbit</u> , <u>velocity</u> or <u>instantaneous position</u> of an object in space by means of <u>radiodetermination</u> , excluding <u>primary radar</u> , for the purpose of following the movement of the object.

MOD      **Section VI. Characteristics of Emissions and Radio Equipment**

ADD    **3133B**            6.1            Radiation: The outward flow of energy from any source in the form of radio waves.

ADD    **3133C**            6.2            Emission: Radiation produced, or the production of radiation, by a radio transmitting station.

For example, the energy radiated by the local oscillator of a radio receiver would not be an emission but a radiation.

ADD    **3006A**            6.3            Class of Emission: The set of characteristics of an emission, designated by standard symbols, e.g. type of modulation, modulating signal, type of information to be transmitted, and also if appropriate, any additional signal characteristics.

ADD    **3021A**            6.4            Single-Sideband Emission: An amplitude modulated emission with one sideband only.

ADD    **3021B**            6.5            Full Carrier Single-Sideband Emission: A single-sideband emission without suppression of the carrier.

ADD    **3021C**            6.6            Reduced Carrier Single-Sideband Emission: A single-sideband emission in which the degree of carrier suppression enables the carrier to be reconstituted and to be used for demodulation.

ADD    **3021D**            6.7            Suppressed Carrier Single-Sideband Emission: A single-sideband emission in which the carrier is virtually suppressed and not intended to be used for demodulation

ADD 3133D

6.8 Out-of-band Emission\*: Emission on a frequency or frequencies immediately outside the necessary bandwidth which results from the modulation process, but excluding spurious emissions.

MOD 3141 92

6.9 Spurious Emission\*: Emission on a frequency or frequencies which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions.

ADD 3133F

6.10 Unwanted Emissions\*: Consists of spurious emissions and out-of-band emissions.

\*The terms associated with the definitions given by the numbers below shall be expressed in the working languages as follows:

Numbers	In English	In French	In Spanish
3133D (6.8)	Out of band de banda	Emission hors bande	Emisión fuera de banda
3141/92 (6.9)	Spurious emission	Rayonnement non essentiel	Emisión no esencial
3133F (6.10)	Unwanted emissions	Rayonnements non désirés	Emisiones no deseadas

MOD 3138 89

6.11 Assigned Frequency Band: The frequency band within which the emission of a station is authorized; the width of the band equals the necessary bandwidth plus twice the absolute value of the frequency tolerance. Where space stations are concerned, the assigned frequency band includes twice the maximum Doppler shift that may occur in relation to any point of the Earth's surface.

NOC 3134 85

6.12 Assigned Frequency: The centre of the frequency band assigned to a station.

MOD 3135 86

6.13 Characteristic Frequency: A frequency which can be easily identified and measured in a given emission.

A carrier frequency may, for example, be designated as the characteristic frequency.



- NOC 3136 87 6.14 Reference Frequency: A frequency having a fixed and specified position with respect to the assigned frequency. The displacement of this frequency with respect to the assigned frequency has the same absolute value and sign that the displacement of the characteristic frequency has with respect to the centre of the frequency band occupied by the emission.
- MOD 3137 88 6.15 Frequency Tolerance: The maximum permissible departure by the centre frequency of the frequency band occupied by an emission from the assigned frequency or, by the characteristic frequency of an emission from the reference frequency.
- The frequency tolerance is expressed in parts in 10<sup>6</sup> or in hertz.
- MOD 3140 91 6.16 Necessary Bandwidth: For a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions.
- MOD 3139 90 6.17 Occupied Bandwidth: The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage  $\beta/2$  of the total mean power of a given emission.
- Unless otherwise specified by the CCIR for the appropriate class of emission, the value of  $\beta/2$  should be taken as 0.5%.
- ADD 3153C 6.18 Right-Hand (or Clockwise) Polarized Wave: An elliptically or circularly-polarized wave, in which the electric field vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a right-hand or clockwise direction.
- ADD 3153D 6.19 Left-Hand (or Anti-Clockwise) Polarized Wave: An elliptically or circularly-polarized wave, in which the electric field vector, observed in the fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a left-hand or anti-clockwise direction.
- MOD 3143 94 6.20 Power: Whenever the power of a radio transmitter etc. is referred to it shall be expressed in one of the following forms, according to the class of emission, using the arbitrary symbols indicated:
- peak envelope power (PX or pX);
  - mean power (PY or pY);
  - carrier power (PZ or pZ).

For different classes of emission, the relationships between peak envelope power, mean power and carrier power, under the conditions of normal operation and of no modulation, are contained in CCIR Recommendations which may be used as a guide.

For use in formulae, the symbol  $p$  denotes power expressed in watts and the symbol  $P$  denotes power expressed in decibels relative to a reference level.

MOD	3144	95	6.21 <u>Peak Envelope Power</u> (of a radio transmitter): The average <u>power</u> supplied to the antenna transmission line by a transmitter during one <u>radio frequency</u> cycle at the crest of the modulation envelope taken under normal operating conditions.
MOD	3145	96	6.22 <u>Mean Power</u> (of a radio transmitter): The average <u>power</u> supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.
MOD	3146	97	6.23 <u>Carrier Power</u> (of a radio transmitter): The average <u>power</u> supplied to the antenna transmission line by a transmitter during one <u>radio frequency</u> cycle taken under the condition of no modulation.
MOD	3149	99	6.24 <u>Gain of an Antenna</u> : The ratio, usually expressed in decibels, of the <u>power</u> required at the input of a loss free reference antenna to the <u>power</u> supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same <u>power flux-density</u> at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. The gain may be considered for a specified polarization.

Depending on the choice of the reference antenna a distinction is made between:

- absolute or isotropic gain ( $G_i$ ), when the reference antenna is an isotropic antenna isolated in space;
- gain relative to a half-wave dipole ( $G_d$ ), when the reference antenna is a half-wave dipole isolated in space whose equatorial plane contains the given direction;

- gain relative to a short vertical antenna ( $G_v$ ), when the reference antenna is a linear conductor, much shorter than one quarter of the wavelength, normal to the surface of a perfectly conducting plane which contains the given direction.

MOD 3147 98 6.25 Effective Radiated Power (e.r.p.) (in a given direction): The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.

ADD 3147A 6.26 Equivalent Monopole Radiated Power (e.m.r.p.) (in a given direction): The product of the power supplied to the antenna and its gain relative to a short vertical antenna in a given direction.

MOD 3148 98A Spa2 6.27 Equivalent Isotropically Radiated Power (e.i.r.p.): The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

NOC 3022 26 6.28 Tropospheric Scatter: The propagation of radio waves by scattering as a result of irregularities or discontinuities in the physical properties of the troposphere.

NOC 3023 27 6.29 Ionospheric Scatter: The propagation of radio waves by scattering as a result of irregularities or discontinuities in the ionization of the ionosphere.

## ADD Section VII. Frequency Sharing

ADD 3140A 7.1 Interference: The effect of unwanted energy due to one or a combination of emissions, radiations, or inductions upon reception in a radiocommunication system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.

ADD 3142A 7.2 Permissible Interference: Observed or predicted interference which complies with quantitative interference and sharing criteria contained in these Regulations or in CCIR Recommendations or in special agreements as provided for in these Regulations.

ADD 3140B 7.3 Accepted Interference: Interference at a higher level than that defined as permissible interference and which has been agreed upon between two or more administrations without prejudice to other administrations.

- MOD 3142 93 7.4 Harmful Interference \*: Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with these Regulations.
- \_\_\_\_\_
- \* See Resolution CD
- ADD 3142B 7.5 Protection Ratio: The minimum value of the wanted-to-unwanted signal ratio, usually expressed in decibels, at the receiver input determined under specified conditions such that a specified reception quality of the wanted signal is achieved at the receiver output.
- MOD 3157 103D 7.6 Coordination Area: The area associated with an earth station outside of which a terrestrial station or another earth station sharing the same frequency band neither causes nor is subject to interfering emissions greater than a permissible level.
- MOD 3156 103C 7.7 Coordination Contour: The line enclosing the coordination area.
- MOD 3155 103B 7.8 Coordination Distance: Distance on a given azimuth from an earth station beyond which a terrestrial station or another earth station sharing the same frequency band neither causes nor is subject to interfering emissions greater than a permissible level.
- MOD 3154 103A 7.9 Equivalent Satellite Link Noise Temperature: The noise temperature referred to the output of the receiving antenna of the earth station corresponding to the radio-frequency noise power which produces the total observed noise at the output of the satellite link excluding noise due to interference coming from satellite links using other satellites and from terrestrial systems.

ADD **Section VIII Technical Terms relating to Space**

- NOC 3123 84BA 8.1 Deep Space: Space at distances from the Earth approximately equal to, or greater than, the distance between the Earth and the Moon.
- NOC 3124 84BAA 8.2 Spacecraft: A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere.
- (MOD) 3125 84BAB 8.3 Satellite: A body which revolves around another body of preponderant mass and which has a motion primarily and permanently determined by the force of attraction of that other body.

MOD	3126	84BAC Spa2	8.4 <u>Active Satellite: A satellite carrying a station intended to transmit or retransmit radiocommunication signals.</u>
MOD	3127	84BAD Spa2	8.5 <u>Reflecting Satellite: A satellite intended to reflect radiocommunication signals.</u>
ADD	3127A		8.6 <u>Active Sensor: A measuring instrument in the earth exploration-satellite service or in the space research service by means of which information is obtained by transmission and reception of radio waves.</u>
ADD	3127B		8.7 <u>Passive Sensor: A measuring instrument in the earth exploration-satellite service or in the space research service by means of which information is obtained by reception of radio waves of natural origin.</u>
MOD	3128	84BB Spa2	8.8 <u>Orbit: The path, relative to a specified frame of reference, described by the centre of mass of a satellite or other object in space subjected primarily to natural forces, mainly the force of gravity.</u>
MOD	3129	84BC Spa2	8.9 <u>Inclination of an Orbit (of an earth satellite): The angle determined by the plane containing the orbit and the plane of the Earth's equator.</u>
MOD	3130	84BD Spa2	8.10 <u>Period (of a satellite): The time elapsing between two consecutive passages of a satellite through a characteristic point on its orbit.</u>
(MOD)	3131	84BE Spa2	8.11 <u>Altitude of the Apogee or Perigee: The altitude of the apogee or perigee above a specified reference surface serving to represent the surface of the Earth.</u>
NOC	3132	84BFA Spa2	8.12 <u>Geosynchronous Satellite: An earth satellite whose period of revolution is equal to the period of rotation of the Earth about its axis.</u>
MOD	3133	84BG Spa2	8.13 <u>Geostationary Satellite: A geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a satellite which remains approximately fixed relative to the Earth.</u>
ADD	3133A		8.14 <u>Geostationary satellite orbit: The orbit in which a satellite must be placed to be a geostationary satellite.</u>

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## RESOLUTION CD

**Relating to the Redefinition of Certain Terms  
Contained in Annex 2 to the  
International Telecommunication Convention  
(Malaga-Torremolinos, 1973)  
and Applicable to the Radio Regulations**

The World Administrative Radio Conference, Geneva, 1979,

having considered and adopted

the terms and definitions contained in Article 1 of the Radio Regulations, Geneva, 1979, which includes a number of terms already defined in Annex 2 ("Definition of Certain Terms Used in the Convention and in the Regulations of the International Telecommunication Union") to the International Telecommunication Convention (Malaga-Torremolinos, 1973);

being aware

- that the term "harmful interference" (in French, formerly "brouillage nuisible" now "brouillage préjudiciable") was originally introduced in the Radio Regulations mainly with a view to the protection of the safety services, for which the essential characteristic is the possibility of transmitting a signal rather than the quality of that signal;
- that since then, the need to characterize signal quality for various percentages of time has led to the introduction of additional concepts of interference, such as "permissible interference" and "accepted interference";
- that this has resulted in a certain confusion in the texts of the Radio Regulations dealing with interference;

believing

that some of the other terms as defined in Annex 2 to the Convention which are of importance to the Radio Regulations, i.e. "telegraphy" and "telephony", and associated terms, should be reviewed and made more precise and better adapted to current technology;

recognizing however

that, in view of Article 51, in particular No. 167, of the International Telecommunication Convention (Malaga-Torremolinos, 1973), only a Plenipotentiary Conference of the International Telecommunication Union is competent to amend the terms and their definitions contained in Annex 2 to that Convention;

recommends

1. that the Plenipotentiary Conference of the International Telecommunication Union, Nairobi, 1982, re-examine the definition in Annex 2 to the International Telecommunication Convention of the terms "harmful interference", "telegraphy", "telephony" and associated terms, taking into account the terms and definitions adopted for the purposes of the Radio Regulations by the World Administrative Radio Conference, Geneva, 1979, together with any proposals submitted by the CCIR and CCITT under Resolution No. 44 of the Plenipotentiary Conference (Malaga-Torremolinos, 1973);

instructs the Secretary-General

1. to bring this matter to the attention of that Plenipotentiary Conference;
2. to indicate in the published text of the Radio Regulations, by means of notes, those definitions which are not in alignment with Annex 2 to the Convention, drawing attention to the fact that the corresponding definitions in that Annex shall prevail over those in the Radio Regulations to the extent that there are differences between them;
3. to amend or delete these notes in the light of any relevant decisions of the Plenipotentiary Conference.

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Addendum No. 1 to  
Document No. 781  
23 November 1979

E

B.26

PLENARY MEETING

## 26th SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.5	787 + 786 (Annex 9)	Article N1 Terms and Definitions

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 1 page



## ARTICLE N1

## Terms and Definitions

NOC	3042	76	<u>Meteorological Aids Service: A radiocommunication service used for meteorological, including hydrological, observations and exploration.</u>
NOC	3043	77	<u>Radiosonde: An automatic radio transmitter in the meteorological aids service usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data.</u>
NOC	3120	74	<u>Radio Astronomy: Astronomy based on the reception of radio waves of cosmic origin.</u>
NOC	3121	75	<u>Radio Astronomy Service: A service involving the use of radio astronomy.</u>
NOC	3122	75A	<u>Radio Astronomy Station: A station in the radio astronomy service.</u>
ADD	3127A		<u>Active Sensor: A measuring instrument in the earth exploration-satellite service or in the space research service by means of which information is obtained by transmission and reception of radio waves.</u>
ADD	3127B		<u>Passive Sensor: A measuring instrument in the earth exploration-satellite service or in the space research service by means of which information is obtained by reception of radio waves of natural origin.</u>

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 781

22 November 1979

B.26

PLENARY MEETING**26th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
Coord. C.4/5/7	702	Article N1 Terms and Definitions
C.4	426 + 427	
C.4	428 + 429	
C.4	471 + 472	
C.5	606 + 605	
C.4	607 + 608	
C.7	707 + 708	

Note 1

In Nos 3141/92/6.9 and 3133F/6.10, the English and Spanish texts have been aligned (Spurious emission/Emisión no esencial/unwanted emissions/Emisiones no deseadas). In the French text, the terms "Rayonnement non essentiel - Rayonnements non désirés" have been retained.

Note 2

In No. 3149/6.24 (Gain of an Antenna), the texts are not aligned:

E = Absolute Gain

F = Gain isotrope

S = Ganancia isotropa o absoluta.

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 25 pages



B.26-1

## CHAPTER NI

NOC

## Terminology

## ARTICLE N1/1

NOC

## Terms and Definitions

NOC

## Preamble

MOD 3001 1

For the purposes of these Regulations, the following terms shall have the meanings defined below. These terms and definitions do not, however, necessarily apply for other purposes. Definitions identical to those contained in the International Telecommunication Convention (Malaga-Torremolinos, 1973) are marked (CONV.) \*.

Note: If in the text of a definition below, a term is printed in italics, this means that the term itself is defined in this Article.

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\* See Resolution No. [ ]

NOC

## Section I. General Terms

MOD 3002 2

1.1 Telecommunication: Any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems (CONV.).

NOC 3006 8

1.2 Radio: A general term applied to the use of radio waves (CONV.).

MOD 3005 7

1.3 Radio Waves or Hertzian Waves: Electromagnetic waves of frequencies arbitrarily lower than 3 000 GHz, propagated in space without artificial guide.

NOC 3004 9

1.4 Radiocommunication: Telecommunication by means of radio waves (CONV.).

- MOD 3025 21D 1.5 Terrestrial Radiocommunication: Any  
Spa2 radiocommunication other than space radiocommunication  
or radio astronomy.
- In these Regulations, unless otherwise stated,  
any radiocommunication service relates to terrestrial  
radiocommunication.
- MOD 3024 21C 1.6 Space Radiocommunication: Any  
Spa2 radiocommunication involving the use of one or more space  
stations or the use of one or more reflecting satellites or  
other objects in space.
- MOD 3026 45 1.7 Radiodetermination: The determination of the  
position, velocity and/or other characteristics of an  
object, or the obtaining of information relating to  
these parameters, by means of the propagation properties  
of radio waves.
- NOC 3027 48 1.8 Radionavigation: Radiodetermination used for  
the purposes of navigation, including obstruction  
warning.
- NOC 3028 54 1.9 Radiolocation: Radiodetermination used for  
purposes other than those of radionavigation.
- NOC 3068 66 1.10 Radio Direction-Finding: Radiodetermination  
using the reception of radio waves for the purpose of  
determining the direction of a station or object.
- 3120 74 1.11 [ Radio Astronomy: ] [ ]  
[ pending ] [ ]
- ADD 3023A 1.12 Industrial, Scientific and Medical (ISM)  
Applications: Operation of equipment or appliances  
designed to generate and use locally radio-frequency energy  
for industrial, scientific, medical, domestic or similar  
purposes, excluding applications in the field of  
telecommunications.

MOD Section II. Specific Terms Related to Frequency Management

- ADD 3023B 2.1 Allocation (of a frequency band): Entry in the  
Table of Frequency Allocations of a given frequency  
band for the purpose of its use by one or more  
radiocommunication services under specified conditions.  
This term shall also be applied to the frequency band  
concerned.

- ADD 3023C 2.2 Allotment (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent Conference, for use by one or more administrations for a radiocommunication service in one or more identified countries or geographical areas and under specified conditions.
- ADD 3023D 2.3 Assignment (of a radio frequency or radio frequency channel): Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under prescribed conditions.

MOD

## Section III. Radio Services

- ADD 3023E 3.1 Radiocommunication Service: A service as defined in this Section involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes.
- (MOD) 3036 22 3.2 Fixed Service: A radiocommunication service between specified fixed points.
- MOD 3102 84AG Spa2 3.3 Fixed-Satellite Service: A radiocommunication service between earth stations at specified fixed points or transportable earth stations when one or more satellites are used; in some cases this service includes satellite-to-satellite links, which may also be effected in the inter-satellite service; the fixed-satellite service may also include feeder links for other space radiocommunication services. [ ]
- MOD 3038 24 3.4 Aeronautical Fixed Service: A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.
- NOC 3101 84ATF Spa2 3.5 Inter-Satellite Service: A radiocommunication service providing links between artificial earth satellites.
- (MOD) 3100 84ATE Spa2 3.6 Space Operation Service: A radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand.
- (MOD) 3072 30 3.7 Mobile Service \*: A radiocommunication service between mobile stations and land stations, or between mobile stations (CONV.).

These functions will normally be provided within the service in which the space station is operating.

\* See Resolution No. [ ] [ ]



MOD	3115	84AGA Spa2	3.8	<u>Mobile-Satellite Service: A radiocommunication service:</u>
				<ul style="list-style-type: none"> <li>- between <u>mobile earth stations</u> and one or more <u>space stations</u>, or between <u>space stations</u> used by this service; or</li> <li>- between <u>mobile earth stations</u> by means of one or more <u>space stations</u>.</li> </ul>
				This service may also include <u>feeder links</u> necessary for its operation.
NOC	3087	42	3.9	<u>Land Mobile Service: A mobile service between base stations and land mobile stations, or between land mobile stations.</u>
NOC	3119	84AGD Spa2	3.10	<u>Land Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on land.</u>
MOD	3079	36 Mar2	3.11	<u>Maritime Mobile Service: A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.</u>
(MOD)	3117	84AGC Spa2	3.12	<u>Maritime Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.</u>
(MOD)	3086	37A Mar2	3.13	<u>Ship Movement Service: A safety service in the maritime mobile service other than a port operations service, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the movement of ships.</u>
				Messages which are of a <u>public correspondence</u> nature shall be excluded from this service.
NOC	3084	37 Mar2	3.14	<u>Port Operations Service: A maritime mobile service in or near a port, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons.</u>
				Messages which are of a <u>public correspondence</u> nature shall be excluded from this service.

- MOD 3076 33 3.15 Aeronautical Mobile Service: A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
- (MOD) 3116 84AGB Spa2 3.16 Aeronautical Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
- NOC 3040 28 3.17 Broadcasting Service: A radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission (CONV.).
- (MOD) 3103 84AP Spa2 3.18 Broadcasting-Satellite Service: A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public.
- In the broadcasting-satellite service, the term "direct reception" shall encompass both individual reception and community reception.
- (MOD) 3049 46 3.19 Radiodetermination Service: A radiocommunication service for the purpose of radiodetermination.
- MOD 3111 84APC Spa2 3.20 Radiodetermination-Satellite Service: A radiocommunication service for the purpose of radiodetermination involving the use of one or more space stations.
- (MOD) 3051 49 3.21 Radionavigation Service: A radiodetermination service for the purpose of radionavigation.
- MOD 3112 84AQ Spa2 3.22 Radionavigation-Satellite Service: A radiodetermination-satellite service used for the purpose of radionavigation.

This service may also include feeder links necessary for its operation.

MOD	3055	53	3.23	<u>Maritime Radionavigation Service:</u> A <u>radionavigation service</u> intended for the benefit and for the safe operation of ships.	
MOD	3114	84AQB Spa2	3.24	<u>Maritime Radionavigation-Satellite Service:</u> A <u>radionavigation-satellite service</u> in which <u>earth stations</u> are located on board ships.	
MOD	3054	52	3.25	<u>Aeronautical Radionavigation Service:</u> A <u>radionavigation service</u> intended for the benefit and for the safe operation of aircraft.	
MOD	3113	84AQA Spa2	3.26	<u>Aeronautical Radionavigation-Satellite Service:</u> A <u>radionavigation-satellite service</u> in which <u>earth stations</u> are located on board aircraft.	
(MOD)	3056	55	3.27	<u>Radiolocation Service:</u> A <u>radiodetermination service</u> for the purpose of <u>radiolocation</u> .	
	3042	76	3.28	[ <u>Meteorological Aids Service:</u> ]	[ ]
				[ pending ]	[ ]
NOC	3107	84AT Spa2	3.29	<u>Meteorological-Satellite Service:</u> An <u>earth exploration-satellite service</u> for <u>meteorological purposes</u> .	
MOD	3106	84ASA Spa2	3.30	<u>Earth Exploration-Satellite Service:</u> A <u>radiocommunication service</u> between <u>earth stations</u> and one or more <u>space stations</u> or between <u>space stations</u> in which:	
			-	information relating to the characteristics of the Earth and its natural phenomena is obtained from <u>[ active sensors or passive sensors ]</u> on <u>earth satellites</u> ;	{ }
			-	similar information is collected from air-borne or earth-based platforms;	
			-	such information may be distributed to <u>earth stations</u> within the system concerned;	
			-	platform interrogation may be included.	
				This service may also include <u>feeder links</u> necessary for its operation.	

MOD 3046 80 3.31 Standard Frequency and Time Signal Service:  
A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.

MOD 3109 84ATB  
Spa2 3.32 Standard Frequency and Time Signal-Satellite Service: A radiocommunication service using space stations on earth satellites for the same purposes as those of the standard frequency and time signal service.

This service may also include feeder links necessary for its operation.

NOC 3099 84ATD  
Spa2 3.33 Space Research Service: A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.

MOD 3044 78 3.34 Amateur Service: A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

NOC 3108 84ATA  
Spa2 3.35 Amateur-Satellite Service: A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.

3121 75 3.36 [Radio Astronomy Service:] []  
[pending] []

MOD 3029 69  
Spa2 3.37 Safety Service: Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property (CONV.).

(MOD) 3030 84 3.38 Special Service: A radiocommunication service, not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to public correspondence.

MOD

## Section IV. Radio Stations and Systems

NOC 3031 21 4.1 Station: One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a radiocommunication service.

Each station shall be classified by the service in which it operates permanently or temporarily.

MOD 3034 21E  
Spa2 4.2 Terrestrial Station: A station effecting terrestrial radiocommunication.

In these Regulations, unless otherwise stated, any station is a terrestrial station.

MOD 3033 21B  
Spa2 4.3 Earth Station: A station located either on the Earth's surface or within the major portion of the Earth's atmosphere and intended for communication:

- with one or more space stations; or
- with one or more stations of the same kind by means of one or more reflecting satellites or other objects in space.

ADD 3033A 4.4 [Transportable Earth Station:] [ ]  
[pending] [ ]

NOC 3032 21A  
Spa2 4.5 Space Station: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.

(MOD) 3075 41 4.6 Survival Craft Station: A mobile station in the maritime mobile service or the aeronautical mobile service intended solely for survival purposes and located on any lifeboat, life-raft or other survival equipment.

NOC 3037 23 4.7 Fixed Station: A station in the fixed service.

NOC 3039 25 4.8 Aeronautical Fixed Station: A station in the aeronautical fixed service.

NOC 3074 32 4.9 Mobile Station: A station in the mobile service intended to be used while in motion or during halts at unspecified points.

ADD	3115A		4.10	<u>Mobile Earth Station: An earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points.</u>
MOD	3088	43	4.11	<u>Base Station: A land station in the land mobile service.</u>
NOC	3073	31	4.12	<u>Land Station: A station in the mobile service not intended to be used while in motion.</u>
NOC	3089	44	4.13	<u>Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent.</u>
NOC	3080	38	4.14	<u>Coast Station: A land station in the maritime mobile service.</u>
ADD	3118A		4.15	<u>Coast Earth Station: An earth station in the fixed-satellite service located at a specified fixed point on land, or in some cases in the maritime mobile-satellite service, to provide a feeder link for the maritime mobile-satellite service.</u>
(MOD)	3081	39	4.16	<u>Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station.</u>
NOC	3118	84AGCA Mar2	4.17	<u>Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship.</u>
NOC	3082	39A Mar2	4.18	<u>On-Board Communication Station: A low-powered mobile station in the maritime mobile service intended for use for internal communications on board a ship, or between a ship and its lifeboats and life-rafts during lifeboat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling and mooring instructions.</u>
NOC	3085	38A Mar	4.19	<u>Port Station: A coast station in the port operations service.</u>
MOD	3077	34 Spa	4.20	<u>Aeronautical Station: A land station in the aeronautical mobile service.</u>

In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

MOD	3078	35 Spa	4.21 <u>Aircraft Station: A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft.</u>
ADD	3116A		4.22 <u>Aircraft Earth Station: A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft.</u>
NOC	3041	29	4.23 <u>Broadcasting Station: A station in the broadcasting service.</u>
NOC	3050	47	4.24 <u>Radiodetermination Station: A station in the radiodetermination service.</u>
NOC	3053	51	4.25 <u>Radionavigation Mobile Station: A station in the radionavigation service intended to be used while in motion or during halts at unspecified points.</u>
NOC	3052	50	4.26 <u>Radionavigation Land Station: A station in the radionavigation service not intended to be used while in motion.</u>
NOC	3058	57	4.27 <u>Radiolocation Mobile Station: A station in the radiolocation service intended to be used while in motion or during halts at unspecified points.</u>
NOC	3057	56	4.28 <u>Radiolocation Land Station: A station in the radiolocation service not intended to be used while in motion.</u>
NOC	3069	67	4.29 <u>Radio Direction-Finding Station: A radiodetermination station using radio direction-finding.</u>
NOC	3070	68	4.30 <u>Radiobeacon Station: A station in the radionavigation service the emissions of which are intended to enable a mobile station to determine its bearing or direction in relation to the radiobeacon station.</u>
NOC	3071	68A Mar	4.31 <u>Emergency Position-Indicating Radiobeacon Station: A station in the mobile service the emissions of which are intended to facilitate search and rescue operations.</u>
MOD	3047	81	4.32 <u>Standard Frequency and Time Signal Station: A station in the standard frequency and time signal service.</u>
NOC	3045	79	4.33 <u>Amateur Station: A station in the amateur service.</u>
	3122	75A Spa	4.34 <u>[Radio Astronomy:]</u> [ pending]

[ ]  
[ ]

NOC	3035	83	4.35	<u>Experimental Station: A station utilizing radio waves in experiments with a view to the development of science or technique.</u>
				This definition does not include <u>amateur stations.</u>
NOC	3083	40	4.36	<u>Ship's Emergency Transmitter: A ship's transmitter to be used exclusively on a distress frequency for distress, urgency or safety purposes.</u>
NOC	3059	58	4.37	<u>Radar: A radiodetermination system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined.</u>
NOC	3060	59	4.38	<u>Primary Radar: A radiodetermination system based on the comparison of reference signals with radio signals reflected from the position to be determined.</u>
NOC	3061	60	4.39	<u>Secondary Radar: A radiodetermination system based on the comparison of reference signals with radio signals retransmitted from the position to be determined.</u>
MOD	3062	60A Mar2	4.40	<u>Radar beacon (racon): A transmitter-receiver associated with a fixed navigational mark which, when triggered by a radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information.</u>
NOC	3063	61	4.41	<u>Instrument Landing System (ILS): A radionavigation system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing.</u>
NOC	3064	62	4.42	<u>Instrument Landing System Localizer: A system of horizontal guidance embodied in the instrument landing system which indicates the horizontal deviation of the aircraft from its optimum path of descent along the axis of the runway.</u>
NOC	3065	63	4.43	<u>Instrument Landing System Glide Path: A system of vertical guidance embodied in the instrument landing system which indicates the vertical deviation of the aircraft from its optimum path of descent.</u>
NOC	3066	64	4.44	<u>Marker Beacon: A transmitter in the aeronautical radionavigation service which radiates vertically a distinctive pattern for providing position information to aircraft.</u>



MOD 3067 65 4.45 Radio Altimeter: Radionavigation equipment, on board an aircraft or spacecraft, used to determine the height of the aircraft or the spacecraft above the Earth's surface or another surface.

3043 77 4.46 [Radiosonde]  
[pending]

[ ]

[ ]

(MOD) 3090 84AF Spa2 4.47 Space System: Any group of cooperating earth stations and/or space stations employing space radiocommunication for specific purposes.

NOC 3091 84AFA Spa2 4.48 Satellite System: A space system using one or more artificial earth satellites.

NOC 3092 84AFB Spa2 4.49 Satellite Network: A satellite system or a part of a satellite system, consisting of only one satellite and the cooperating earth stations.

MOD 3093 84AFC Spa2 4.50 Satellite Link: A radio link between a transmitting earth station and a receiving earth station through one satellite.

A satellite link comprises one up-link and one down-link.

MOD 3094 84AFD Spa2 4.51 Multi-Satellite Link: A radio link between a transmitting earth station and a receiving earth station through two or more satellites, without any intermediate earth station.

A multi-satellite link comprises one up-link, one or more satellite-to-satellite links and one down-link.

ADD 3094A 4.52 Feeder Link: A radio link from an earth station at a specified fixed point [or a transportable earth station] to a space station, or vice versa, conveying information for space radiocommunication other than for the fixed-satellite service.

[ ]

MOD

## Section V. Operational Terms

ADD 3094B

5.1 Public Correspondence: Any telecommunication which the offices and stations must, by reason of their being at the disposal of the public, accept for transmission (CONV.).

MOD 3007 10

5.2 Telegraphy \*: A form of telecommunication which is concerned in any process providing transmission and reproduction at a distance of documentary matter, such as written or printed matter or fixed images, or the reproduction at a distance of any kind of information in such a form. For the purposes of the Radio Regulations, unless otherwise specified therein, telegraphy shall mean a form of telecommunication for the transmission of written matter by the use of a signal code (CONV.).

\* See Resolution No. [ ].

[ ]

MOD 3010 13

5.3 Telegram \*: Written matter intended to be transmitted by telegraphy for delivery to the addressee; this term also includes radiotelegrams unless otherwise specified (CONV).

[ In this definition the term telegraphy has the same general meaning as defined in the Convention. ]

[ ]

\* See Resolution No. [ ].

[ ]

MOD 3011 14  
Mar2

5.4 Radiotelegram: A telegram, originating in or intended for a mobile station or a mobile earth station transmitted on all or part of its route over the radiocommunication channels of the mobile service or of the mobile-satellite service.

MOD 3012 14A  
Mar2

5.5 Radiotelex Call: A telex call, originating in or intended for a mobile station or a mobile earth station, transmitted on all or part of its route over the radiocommunication channels of the mobile service or the mobile-satellite service.

MOD 3008 11

5.6 Frequency-Shift Telegraphy: Telegraphy by frequency modulation in which the telegraph signal shifts the frequency of the carrier between predetermined values.

MOD 3016 20

5.7 Facsimile: A form of telegraphy for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

[ In this definition the term telegraphy has the same general meaning as defined in the Convention. ] [ ]

[ ]

- MOD 3013 17 5.8 Telephony \*: A form of telecommunication set up for the transmission of speech or, in some cases, other sounds (CONV.).
- []
- \* See Resolution No. [ ]
- MOD 3014 18 5.9 Radiotelephone Call: A telephone call, Mar2 originating in or intended for a mobile station or a mobile earth station, transmitted on all or part of its route over the radiocommunication channels of the mobile service or of the mobile-satellite service.
- (MOD) 3019 4 5.10 Simplex Operation: Operating method in which transmission is made possible alternately in each direction of a telecommunication channel, for example, by means of manual control. <sup>1</sup>
- (MOD) 3019.1 4.1 <sup>1</sup> In general, duplex operation and semi-duplex operation require two frequencies in radiocommunication; simplex operation may use either one or two.
- (MOD) 3020 5 5.11 Duplex Operation: Operating method in which transmission is possible simultaneously in both directions of a telecommunication channel. <sup>1</sup>
- (MOD) 3020.1 5.1 <sup>1</sup> In general, duplex operation and semi-duplex operation require two frequencies in radiocommunication; simplex operation may use either one or two.
- (MOD) 3021 6 5.12 Semi-Duplex Operation: A method which is simplex operation at one end of the circuit and duplex operation at the other. <sup>1</sup>
- (MOD) 3021.1 6.1 <sup>1</sup> In general, duplex operation and semi-duplex operation require two frequencies in radiocommunication; simplex operation may use either one or two.
- MOD 3015 19 5.13 Television: A form of telecommunication for the transmission of transient images of fixed or moving objects.

## B.26-15

NOC	3104	84APA Spa2	5.14 <u>Individual Reception</u> (in the broadcasting-satellite service): The reception of <u>emissions from a space station in the broadcasting-satellite service by simple domestic installations</u> and in particular those possessing small antennae.
NOC	3105	84APB Spa2	5.15 <u>Community Reception</u> (in the broadcasting-satellite service): The reception of <u>emissions from a space station in the broadcasting-satellite service by receiving equipment</u> , which in some cases may be complex and have antennae larger than those used for <u>individual reception</u> , and intended for use: <ul style="list-style-type: none"> <li>- by a group of the general public at one location; <u>or</u></li> <li>- through a distribution system covering a limited area.</li> </ul>
MOD	3017	15	5.16 <u>Telemetry</u> : The use of <u>telecommunication</u> for automatically indicating or recording measurements at a distance from the measuring instrument.
MOD	3018	16	5.17 <u>Radiotelemetry</u> : <u>Telemetry</u> by means of <u>radio waves</u> .
MOD	3095	84AW Spa	5.18 <u>Space Telemetry</u> : The use of <u>telemetry</u> for the transmission from a <u>space station</u> of results of measurements made in a <u>spacecraft</u> , including those relating to the functioning of the <u>spacecraft</u> .
ADD	3018A		5.19 <u>Telecommand</u> : The use of <u>telecommunication</u> for the transmission of signals to initiate, modify or terminate functions of equipment at a distance.
(MOD)	3097	84AY Spa	5.20 <u>Space Telecommand</u> : The use of <u>radiocommunication</u> for the transmission of signals to a <u>space station</u> to initiate, modify or terminate functions of equipment on a space object, including the <u>space station</u> .
NOC	3098	84AZ Spa	5.21 <u>Space Tracking</u> : Determination of the <u>orbit</u> , velocity or instantaneous position of an object in space by means of <u>radiodetermination</u> , excluding <u>primary radar</u> , for the purpose of following the movement of the object.

MOD

**Section VI. Technical Terms**

ADD

**Sub-Section VI-A. Emissions and Power**

ADD 3133B

6.1 Radiation: The outward flow of energy from any source in the form of radio waves.

ADD 3133C

6.2 Emission: Radiation produced, or the production of radiation, by a radio transmitting station.

For example, the energy radiated by the local oscillator of a radio receiver would not be an emission but a radiation.

ADD 3006A

6.3 Class of Emission: The set of characteristics of an emission, designated by standard symbols, e.g. type of modulation, modulating signal, type of information to be transmitted, and also if appropriate, any additional signal characteristics.

ADD 3021A

6.4 Single-Sideband Emission: An amplitude modulated emission with one sideband only.

ADD 3021B

6.5 Full Carrier Single-Sideband Emission: A single-sideband emission without suppression of the carrier.

ADD 3021C

6.6 Reduced Carrier Single-Sideband Emission: A single-sideband emission in which the degree of carrier suppression enables the carrier to be reconstituted and to be used for demodulation.

ADD 3021D

6.7 Suppressed Carrier Single-Sideband Emission: A single-sideband emission in which the carrier is virtually suppressed and not intended to be used for demodulation.

ADD 3133D

6.8 Out-of-band Emission: Emission on a frequency or frequencies immediately outside the necessary bandwidth which results from the modulation process, but excluding spurious emissions.

## B.26-17

MOD	3141	92	6.9	<u>Spurious Emission: Emission on a frequency or frequencies which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions.</u>
ADD	3133F		6.10	<u>Unwanted Emissions: Consists of spurious emissions and out-of-band emissions.</u>
MOD	3138	89	6.11	<u>Assigned Frequency Band: The frequency band within which the emission of a station is authorized; the width of the band equals the necessary bandwidth plus twice the absolute value of the frequency tolerance. Where space stations are concerned, the assigned frequency band includes twice the maximum Doppler shift that may occur in relation to any point of the Earth's surface.</u>
NOC	3134	85	6.12	<u>Assigned Frequency: The centre of the frequency band assigned to a station.</u>
MOD	3135	86	6.13	<u>Characteristic Frequency: A frequency which can be easily identified and measured in a given emission.</u>  A carrier frequency may, for example, be designated as the characteristic frequency.
NOC	3136	87	6.14	<u>Reference Frequency: A frequency having a fixed and specified position with respect to the assigned frequency. The displacement of this frequency with respect to the assigned frequency has the same absolute value and sign that the displacement of the characteristic frequency has with respect to the centre of the frequency band occupied by the emission.</u>
MOD	3137	88	6.15	<u>Frequency Tolerance: The maximum permissible departure by the centre frequency of the frequency band occupied by an emission from the assigned frequency or, by the characteristic frequency of an emission from the reference frequency.</u>  The frequency tolerance is expressed in parts in $10^6$ or in hertz.
MOD	3140	91	6.16	<u>Necessary Bandwidth: For a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions.</u>

MOD 3139 90 6.17 Occupied Bandwidth: The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage  $\beta/2$  of the total mean power of a given emission.

Unless otherwise specified by the CCIR for the appropriate class of emission, the value of  $\beta/2$  should be taken as 0.5%.

ADD 3153C 6.18 Right-Hand (or Clockwise) Polarized Wave: An elliptically or circularly-polarized wave, in which the electric field vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a right-hand or clockwise direction.

ADD 3153D 6.19 Left-Hand (or Anti-Clockwise) Polarized Wave: An elliptically or circularly-polarized wave, in which the electric field vector, observed in the fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a left-hand or anti-clockwise direction.

MOD 3143 94 6.20 Power: Whenever the power of a radio transmitter etc. is referred to it shall be expressed in one of the following forms, according to the class of emission:

- peak envelope power (PX or pX);
- mean power (PY or pY);
- carrier power (PZ or pZ).

For different classes of emission, the relationships between peak envelope power, mean power and carrier power, under the conditions of normal operation and of no modulation, are contained in CCIR Recommendations which may be used as a guide.

For use in formulae, the symbol  $p$  denotes power expressed in watts and the symbol  $P$  denotes power expressed in decibels relative to a reference level.

MOD 3144 95 6.21 Peak Envelope Power (of a radio transmitter): The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.

- MOD 3145 96 6.22 Mean Power (of a radio transmitter):  
The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.
- MOD 3146 97 6.23 Carrier Power (of a radio transmitter):  
The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle taken under the condition of no modulation.
- MOD 3149 99 6.24 Gain of an Antenna: The ratio, usually expressed in decibels, of the power required at the input of a loss free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power flux-density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. The gain may be considered for a specified polarization.

Depending on the choice of the reference antenna a distinction is made between:

- {absolute gain} ( $G_i$ ), when the reference antenna is an isotropic antenna isolated in space; [ 3
- gain relative to a half-wave dipole ( $G_d$ ), when the reference antenna is a half-wave dipole isolated in space whose equatorial plane contains the given direction;
- gain relative to a short vertical antenna ( $G_v$ ), when the reference antenna is a linear conductor, much shorter than one quarter of the wavelength, normal to the surface of a perfectly conducting plane which contains the given direction.

- MOD 3147 98 6.25 Effective Radiated Power (e.r.p.) (in a given direction): The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.
- ADD 3147A 6.26 Equivalent Monopole Radiated Power (e.m.r.p.) (in a given direction): The product of the power supplied to the antenna and its gain relative to a short vertical antenna in a given direction.



MOD	3148	98A Spa2	6.27 <u>Equivalent Isotropically Radiated Power (e.i.r.p.)</u> : The product of the <u>power</u> supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.
NOC	3022	26	6.28 <u>Tropospheric Scatter</u> : The propagation of <u>radio waves</u> by scattering as a result of irregularities or discontinuities in the physical properties of the troposphere.
NOC	3023	27	6.29 <u>Ionospheric Scatter</u> : The propagation of <u>radio waves</u> by scattering as a result of irregularities or discontinuities in the ionization of the ionosphere.
ADD			<b>Sub-Section VI-B. Frequency Sharing</b>
ADD	3140A		6.30 <u>Interference</u> : The effect of unwanted energy due to one or a combination of <u>emissions</u> , <u>radiations</u> , or <u>inductions</u> upon reception in a <u>radiocommunication</u> system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.
ADD	3142A		6.31 <u>Permissible Interference</u> : Observed or predicted <u>interference</u> which complies with quantitative <u>interference</u> and sharing criteria contained in these Regulations or in CCIR Recommendations or in special agreements as provided for in these Regulations.
ADD	3140B		6.32 <u>Accepted Interference</u> : <u>Interference</u> at a higher level than that defined as <u>permissible interference</u> and which has been agreed upon between two or more administrations without prejudice to other administrations.
MOD	3142	93	6.33 <u>Harmful Interference</u> *: <u>Interference</u> which endangers the functioning of a <u>radionavigation service</u> or of other <u>safety services</u> or seriously degrades, obstructs, or repeatedly interrupts a <u>radiocommunication service</u> operating in accordance with these Regulations.
			* See Resolution No. [ ]
ADD	3142B		6.34 <u>Protection Ratio</u> : The minimum value of the wanted-to-unwanted signal ratio, usually expressed in decibels, at the receiver input determined under specified conditions such that a specified reception quality of the wanted signal is achieved at the receiver output.

**ADD**

NOC	3123	84BA Spa2	6.39 <u>Deep Space:</u> Space at distances from the Earth approximately equal to, or greater than, the distance between the Earth and the Moon.
NOC	3124	84BAA Spa2	6.40 <u>Spacecraft:</u> A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere.
(MOD)	3125	84BAB Spa2	6.41 <u>Satellite:</u> A body which revolves around another body of preponderant mass and which has a motion primarily and permanently determined by the force of attraction of that other body.
MOD	3126	84BAC Spa2	6.42 <u>Active Satellite:</u> A <u>satellite</u> carrying a <u>station</u> intended to transmit or retransmit <u>radiocommunication signals</u> .

MOD	3127	84BAD Spa2	6.43	<u>Reflecting Satellite: A satellite intended to reflect radiocommunication signals.</u>	
ADD	3127A		6.44	[Active Sensor:]	[ ]
				[pending]	[ ]
ADD	3127B		6.45	[Passive Sensor:]	[ ]
				[pending]	[ ]
MOD	3128	84BB Spa2	6.46	<u>Orbit: The path, relative to a specified frame of reference, described by the centre of mass of a satellite or other object in space subjected primarily to natural forces, mainly the force of gravity.</u>	
MOD	3129	84BC Spa2	6.47	<u>Inclination of an Orbit (of an earth satellite): The angle determined by the plane containing the orbit and the plane of the Earth's equator.</u>	
MOD	3130	84BD Spa2	6.48	<u>Period (of a satellite): The time elapsing between two consecutive passages of a satellite through a characteristic point on its orbit.</u>	
(MOD)	3131	84BE Spa2	6.49	<u>Altitude of the Apogee or Perigee: The altitude of the apogee or perigee above a specified reference surface serving to represent the surface of the Earth.</u>	
NOC	3132	84BFA Spa2	6.50	<u>Geosynchronous Satellite: An earth satellite whose period of revolution is equal to the period of rotation of the Earth about its axis.</u>	
MOD	3133	84BG Spa2	6.51	<u>Geostationary Satellite: A geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a satellite which remains approximately fixed relative to the Earth.</u>	
ADD	3133A		6.52	<u>Geostationary satellite orbit: The orbit in which a satellite must be placed to be a geostationary satellite.</u>	

## B.26-23

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3129	84BC	6.47			
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# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Corrigendum No. 1 to  
Document No. 782  
24 November 1979

**E**

B.27

PLENARY MEETING

Pages B.27-2 and B.27 - 3 Replace the text of Recommendation ZN by the following:

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 1 page



(Corr. No. 1 to Doc. No. 782)

## RECOMMENDATION ZN

**Relating to the Standardization of the Technical and Operational Characteristics of Radio Equipment**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that administrations are confronted with the necessity of allocating increasing resources to the regulation of radio equipment performance;
- b) that administrations, and in particular those in developing countries, often have difficulty in providing such resources;
- c) that it would be of advantage to apply, as far as practicable, any mutually agreed standards and associated type approvals;
- d) that a number of international bodies including the CCIR, ICAO, IMCO, CISPR and the IEC already provide recommendations and standards for technical and operating characteristics applicable to equipment performance and its measurement;
- e) that in this context the specific requirements of developing countries have not always been taken fully into account;

recommends

- 1. that administrations endeavour to cooperate with a view to establishing international specifications and associated measuring methods that could be used as models for domestic standards for radio equipment;
- 2. that such international specifications and associated measuring methods respond to widely representative conditions including specific requirements of developing countries;
- 3. that when such international specifications for radio equipment exist administrations, as far as practicable, adopt these specifications as a basis for their national standards;
- 4. that administrations consider as far as practicable mutual acceptance for the type approval of equipment which conforms to such specifications.



WORLD ADMINISTRATIVE  
RADIO CONFERENCE

(Geneva, 1979)

Document No. 782

21 November 1979

E

B.27

PLENARY MEETING27th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.4	744 + 745	Resolution BJ Recommendations ZN; ZO; ZP
C.4	746 + 747	Recommendation ZM
C.4	748 + 749	Recommendation ZL
C.4	775 + 776	Recommendation ZQ

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 13 pages



ADD

RESOLUTION No. BJ

**Relating to Improvements in the Design  
and Use of Radio Equipment**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the radio frequency spectrum is a scarce natural resource which has value only when used;
- b) that efficient utilization of the spectrum can be limited by the characteristics of both transmitting and receiving equipment;
- c) that operational aspects of radio systems can also limit the efficient utilization of the spectrum;
- d) that continuing advances in electronics and allied fields are enabling the production of more spectrum-efficient radiocommunication systems;

resolves

that administrations should encourage improvements in the design and construction of radio equipment and in the mode of operation of systems in order to improve the utilization of the radio frequency spectrum.

ADD

## RECOMMENDATION ZN

**Relating to the Standardization of the Technical  
and Operational Characteristics of Radio Equipment**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the cost of radiocommunications equipment is often a substantial portion of the overall transmission system costs;
- b) that reducing system costs facilitates greater utilization of the radio frequency spectrum;
- c) that development of equipment for limited markets usually increases equipment costs;
- d) that administrations find it necessary to allocate increasing resources to the regulation of equipment performance;
- e) that administrations, and in particular those in developing countries, often have difficulty in providing such resources;
- f) that a number of international bodies including the CCIR, the IEC, IMCO and ICAO provide recommendations and standards for the technical and operating characteristics applicable to equipment performance and measurement;

noting

that in international trade negotiations, a multilateral code of conduct is being negotiated with a view to reducing or eliminating technical barriers to trade and to fostering greater uniformity of product standards;

recommends

1. that administrations should endeavour to produce, in the appropriate international forum, radio equipment specifications that would be internationally standardized;
2. that, where such internationally standardized specifications exist, administrations should adhere to those standard specifications for their national regulation of equipment performance;

3. that, again where such internationally standardized specifications exist, administrations should allow the use of equipment meeting such standards on a national basis, and, in particular they should, as far as practicable, accept the type approval of equipment to such specifications by administrations of other countries;

4. that, where such internationally standardized specifications do not exist and are not in the course of preparation, administrations, when developing equipment specifications for national use, should produce specifications that would be capable of acceptance as internationally standardized specifications.

MOD

## RECOMMENDATION No. ZO 1

**Relating to the Use of the Rationalized  
"Système International d'Unités" (SI)**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that many difficulties associated with older systems of units are remedied by the SI system;
- b) that the International Organization for Standardization has approved the SI system and recommends it for general adoption;

recognizing

- a) that the SI system has already been adopted by many international organizations, and is widely used by the CCIR and other permanent organs of the Union;
- b) that the SI system has the status of a national standard in many countries;
- c) that, in countries where the SI system has not yet been adopted as the national standard, the SI system is also widely used by radio engineers, scientists and authors of radio publications;
- d) that the use of the SI system is continuing to spread in all parts of the world;

recommends

that administrations should use the SI system in their relations with the Union and its organs.

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<sup>1</sup> Replaces Recommendation No. 9 of the Administrative Radio Conference, Geneva, 1959.

ADD

RECOMMENDATION ZP

**Relating to Specifications of Low-Cost Television Receivers**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the potential of the television medium as an instrument for national development is being increasingly recognized;
- b) that direct reception of television broadcasting from satellites is demonstrated to be technically feasible and economically attractive;
- c) that, within the limited resources available to them, many developing countries might wish to exploit the television medium to the maximum advantage;
- d) that the availability of an efficient, low-cost television receiver would be an important factor in the setting up and expansion of television broadcast services in developing countries;
- e) that the need for both monochrome and colour receiver sets can be foreseen for receiving terrestrial and satellite transmissions;
- f) that the CCIR is already studying specifications for low-cost monochrome television receivers for home and community use, as well as the characteristics of a receiving systems for a broadcasting satellite service (television);
- g) that general agreement on the performance of suitable television receivers would considerably assist TV receiver manufacturers to produce suitable receivers of the desired types and adequate standards of performance at the lowest possible cost;
- h) that the design and production of television receivers has to take account of rapid advances in technology as well as obsolescence;

invites the CCIR

1. to draw up performance specifications for one or more types of low-cost television receivers as in considering e) above, suitable for quantity production;
2. to collaborate as necessary, with other international bodies working in this field, with a view to finalizing the specifications for such low-cost sets in the shortest possible time;

requests the Secretary-General

to send the results of this work together with suggestions as to the action to be taken to the Director General of UNESCO.

ADD

## RECOMMENDATION ZM

**Relating to the Technology for New Spectrum Sharing  
and Band Utilization Schemes**

The World Administrative Radio Conference, Geneva, 1979,

recognizing

a) that advances in technology, particularly digital radio techniques and new encoding, modulation and access schemes, are making practicable new sharing schemes that offer economical as well as technological advantages for increasing the efficiency of spectrum sharing and band utilization;

b) that rapid advances are being made in the associated technology;

invites the CCIR

1. to carry out studies of the digital radio techniques and new encoding, modulation and access schemes; examples of areas for such studies are packet radiocommunication, spread-spectrum and multifunction techniques;

2. to develop new concepts in the use of a carrier on a time-sharing basis for different radiocommunication services, i.e. use of the same part of the spectrum by multiple services;

3. to submit Recommendations to appropriate future World Administrative Radio Conferences relating to:

- the technical criteria and specifications of the most efficient spectrum sharing schemes for the various services;
- the technical and performance criteria for ensuring compatibility and interworking of systems; and
- the criteria on which to base spectrum management for these new technology systems.



MOD

## RECOMMENDATION ZL 1

**To the CCIR relating to Studies of Propagation at 12 GHz  
for the Broadcasting-Satellite Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

a) that the technical criteria, adopted at the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977, which drew up an assignment Plan for the broadcasting-satellite service in Regions 1 and 3, included a maximum margin of 2 dB, at an elevation angle of 45°, for rainfall attenuation;

b) that some studies have indicated that the necessary margin in the Tropical Zone could be higher than 2 dB;

c) that the Special Preparatory Meeting of CCIR, Geneva, 1978 recognized that, for the application of the technique suggested in CCIR Report 721, the available rain rate data are likely to underestimate the attenuation which will occur in tropical regions;

d) that there is also a need for ample information on the various other propagation factors to be taken into account in the planning of the broadcasting-satellite service;

recommends that the CCIR

1. expedite the studies of the effects of rainfall attenuation in the tropical regions and specify, as early as possible, the attenuation values necessary for ensuring a satisfactory broadcasting-satellite service;

2. continue the studies of the effects of precipitation attenuation at low angles of incidence in all rain-climatic zones;
3. continue the studies of the effects of sand and dust storms;
4. examine the relationship between the propagation characteristics for 99% of the worst month and those for the year;
5. examine, for emissions using circular polarization, the level of the depolarized component relative to the polarized component;

requests that the Director of the CCIR

bring such values of rainfall attenuation as may be specified to the notice of all administrations.

MOD

## RECOMMENDATION ZQ 1

**Relating to Frequency Bands shared between Space  
Radiocommunication Services and between Space and  
Terrestrial Radiocommunication Services**

(MOD) The World Administrative Radio Conference, Geneva, 1979,  
recognizing

NOC a) the value to the Conference of the material contained in  
the Report of the CCIR Special Preparatory Meeting, Geneva, 1978;

MOD b) that further studies on a wide range of problems dealing with  
space radiocommunications form the subject of CCIR Questions and  
Study Programmes approved by the XIVth Plenary Assembly;

considering however

NOC a) that certain CCIR Recommendations, listed below, call for  
further work and study:

MOD Recommendation 355-2 "Frequency sharing between systems in the  
fixed-satellite service and terrestrial radio services in  
the same frequency bands"

MOD Recommendation 465-1 "Reference earth station radiation pattern for  
use in coordination and interference assessment in  
the frequency range from 2 to about 10 GHz"

MOD Recommendation 466-2 "Maximum permissible level of interference  
in a telephone channel of a geostationary  
satellite network in the fixed-satellite service  
employing frequency modulation with  
frequency-division multiplex, caused by other  
networks of this service"

(MOD) b) that the deliberations of this Conference,  
particularly in relation to the provisions of Articles N25, N26  
and N27, and of other relevant Articles of the Radio Regulations,  
have shown that further information is required to reply to the following  
current Questions and Study Programmes of the CCIR:

MOD Question 1-2/4 "Antennae for systems in the fixed-satellite  
service"

<sup>1</sup> Replaces Recommendation No. Spa2 - 15 of the World Administrative  
Radio Conference for Space Telecommunications, Geneva, 1971.

- |     |                               |  |            |
|-----|-------------------------------|--|------------|
| MOD | <u>Question 2-3/4</u>         | "Technical characteristics of systems in the fixed-satellite service"  |            |
| MOD | <u>Study Programme 2A-3/4</u> | "Feasibility of frequency sharing between systems in the fixed-satellite service and terrestrial services"   |            |
| SUP | <u>Study Programme 2C-1/4</u> |  |            |
| MOD | <u>Study Programme 2J-2/4</u> | "Technical factors influencing the efficiency of use of the geostationary-satellite orbit by radiocommunication satellite networks sharing frequency bands allocated to the fixed-satellite service"   |            |
| SUP | <u>c)</u>                     |  |            |
| SUP | <u>d)</u>                     |  |            |
| NOC | <u>e)</u>                     | that it would be useful to have specific numerical values of power flux density from space stations of the broadcasting-satellite service which would permit differentiation between "individual reception" and "community reception" in the broadcasting-satellite service;   |            |
| NOC | <u>f)</u>                     | that frequency sharing between the radionavigation service and the fixed-satellite service (Earth-to-space) has been adopted in the frequency band[14.0 to 14.3]GHz, and between the radionavigation-satellite service and the fixed-satellite service (Earth-to-space) in the frequency band[14.3 to 14.4]GHz;  | [ ]<br>[ ] |
|     |                               | <u>recommends</u>  |            |
| NOC | 1.                            | that administrations, recognized private operating agencies, and other participants in the work of the CCIR, consider as a matter of priority, the submission of contributions on these subjects, so that draft Recommendations on them can be prepared at the meetings of the relevant Study Groups for consideration by the Plenary Assembly of the CCIR;  |            |
| NOC | 2.                            | that the CCIR study or, as appropriate, continue to study:   |            |
| NOC | 2.1                           | the reference antenna patterns for earth station antennae, which may be appropriate for setting minimum standards of performance with a view to recommending specific patterns for this purpose, in order to improve utilization of the bands shared between the fixed-satellite service and terrestrial radiocommunication services, and of the bands shared by space radiocommunication services, and to improve the utilization of the geostationary satellite orbit; |            |

- NOC 2.2 the reference antenna patterns for satellite antennae, which may be appropriate for setting minimum standards of performance, particularly outside the main beam, in order to improve the utilization of the geostationary satellite orbit and to increase the possibilities for frequency re-use;
- NOC 2.3 the reference cross-polarization antenna patterns which may be appropriate for setting minimum standards of performance and, in this connection, further study:
- 2.3.1 the portions of the spectrum within which linear-orthogonal or circular-orthogonal polarizations might be most appropriate;
  - 2.3.2 the relative desirability, taking into account technical and orbit utilization factors, of using orthogonal polarizations within a single satellite as against with two satellites;
- NOC 2.4 the necessary limitation of spurious emissions and the frequency tolerances to be observed in both the terrestrial and space radiocommunication services insofar as they may affect sharing of frequency bands;
- (MOD) 2.5 the criteria of permissible interference for the various space radiocommunication services and terrestrial radiocommunication services sharing the frequency bands allocated by this Conference, in order to permit the determination of:
- 2.5.1 the coordination distance and the probability of interference between stations within that distance;
  - 2.5.2 the necessary limits of power flux density set up at the Earth's surface by space stations;
- NOC 2.6 the maximum permissible level of interference into a geostationary satellite link from any other single interfering geostationary satellite network and from the aggregate of all other geostationary satellite networks, particularly in the case of:
- NOC 2.6.1 frequency-modulated telephony signals;
  - NOC 2.6.2 frequency-modulated television signals;
  - NOC 2.6.3 digitally-modulated signals
- and the most appropriate manner in which permissible interference should be specified in these and other cases;

- NOC 2.7 the interference criteria applicable to frequency sharing between non-geostationary satellite networks and geostationary satellite networks;
- NOC 2.8 the possibility of establishing a technical criterion for expressing the efficiency of use of the geostationary satellite orbit;
- NOC 2.9 the possibility of improving and simplifying the method of determining the coordination area as described in Appendix 28 to the Radio Regulations;
- (MOD) 2.10 the conditions for frequency sharing in those bands allocated to the broadcasting-satellite service by this Conference with a view to issuing appropriate Recommendations as soon as possible so that administrations and the International Frequency Registration Board shall have the necessary technical data required to carry out examination procedures, in particular regarding Articles N11, N12 and N13 of the Radio Regulations and those in Resolution No. [Spa2 - 3] [ ]
- SUP 2.11
- SUP 2.12
- NOC 2.13 the power flux densities required for individual and community reception in the broadcasting-satellite service, with a view to specifying numerical values which will differentiate between these types of reception;
- NOC 2.14 the criteria for frequency sharing between the radionavigation service and the fixed-satellite service (Earth-to-space) in the frequency band [14.0 to 14.3]GHz and [ ] between the radionavigation-satellite service and the fixed-satellite service (Earth-to-space) in the frequency band [14.3 to 14.4]GHz. [ ]

WORLD ADMINISTRATIVE  
RADIO CONFERENCE

(Geneva, 1979)

Document No. 783-E

20 November 1979

Original : English

COMMITTEE 5

SECOND REPORT OF WORKING GROUP 5/AD HOC 8 TO COMMITTEE 5

Subject : Study of the problems associated with the Region 2 12 GHz planning conference; and  
Problems caused by allocations in Region 3 to sharing with Regions 1 and 2.

1. Representatives of the Administrations of Algeria, Australia, Brazil, Canada, Cuba, France, Federal Republic of Germany, People's Democratic Republic of Korea, the Netherlands, New Zealand, Nigeria, Japan, Senegal, Sweden, Syria, United Kingdom, United States of America, the USSR and Venezuela attended the third meeting of the Working Group.
2. The Working Group discussed the inter-regional sharing situation between the fixed-satellite service in Regions 1 and 3 with the broadcasting-satellite service in Region 2 in the band 12.5 - 12.7 GHz.
3. The Working Group decided by majority to recommend to Committee 5, for its consideration, a draft Resolution indicating the sharing criteria between the services mentioned in 2 above.
4. During discussion of this subject several delegations expressed concern as to how the requirements of the fixed-satellite service in Regions 1 and 3 could be adequately safeguarded during the drawing up of the Region 2 Broadcasting-Satellite Plan. It was recognized that all Members of the Union have the right to attend a Regional Conference, but there was some doubt as to the position concerning voting rights. This matter is referred to Committee 5 for further consideration.
5. The delegation of the USSR considered that the Resolution should also cover the protection of terrestrial services operating in the band 12.5 - 12.7 GHz under No. 6788/405BD and reserved the right to come back to this matter in Committee 5.
6. The draft Resolution No. [CC] is presented in Annex 1 of this Report.
7. Sharing with the broadcasting-satellite service in Region 3 in the band 12.5 - 12.7 GHz  
  
The Working Group discussed the sharing situations that would arise from the allocation of the band 12.5 - 12.7 GHz to the broadcasting-satellite service in Region 3 and decided unanimously to recommend to Committee 5, for its consideration, a draft Resolution giving appropriate sharing criteria.
8. The draft Resolution No. [EE] is presented in Annex 2 of this Report.
9. Proposed Amendment to Resolution No. [AA]  
  
Working Group 5D, in its twenty-ninth report, decided to recommend to Committee 5 the adoption of a Resolution relating to the convening of the 1983 Regional Broadcasting-Satellite Conference. The Working Group agreed that it would be desirable in this Resolution (No. [AA]) to draw specific attention to draft Resolutions No. [BB] and No. [CC] concerning inter-regional sharing problems.
10. The Working Group decided by majority to amend Resolution No. [AA] as indicated in Annex 3 to this Report.



11. The delegation of Canada could not accept use of the word "respect" in the proposed amendment and reserved its right to return to this matter in Committee 5.

12. Documents not considered by the Working Group

Two additional documents (No. DL/247 and No. 248) were submitted to the Working Group for consideration. These documents do not concern inter-regional sharing problems but it was agreed that there would be benefit in discussing them so as to avoid taking up the time of Committee 5. However it was not possible to discuss the documents and they are submitted to Committee 5 for possible consideration.

13. The documents referred to are presented in Annexes 4 and 5.

14. The Working Group has now completed the tasks given to it by Committee 5.

R.O. PHILLIPS  
Chairman of Working Group 5/ad hoc 8

Annexes : 5





A N N E X 1

RESOLUTION No. CC 7

Relating to the Sharing between the Fixed-Satellite Service  
in Regions 1 and 3 and the Broadcasting-Satellite Service  
in Region 2 in the Band 12.5 - 12.7 GHz

The World Administrative Radio Conference, Geneva, 1979,

recognizing

- a) that an allocation has been made at this Conference to the broadcasting-satellite service in the band 12.1 - 12.7 GHz in Region 2;
- b) that in the band 12.5 - 12.75 GHz in Regions 1 and 3 the allocation to the fixed-satellite service has been maintained;
- c) that in drawing up the broadcasting-satellite Plan (Geneva, 1977) for Regions 1 and 3 due regard was taken of the future operational needs of the fixed satellite service in Region 2 and that, in observing these needs it was necessary to impose constraints on the preparation of the Plan and the associated modification procedure;

resolves

- 1. that, prior to the coming into force of the Plan to be prepared by the Regional Conference for the planning of the broadcasting-satellite service in Region 2, the provisions of Resolution No. Spa2 - 3 together with Articles N11 and N13 shall apply with respect to the coordination between space stations in the broadcasting-satellite service in Region 2 and space stations in the fixed-satellite service in Regions 1 and 3.
- 2. that in the drawing-up of the Plan (and any associated modification procedure) for the broadcasting-satellite service in Region 2 the requirements for satisfactory future operation of the fixed-satellite service in Regions 1 and 3 shall be observed, and that, if constraints on the fixed-satellite service are considered necessary to ensure that no harmful interference is caused either to the fixed-satellite or the broadcasting-satellite services involved, they should not in any case be greater than those imposed on the fixed-satellite service in Region 2 by the Final Acts of the World Broadcasting-Satellite Administrative Radio Conference, Geneva, 1977;
- 3. that, in order that the Regional Conference shall have the necessary guidance for achieving resolves 2, the CCIR should study urgently the technical provisions required, taking into account existing and proposed fixed-satellite systems for operation in the 12.5 - 12.7 GHz band in Regions 1 and 3.

A N N E X 2

RESOLUTION No. / EE /

Relating to the Establishment of the Broadcasting Satellite Service  
in Region 3 in the 12.5 - 12.75 GHz Frequency Band and to Sharing  
with Space and Terrestrial Services in Regions 1, 2 and 3

The World Administrative Radio Conference, Geneva, 1979,

considering

that this Conference has allocated the band 12.5 - 12.75 GHz to the broadcasting-satellite service for community reception in Region 3;

recognizing

that under Resolution No. Spa2 - 2 the Administrative Council may wish to empower a future Administrative Radio Conference to establish a plan for the broadcasting-satellite service in this band;

resolves

a) that, until such time as a plan may be established for the broadcasting-satellite service in the band 12.5 - 12.75 GHz in Region 3, the provisions of / Resolution No. Spa2 - 3 / together with Articles N11 and N13 shall apply to the coordination between stations in the broadcasting-satellite service in Region 3 and :

i) space stations in the broadcasting-satellite and fixed-satellite services in Regions 1, 2 and 3;

ii) terrestrial stations in Regions 1 and 2;

b) that the CCIR should study urgently the technical provisions which may be appropriate for the sharing between stations in the broadcasting-satellite service in Region 3 and :

i) space stations in the broadcasting-satellite and fixed-satellite services in Regions 1 and 2;

ii) terrestrial stations in Regions 1 and 2;

c) that, until such time as technical provisions are developed by the CCIR and accepted by Administrations concerned under / Resolution No. Spa2 - 6 /, the sharing between space stations in the broadcasting-satellite service in Region 3 and terrestrial services in Regions 1 and 2 shall be based on the following criteria

- i) the power flux-density at the Earth's surface, produced by emissions from a space station in the broadcasting-satellite service in Region 3 for all conditions and for all methods of modulation shall not exceed the limits given in Annex 5 of the / Final Acts of the World Administrative Radio Conference, Geneva, 1977 /;
- ii) in addition to i), the provisions of No. 6072 shall apply in the countries mentioned in No. 3788/405BD;
- iii) the limits given in i) and ii) above may be exceeded on the territory of any country, the Administration of which has so agreed.

A N N E X 3

PROPOSED AMENDMENT TO RESOLUTION /AA/

(This Resolution is contained in the twenty-ninth report of Working Group 5D, Document No. 731(Rev.1) Annex 3).

a) Delete present text of resolves 7.

b) Insert new text as follows :

"7. that planning should respect the provisions of Resolutions Nos. /BB/ and /CC/, concerning the matter of inter-regional sharing."

A N N E X 4

## RESOLUTION NO. DD

Relating to the Final Acts of the  
1977 World Broadcasting-Satellite Administrative Radio Conference  
with Respect to Region 2

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the 1977 World Broadcasting-Satellite Administrative Radio Conference adopted only interim provisions for Region 2;
- b) that the present Conference has adopted changes to the allocation Table for Region 2 that affect the conditions on which those interim provisions in the Final Acts of the 1977 Conference are based;
- c) that the present Conference has also decided to incorporate the Final Acts of the 1977 Conference into the Radio Regulations as Appendix [...]7;
- d) that a Regional Administrative Radio Conference will be convened in 1983 to carry out planning for the broadcasting-satellite service in Region 2 in accordance with Resolution No. AA;

resolves

1. that for the present, the following Resolutions and Recommendations are no longer required and are abrogated :
  - Resolution No. Sat-8
  - Resolution No. Sat-9
  - Recommendation No. Sat-8
2. that the provisions of Article 12 of the 1977 Final Acts relating to arc segmentation in Region 2 are no longer applicable in the band 11.7 - 12.1 GHz and will not be applicable in the remainder of the band 11.7 - 12.2 GHz following the 1983 Regional Administrative Radio Conference;
3. that the remaining interim provisions for Region 2 in the 1977 Final Acts shall continue to apply until the time of the 1983 Regional Administrative Radio Conference which time they will be superseded by the appropriate decisions of that Conference.

A N N E X 5

ADD ARTICLE N13B

ADD Coordination, Notification and Recording of Frequency  
Assignments to Stations of the Broadcasting-Satellite  
Service in the 12 GHz Band and to the other  
Services to which these Bands are Allocated, so far  
as their Relationship to the Broadcasting-Satellite  
Service in these Bands is Concerned

New  
ADD 4650AA 1. This Article is applicable to frequency bands and Regions  
as follows :

- a) 11.7 - 12.5 GHz in Region 1;
- b) 12.1 - 12.7 GHz in Region 2;
- c) 11.7 - 12.2 GHz in Region 3.

ADD 4650B 2. The provisions and associated Plan for the broadcasting-  
satellite service in the frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3)  
and 11.7 - 12.5 GHz (in Region 1) adopted by the World Broadcasting-Satellite  
Administrative Radio Conference, Geneva, 1977, as contained in Appendix [..],  
together with Resolutions Nos. BB, CC and DD shall apply to the assignment and  
use of frequencies by stations of the broadcasting-satellite service in these  
bands and to the stations of other services to which these bands are allocated  
so far as their relationship to the broadcasting-satellite service in these  
bands is concerned.

MOD ARTICLE N11

Coordination of Frequency Assignments to Stations in a  
Space Radiocommunication Service except Stations  
in the Broadcasting-Satellite Service and to  
Appropriate Terrestrial Stations<sup>1</sup>

ADD 1 For the coordination of frequency assignments to stations  
in the broadcasting-satellite service and other services in the 12 GHz band as  
defined in No. 4650AA, see also Article N13B.

ARTICLE N12/9

MOD Notification and Recording in the Master  
International Frequency Register of Frequency  
Assignments<sup>1</sup> to Terrestrial Radiocommunication Stations<sup>2</sup> 2A

ADD 2A For notification and recording of frequency assignments to  
terrestrial stations in the 12 GHz band as defined in No. 4650AA, so far as  
their relationship to the broadcasting-satellite service in the bands is  
concerned, see also Article N13B.

ARTICLE N13/9A

MOD

Notification and Recording in the Master  
International Frequency Register of Frequency  
Assignments<sup>1</sup> to Radio Astronomy<sup>1</sup>, Passive<sup>1</sup> and Space  
Radiocommunication Stations except Stations in the  
Broadcasting-Satellite Service<sup>2</sup>)

ADD 2)

For notification and recording of frequency assignments to  
stations in the broadcasting-satellite service and other services in the  
12 GHz band as defined in No. 4650AA, see also Article N13B.

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# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Corrigendum No. 1 au  
Document No. 784-E  
22 novembre 1979

GROUPE DE TRAVAIL 6A  
WORKING GROUP 6A  
GRUPO DE TRABAJO 6A

## CORRIGENDUM TO ANNEX TO APPENDIX 1A

Read Column headings :

	Appendix 1A Type of information co-ordination required	
	1. Assignments to transmitting earth station with simple frequency-changing transponder on board the satellite in accordance with No. <u>/4114/639AJ/</u>	
	2. Same as 1 above in cases requiring independent treatment of the up-link and down-link (e.g. telemetry and telecommand)	
	3. Assignments to transmitting earth station with simple frequency-changing transponder on board the satellite in accordance with No. <u>/4114/639AJ/</u>	
	4. Same as 3 above in cases requiring independent treatment of the up-link and down-link (e.g. telemetry and telecommand)	
	5. Assignments to transmitting earth station with simple frequency-changing transponder on board the satellite in accordance with No. <u>/4114/639AJ/</u>	
	6. Same as 5 above in cases requiring independent treatment of the up-link and down-link (e.g. telemetry and telecommand)	
	7. Assignments to transmitting earth station with simple frequency-changing transponder on board the satellite in accordance with No. <u>/4114/639AJ/</u>	
	8. Same as 7 above in cases requiring independent treatment of the up-link and down-link (e.g. telemetry and telecommand)	

Cols. 9 and 10 NOC





# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 784-E  
21 November 1979  
Original : English

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WORKING GROUP 6A

NOTE BY THE CHAIRMAN OF WORKING GROUP 6A3

1. Working Group 6A requested Working Group 6A3 to determine which items in Appendix 1A are required for co-ordination.
2. Attached is a proposed addition to Appendix 1A which lists the minimum information required for co-ordination in ten different cases.
3. Because of the shortage of time, this document is being introduced into Working Group 6A (with the concurrence of the Chairman of Working Group 6A) without having been considered by Working Group 6A3.

A.M. CORRADO  
Chairman of Working Group 6A3

Annex : 1

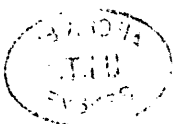


ANNEX TO APPENDIX 1A

Minimum information required for co-ordination  
in accordance with Nos. /4114/639AJ/ and /4138/639AN/

General information

- a) For co-ordination in accordance with No. /4114/639AJ/:
- in the case of co-ordination of an assignment(s) to a space station, the information to be provided in Section B or C of Appendix 1A shall be either the characteristics for the actual co-operating earth station, if known, for the network, or, the characteristics of a typical earth station;
  - in the case of co-ordination of an assignment(s) to an earth station, supply items 4c and 4e, Section A of Appendix 1A if there is no change to the basic characteristics of the assignment(s) to the space station to accommodate the earth station(s). Otherwise, co-ordination of the frequency assignment(s) for the space station will be required.
- b) For co-ordination in accordance with No. /4138/639AN/ only the items indicated are required.
- c) An 'X' in the column indicates the information is required.



[illegible]

\* Power density only.

\*\* May not always pertain.

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 785-E  
21 November 1979  
Original : Spanish

## COMMITTEE 5

### REPORT OF WORKING GROUP 5/AD HOC 7 TO COMMITTEE 5

Subject : Draft Recommendation on preferred frequency bands for systems using tropospheric scatter

1. Working Group 5/ad hoc 7 held two meetings on 17 and 21 November. Delegates from the following administrations took part in the discussions : Brazil, Ecuador, Spain, France, Italy, Mexico, Papua New Guinea, United Kingdom, Sweden, Thailand, Tanzania and Venezuela and representatives of the CCIR, the IFRB, INTELSAT and ATU.
2. The draft Resolution in Document No. 551 and Recommendation No. Spa2 - 2 were taken as basic documents.
3. The Group unanimously agreed :
  - to submit the annexed draft Recommendation to Committee 5 for approval and
  - to propose to Committee 5 the cancellation of Recommendation No. Spa2 - 2.

M.N. TAPIADOR  
Chairman of Working Group 5/ad hoc 7

Annex : 1



A N N E X

DRAFT RECOMMENDATION No.

Relating to Preferred Frequency Bands for Systems  
using Tropospheric Scatter

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the World Administrative Radio Conference for Space Telecommunications, 1971, requested the CCIR to study the preferred frequency bands for tropospheric scatter systems and proposed that a future World Administrative Radio Conference should consider this matter;
- b) the technical and operational difficulties pointed out by the CCIR (Report of the Special Preparatory Meeting, Geneva, 1978) in the bands shared by tropospheric scatter systems, space systems and other terrestrial systems;
- c) the additional allocation of frequency bands which this Conference has made for the space services in view of their increasing development;
- d) that the IFRB requires administrations to supply specific information on systems using tropospheric scatter in order to verify compliance with certain provisions of these Regulations (such as 3662/333, 3718/364, 3720/364B, 6058/47ONGA and 6062/47ONK);

recognizing nevertheless

that for some time to come administrations will wish to continue using tropospheric scatter systems to meet certain telecommunication requirements;

noting

that the proliferation of such systems in all frequency bands and particularly in those shared with the space systems is bound to aggravate an already difficult situation;

recommends the CCIR

- 1. to continue studies, as a matter of urgency, of the frequency bands presenting more appropriate propagation features for systems using tropospheric scatter;
- 2. to continue studying the possibilities and criteria for sharing between systems using tropospheric scatter and other systems, particularly space systems;



3. to prepare, on the basis of these studies , and if possible before its next Plenary Assembly, a Recommendation concerning the specific frequency bands found preferable for such systems. The choice of these bands should take into account allocations to other services, particularly allocations to the space services;

recommends administrations

1. to collaborate, as a matter of urgency and within the limits of their possibilities, with the CCIR by sending it contributions relating to the aforementioned studies;
2. for the assignment of frequencies to new stations in systems using tropospheric scatter, to take into account the latest information prepared by the CCIR to ensure that systems established in the future use a limited number of certain frequency bands;
3. in frequency assignment notifications to the IFRB, to indicate expressly whether they relate to stations of tropospheric scatter systems;

invites the Administrative Council

to make the necessary arrangements for a future World Administrative Radio Conference to consider the frequency bands of the fixed service which shall be used in preference by the new tropospheric scatter systems, taking into account the allocations to the space radiocommunication services and the relevant CCIR Recommendations.

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**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Corrigendum No. 2 toDocument No. 786-E

26 November 1979

Original: EnglishCOMMITTEE 5

## NOTE BY THE CHAIRMAN OF COMMITTEE 5

For reasons of economy of paper and time Committee 5 is hereby informed that in consultation with Committee 9 it has been decided not to issue a revised version of Document No. 786. The corrected texts of the Annexes to Document No. 786 shall appear in the blue series documents indicated below and delegates are requested to refer to them:

Annex to Doc. No. 786

No. 1  
Nos. 2 to 8  
No. 9

Blue Series

B.32  
B.31  
Add.1 to B.26

Doc. No.

820  
819  
Add.1 to 781

M. HARBI  
Chairman of Committee 5



# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Corrigendum No. 1 to  
Document No. 786-E  
24 November 1979  
Original: English

## COMMITTEE 9

### FIFTH SERIES OF TEXTS FROM COMMITTEE 5 TO THE EDITORIAL COMMITTEE

#### Note by the Chairman of Committee 5

1. Document No. 786 entitled "Fifth series of texts from Committee 5 to the Editorial Committee" is found to contain some errors.
2. A revised version of this Document is under preparation and will be available soon.

M. HARBI  
Chairman of Committee 5





**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 786-E

22 November 1979

Original : English

COMMITTEE 9

FIFTH SERIES OF TEXTS FROM COMMITTEE 5 TO THE  
EDITORIAL COMMITTEE

The texts mentioned in Document No. 787 are hereby submitted to the Editorial Committee in Annexes 1 to 9 to the present document.

With reference to Annex 1, attention of the Editorial Committee is drawn to Document No. 271. The rules indicated therein have been applied by Committee 5 in preparation of Annex 1. Furthermore, to facilitate reading of the Table of Frequency Allocations, the Editorial Committee is requested to present the Table so that any box or boxes of the Table appear always on the left-hand page followed by the texts of the footnotes related thereto below the boxes and in front of the boxes on the right-hand page.

M. HARBI  
Chairman of Committee 5

Annexes : 9



A N N E X 1

TABLE OF FREQUENCY ALLOCATIONS FOR THE  
FREQUENCY BANDS 27.5 MHz AND 960 MHz

**MHz**  
**27.5-37.75**

Allocation to Services		
Region 1	Region 2	Region 3
27.5—28	METEOROLOGICAL AIDS  FIXED  MOBILE	
28—29.7	AMATEUR AMATEUR-SATELLITE	
29.7—30.005	FIXED MOBILE	
30.005—30.01	SPACE OPERATION (Satellite identification) FIXED MOBILE SPACE RESEARCH	
30.01—37.5	FIXED MOBILE	
37.5—37.75	FIXED MOBILE <i>Radio Astronomy</i> <b>3531A</b>	

ADD 3531A

In making assignments to stations of other services to which the band 37.5 - 38.25 MHz is allocated, Administrations are urged to take all practical steps to protect the radio astronomy service from harmful interference. Emissions from space and airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3261/116A and Article N33A).

SUP 3524/227, 3525/228, 3526/229, 3527/230, 3528/231, 3529/232, 3530/233A.

MHz  
37.75 - 50

Region 1	Region 2	Region 3
37.75 - 38.25	FIXED MOBILE Radio astronomy 3531A	
38.25 - 39.986	FIXED MOBILE	
39.986 - 40.02	FIXED MOBILE Space research	
40.02 - 40.98	FIXED MOBILE 3533/236	
40.98 - 41.015	FIXED MOBILE Space research 3536/238 3538/240 3538A	
41.015 - 44	FIXED MOBILE 3536/238 3538/240 3538A	
44 - 47	FIXED MOBILE 3538/240 3538AB	
	47 - 50 FIXED MOBILE	47 - 50 FIXED MOBILE BROADCASTING

- MOD 3533/236 "The band 40.66 - 40.70 MHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 40.68 MHz). Radio services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 5002A.-
- MOD 3536/238 Additional allocation : in the Republic of South Africa, Burundi, Botswana, Lesotho, Malawi, Namibia, Rhodesia, Rwanda, Swaziland, Zaire, Zambia, the band 41 - 44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- ADD 3538A Additional allocation : in Iran and Japan, the band 41 - 44 MHz is also allocated to the radiolocation service on a secondary basis.
- MOD 3538/240 Additional allocation : in France and Monaco, the band 41 - 47 MHz is also allocated to the broadcasting service on a primary basis until 1 January 1986 and in the United Kingdom until 1 January 1987.
- ADD 3538AB Additional allocation : in Australia and New Zealand, the band 44 - 47 MHz is also allocated to the broadcasting service on a primary basis.
- SUP 3534/236A, 3535/237, 3537/239.

MHz  
47 - 68

Allocation to Services		
Region 1	Region 2	Region 3
47 - 68  BROADCASTING     3539/241 3541/243 3541A 3541B 3541C		
	50 - 54  AMATEUR  3543A 3543B 3542/244 3545/247	
	54 - 68  BROADCASTING  Fixed  Mobile  3543C	54 - 68  FIXED  MOBILE  BROADCASTING

MOD 3541/243 Additional allocation : in Bulgaria, Hungary, Kenya, Mongolia, Poland, Czechoslovakia and the USSR, the bands 47 - 48.5 and 56.5 - 58 MHz are also allocated to the fixed and land mobile services on a secondary basis.

ADD 3541A Additional allocation : in Albania, the Federal Republic of Germany, Austria, Belgium, Denmark, Finland, France, Gabon, Greece, Israel, Italy, Liechtenstein, Luxembourg, Mali, Malta, Morocco, Norway, the Netherlands, the German Democratic Republic, Roumania, the United Kingdom, Sweden, Switzerland, Tunisia, Turkey and Yugoslavia, the band 47 - 68 MHz is also allocated to the land mobile service on a permitted basis. Stations of the land mobile service shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in this footnote.

MOD 3539/241 Additional allocation : in Angola, the Congo, Madagascar, Mozambique, Somalia, Sudan and Tanzania, the band 47 - 68 MHz is also allocated to the fixed and mobile services on a permitted basis.

SUP 3540/242

MOD 3542/244 Alternative allocation : in New Zealand, the band 50 - 51 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis. The band 53 - 54 MHz is allocated to the fixed and mobile services on a primary basis.

SUP 3543/245

ADD 3543B Alternative allocation : in Afghanistan, Bangladesh, Brunei, India, Indonesia, Iran, Malaysia, Pakistan, Singapore and Thailand the band 50 - 54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis.

SUP 3544/246

- ADD 3543A Additional allocation : in Australia, China and the Democratic People's Republic of Korea, the band 50 - 54 MHz is also allocated to the broadcasting service on a primary basis.
- ADD 3541B Alternative allocation : in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, South Africa, Rwanda, Swaziland, Zaire, Zambia and Zimbabwe, the band 50 - 54 MHz is allocated to the amateur service on a primary basis.
- MOD 3545/247 Additional allocation : in New Zealand the band 51 - 53 MHz is also allocated to the fixed and mobile services on a primary basis.
- ADD 3541C Additional allocation : in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, South Africa, Rwanda, Swaziland, Zaire, Zambia and Zimbabwe, the band 54 - 68 MHz is also allocated to the fixed and mobile services on a primary basis.
- ADD 3543C Different category of service : in the United States of America, French Overseas Departments in Region 2, Guyana, Jamaica and Mexico the allocation of the band 54 - 68 MHz to the fixed and mobile services is on a primary basis. (See No. 3432/141.)

MHz  
68 - 75.2

Allocation to Services		
Region 1	Region 2	Region 3
68 - 74.8  FIXED  MOBILE except aeronautical mobile	68 - 72  BROADCASTING  Fixed  Mobile  3548B	68 - 70  FIXED  MOBILE  3553/254
	72 - 73  FIXED  MOBILE	70 - 74.8  FIXED  MOBILE
	73 - 74.6  RADIO ASTRONOMY  3551/253A 3552/253B	
	74.6 - 74.8  FIXED  MOBILE	
	3546/248 3550A 3531X 3548/250 3558/259 3550/252	
74.8 - 75.2		3531X 3553/254 3558/259 3550/252
AERONAUTICAL RADIONAVIGATION  3558/259		

ADD 3548B

Different category of service : in Cuba, the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 68 - 72 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141).

MOD 3548/250

Alternative allocation : in Bulgaria, Hungary, Poland, Roumania and Czechoslovakia, the band 68 - 73 MHz is allocated to the broadcasting service on a primary basis, and used in accordance with the decisions in the Final Acts of the Special Regional Conference, Geneva, 1960.

- MOD 3546/248      Alternative allocation : in Mongolia and the USSR, the bands 68 - 73 MHz and 76 - 87.5 MHz are allocated to the broadcasting service on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in Mongolia and the USSR are subject to agreements with neighbouring countries concerned.
- MOD 3553/254      Additional allocation : in Australia, China, the Republic of Korea, the Philippines, the Democratic People's Republic of Korea and Western Samoa, the band 68 - 74 MHz is also allocated to the broadcasting service on a primary basis.
- ADD 3550A      Additional allocation : in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the USSR, the band 73 - 74 MHz is also allocated to the broadcasting service on a primary basis. The use of this band and the broadcasting service in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the USSR is subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3531X      In making assignments to stations of other services to which the band 73 - 74.6 MHz is allocated, Administrations are urged to take all practical steps to protect the radio astronomy service from harmful interference. Emissions from space and airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3281/116A and Article N33A).
- MOD 3551/253A      In Region 2, the fixed, mobile and broadcasting services operations previously authorized in the band 73 - 74.6 MHz may continue to operate on a non-interference basis to the radio astronomy service until 31 December 1985.
- MOD 3552/253B      Additional allocation : in Colombia, Costa Rica, Cuba, El Salvador, Ecuador, Guatemala, Guyana, Honduras and Nicaragua, the band 73 - 74.6 MHz is also allocated to the fixed and mobile services on a secondary basis.
- MOD 3550/252      Additional allocation : in Bulgaria, China, Hungary, Mongolia, Poland, Czechoslovakia and the USSR, the bands 74.6 - 74.8 and 75.2 - 75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only.
- MOD 3558/259      The frequency 75 MHz is assigned to aeronautical marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons.
- Until 31 December 1989, Administrations in Regions 2 and 3 should refrain from assigning frequencies to other services in the bands 74.6 - 74.8 MHz and 75.2 - 75.4 MHz.
- In the future every effort should be made to further improve the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 and 75.2 MHz.
- SUP 3547/249, 3549/251, 3554/255, 3555/256, 3556/257, 3557/258.



MHz  
75.2 - 88

Region 1	Region 2	Region 3
75.2 - 87.5  FIXED  MOBILE except aeronautical mobile       3546/248 3550/252 3548A 3548C 3558/259	75.2 - 75.4  FIXED  MOBILE  3550/252 3558/259	
	75.4 - 76  FIXED  MOBILE	75.4 - 87  FIXED  MOBILE
	76 - 88  BROADCASTING  Fixed  Mobile  3558X	3553A 3554A 3554B 3560/261

ADD 3554B

Additional allocation : in Western Samoa, the band 75.4 - 87 MHz is also allocated to the broadcasting service on a primary basis.

ADD 3554A

Additional allocation : in China, the Republic of Korea, Japan, the Philippines and the Democratic People's Republic of Korea, the band 76 - 87 MHz is also allocated to the broadcasting service on a primary basis.

ADD 3548A

Additional allocation : in Bulgaria, Hungary, Poland, Roumania and Czechoslovakia, the band 76 - 87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference, Geneva, 1960.

ADD 3558X

Different category of service : in the United States of America, the French Overseas Department in Region 2, Guyana, Jamaica, Mexico and Paraguay, the allocation of the band 76 - 88 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141).

- MOD 3560/261 In Region 3 (except in the Republic of Korea, India, Japan, Malaysia, the Philippines, Singapore and Thailand) the band 79.75 - 80.25 MHz is also allocated to the radio astronomy service on a primary basis. In making assignments to stations of other services, Administrations are urged to take all practicable steps in the band to protect the radio astronomy service from harmful interference. Emissions from spacecraft and airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).
- ADD 3548C Alternative allocation : in Albania, the band 81 - 87.5 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference, Geneva, 1960.
- MOD 3553A Additional allocation : in Afghanistan and Australia the band 85 - 87 MHz is also allocated to the broadcasting service on a primary basis. The introduction of broadcasting service in these countries is subject to special agreements between the Administrations concerned.
- SUP 3559/260, 3561/262, 3562/263.

MHz  
87 - 108

Region 1	Region 2	Region 3
		87 - 100
87.5 - 100		FIXED
BROADCASTING	88 - 100	MOBILE
3563/264 3564/265	BROADCASTING	BROADCASTING
		3566/267
100 - 108	BROADCASTING	
	3566/267 3564/265 3571/272 3566A 3569A 3570A 3570B 3570C 3570D 3570CA	

MOD 3566/267

Alternative allocation : in New Zealand, the band  
87 - 88 MHz is allocated to the land mobile service on a primary basis.

MOD 3563/264

Additional allocation : in the Federal Republic of Germany,  
Spain, France, Ireland, Italy, Liechtenstein, Monaco, the United Kingdom,  
Switzerland and Yemen (P.D.R. of) the band 87.5 - 88 MHz is also allocated to  
the land mobile service on a permitted basis and subject to agreement obtained  
under the procedure set forth in Article N13A.

SUP 3567/268

SUP 3568/269

SUP 3569/270

SUP 3570/271

MOD 3564/265

Additional allocation : in the United Kingdom the  
band 97.6 - 102.1 MHz is also allocated to the land mobile service on a  
permitted basis, until 31 December 1989. The use of this band by the land  
mobile service is restricted to those stations in operation on 1 January 1980.  
The withdrawal of land mobile stations will be arranged in consultation with  
the Administrations concerned.

ADD 3569A

In Region 1, existing systems in the fixed and mobile,  
except aeronautical mobile (R), services may continue to use the  
band 100 - 104 MHz on a primary basis until the date of entry into force of  
the new regional broadcasting agreement referred to in Resolution B or  
1 January 1985 whichever is the earlier date.

- ADD 3570A Broadcasting stations in the band 100- 108 MHz in Region 1 shall be established and operated in accordance with an agreement and associated plan for the band 87.5 - 108 MHz to be drawn up by a regional broadcasting conference (see Resolution B). Prior to the date of entry into force of this agreement, broadcasting stations may be introduced subject to agreement between Administrations concerned, on the understanding that such an operation shall in no case prejudice the establishment of the plan.
- MOD 3571/272 Additional allocation : in China, the Republic of Korea, the Philippines and Singapore, the band 100 - 108 MHz is also allocated to the fixed and mobile services on a permitted basis.
- ADD 3566A Alternative allocation : in New Zealand, the band 100 - 108 MHz is allocated to the band mobile service on a primary basis (see No. 3432/141) and to the broadcasting service on a secondary basis (see No. 3431/140).
- ADD 3570B Additional allocation : in Austria, Bulgaria, Hungary, Israel, Kenya, Mongolia, Poland, Roumania, Syria, the German Democratic Republic, the United Kingdom, Somalia, Czechoslovakia and the USSR, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995 and, thereafter, on a secondary basis.
- ADD 3570D Additional allocation : in Finland and Yugoslavia, the band 104 - 108 MHz is also allocated to the fixed service on a permitted basis, until 31 December 1995. The effective radiated power of any station shall not exceed 25 watts.
- ADD 3570C Additional allocation : in France, Sweden, Turkey, and Yugoslavia, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995.
- ADD 3570CA Additional allocation : in Italy, the band 104 - 108 MHz is also allocated to the land mobile service on a primary basis until the date of entry into force of the new regional broadcasting agreement referred to in Resolution B or 1 January 1985 whichever is the earlier date.

MHz  
108 - 138

Region 1	Region 2	Region 3
108 - 117.975	AERONAUTICAL RADIONAVIGATION	
117.975 - 136	AERONAUTICAL MOBILE (R)  3495/201A 3572/273 3572A 3573/273A 3574/274	
136 - 137	AERONAUTICAL MOBILE (R)  Fixed  Mobile except aeronautical mobile (R)  3578A 3573/273A	
137 - 138	SPACE OPERATION (Space-to-Earth)  METEOROLOGICAL-SATELLITE (Space-to-Earth)  SPACE RESEARCH (Space-to-Earth)  Fixed  Mobile except aeronautical mobile (R)  3580/279A 3583/281C 3584/281E	

MOD 3573/273A

Subject to agreement obtained under the procedure set forth in Article N13A, the band 117.975 - 137 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis and on the condition not to cause harmful interference to the terrestrial aeronautical mobile (R) service.

ADD 3572A

The bands 121.45 - 121.55, and 242.95 - 243.05 MHz are also allocated to the mobile-satellite service for the reception on board satellites of emissions from emergency position indicating radio-beacons transmitting at 121.5 and 243 MHz.

NOC 3572/273

In this band, the frequency 121.5 MHz is the aeronautical emergency frequency and where required the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz; mobile stations of the maritime mobile service may communicate on these frequencies for safety purposes with stations of the aeronautical mobile service.

- MOD 3574/274 Additional allocation : in Angola, Bulgaria, Hungary, Iran, Iraq, Japan, Mongolia, Mozambique, Papua New Guinea, Poland, the German Democratic Republic, Roumania, Czechoslovakia and the USSR, the band 132 - 136 MHz is also allocated to the aeronautical mobile (OR) service on a permitted basis.
- SUP 3575/274A
- SUP 3576/274B
- SUP 3578/275A
- ADD 3578A Until 1 January 1990 the band 136 - 137 MHz is also allocated to the space operation service (space-to-Earth), meteorological satellite service (space-to-Earth) and the space research service (space-to-Earth) on a primary basis. The introduction of stations of the aeronautical mobile (R) service can only occur after that date and shall be effected in accordance with internationally agreed plans for that service. After 1 January 1990 the band 136 - 137 MHz will also be allocated to the above-mentioned space radiocommunication services on a secondary basis (see Recommendation SpA 7) /.
- SUP 3579/278
- MOD 3584/281E Different category of service : in Afghanistan, Bahrein, Brunei, China, United Arab Emirates, India, Indonesia, Iran, Iraq, Jordan, Kuwait, Malaysia, Oman, Pakistan, Qatar, Singapore, Thailand and the Yemen Arab Republic, the allocation of the band 137 - 138 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141).
- MOD 3583/281C Additional allocation : in Saudi Arabia, Austria, Bulgaria, Egypt, Finland, Hungary, Lebanon, Mongolia, Poland, the German Democratic Republic, Roumania, Syria, Czechoslovakia, the USSR, the Yemen Arab Republic and Yugoslavia, the band 137 - 138 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis.
- MOD 3580/279A Additional allocation: in Australia, the band 137 - 144 MHz is also allocated to the broadcasting service, on a primary basis, until that service can be accommodated within Regional broadcasting allocations.
- SUP 3581/281A
- SUP 3582/281AA

MHz  
138 - 144

Region 1	Region 2	Region 3
138 - 143.6  AERONAUTICAL MOBILE (OR)    3577/275 3585A 3586/282A 3587/283	138 - 143.6  FIXED  MOBILE  /RADIOLOCATION/  Space research (Space-to-Earth)	138 - 143.6  FIXED  MOBILE  Space research (Space-to-Earth)   3580/279A 3589/284
143.6 - 143.65  AERONAUTICAL MOBILE (OR)  SPACE RESEARCH (Space-to-Earth)   3577/275 3585A 3587/283	143.6 - 143.65  FIXED  MOBILE  SPACE RESEARCH (Space-to-Earth)  /RADIOLOCATION/	143.6 - 143.65  FIXED  MOBILE  SPACE RESEARCH (Space-to-Earth)   3580/279A 3589/284
143.65 - 144  AERONAUTICAL MOBILE (OR)    3577/275 3585A 3586/282A 3587/283	143.65 - 144  FIXED  MOBILE  /RADIOLOCATION/  Space research (Space-to-Earth)	143.65 - 144  FIXED  MOBILE  Space research (Space-to-Earth)   3580/279A 3589/284

- MOD 3580/279A Additional allocation : in Australia, the band 137 - 144 MHz is also allocated to the broadcasting service on a primary basis until that service can be accommodated within the Regional broadcasting allocations.
- SUP 3585/281G
- MOD 3586/282A Additional allocation : in the Federal Republic of Germany, Austria, Belgium, France, Israel, Italy, Liechtenstein, Luxembourg, the United Kingdom, Sweden, Switzerland and Czechoslovakia, the bands 138 - 143.6 MHz and 143.65 - 144 MHz are also allocated to the space research service (Space-to-Earth) on a secondary basis.
- ADD 3585A Additional allocation : in the Federal Republic of Germany, Saudi Arabia, Austria, Belgium, Spain, Finland, Greece, Ireland, Israel, Italy, Kuwait, Liechtenstein, Mali, Malta, Norway, the Netherlands, the United Kingdom, Sweden, Switzerland, Somalia, Tunisia, Turkey and Yugoslavia, the band 138 - 144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis.
- MOD 3577/275 Alternative allocation : in Angola, Bahrein, Botswana, Burundi, Cameroon, Central African Republic, the Congo, the United Arab Emirates, Ethiopia, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Kenya, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, Sierra Leone, South Africa, Swaziland, Tanzania, Tchad, Togo, Zaire, Zambia and Zimbabwe, the band 138 - 144 MHz is allocated to the fixed and mobile services on a primary basis.
- SUP 3579/278
- MOD 3587/283 Additional allocation : in Finland, Malta, Tunisia, the Yemen Arab Republic and Yugoslavia, the band 138 - 144 MHz is also allocated to the fixed service on a primary basis.
- SUP 3588/283A
- MOD 3589/284 Additional allocation : in China, the band 138 - 144 MHz is also allocated to the radiolocation service on a primary basis.



MHz  
144 - 150.05

Region 1	Region 2	Region 3
144 - 146	AMATEUR  AMATEUR-SATELLITE  3499A 3584A 3589A	
146 - 149.9  FIXED  MOBILE except aeronautical mobile (R)  3591/285A	146 - 148  AMATEUR  3598A	146 - 148  AMATEUR  FIXED  MOBILE  3598A
	148 - 149.9  FIXED  MOBILE  3591/285A	
149.9 - 150.05	RADIONAVIGATION-SATELLITE  3593/285C	

- ADD 3589A In Singapore, the band 144 - 145 MHz is also allocated to the fixed and mobile services on a primary basis. Such use is limited to systems in operation on or before 1 January 1980 and in any case shall cease by 31 December 1995.
- SUP 3590/285
- ADD 3584A Additional allocation : in China, the band 144 - 146 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.
- ADD 3598A Alternative allocation : in Afghanistan, Bangladesh, Cuba, Guyana and India, the band 146 - 148 MHz is allocated to the fixed and mobile services on a primary basis.
- MOD 3591/285A Subject to agreement obtained under the procedure set forth in Article N13A, the band 148 - 149.9 MHz may be used by space operation service (Earth-to-space). The bandwidth of an individual transmission shall not exceed  $\pm$  25 kHz.

NOC 3593/285C

Emissions of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz may also be used by receiving earth stations of the space research service.

SUP 3592/285B

SUP 3597/289

SUP 3598/290

MHz  
150.05 - 174

Region 1	Region 2	Region 3
150.05 - 153  FIXED  MOBILE except aeronautical mobile  RADIOASTRONOMY  3531/233B 3531C	150.05 - 156.7625  FIXED  MOBILE	
153 - 154  FIXED  MOBILE except aeronautical mobile (R)  Meteorological aids		
154 - 156.7625  FIXED  MOBILE except aeronautical mobile (R)  3595/287		
156.7625 - 156.8375		MARITIME MOBILE (Distress and calling)  3495/201A 3595/287
156.8375 - 174  FIXED  MOBILE except aeronautical mobile  3595/287 3596/288 3596A	156.8375 - 174  FIXED  MOBILE  3595/287 3594A 3596B 3596C	

- MOD 3531/233B      In making assignments to stations of other services to which the band 150.05 - 153 MHz is allocated, Administrations are urged to take all practical steps to protect the radio astronomy service from harmful interference. Emissions from space and airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).
- ADD 3531C      Additional allocation: in Jordan, Sweden and Switzerland the band 150.05 - 153 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.
- ADD 3531B      Alternative allocation: in Australia, the band 150.05 - 153 MHz is allocated to the fixed and mobile except aeronautical mobile services on a primary basis.
- ADD 3591A      Additional allocation : in Australia and India, the band 150.05 - 153 MHz is also allocated to the radio astronomy service on a primary basis.
- SUP 3594/286A
- MOD 3595/287      The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency are contained in Article N35/35.
- In the bands 156 - 156.7625 MHz, 156.8375 - 157.45 MHz, 160.6 - 160.975 MHz and 161.475 - 162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by that administration (see Article N57/35).
- Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.
- However, the frequencies in the bands in which the maritime mobile service is authorized, may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements.

- MOD 3596/288      Alternative allocation: in France and Monaco, the band 162 - 174 MHz is allocated to the broadcasting service on a primary basis until 1 January 1985
- ADD 3596A      Alternative allocation: in Morocco, the band 162 - 174 MHz is allocated to the broadcasting service on a primary basis. The use of this band shall be subject to agreement with Administrations having services operating, or intending to have services, in accordance with the Table which are likely to be affected. This note does not apply to the existing stations with their present technical characteristics.
- ADD 3594A      Additional allocation: in China, the band 163 - 167 MHz is also allocated to the space operation service (space-to-Earth) on a primary basis subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3596B      Additional allocation : in Afghanistan, China and Pakistan, the band 167 - 174 MHz is also allocated to the broadcasting service on a primary basis. The introduction of broadcasting stations into this band shall be subject to agreement with the neighbouring countries in Region 3, whose services are likely to be affected.
- ADD 3596C      Additional allocation: in Japan the band 170 - 174 MHz is also allocated to the broadcasting service on a primary basis.
- SUP 3598/290

MHz  
174 - 235

Region 1	Region 2	Region 3
174 - 223  BROADCASTING	174 - 216  BROADCASTING  Fixed  Mobile  3601B	174 - 223  FIXED  MOBILE  BROADCASTING
	216 - 220  FIXED  MARITIME MOBILE  Radiolocation  3608AA	
3601/293 3601A 3608/300 3608A	220 - 225  AMATEUR  FIXED  MOBILE  Radiolocation  3608AA	3603/295 3602A 3608AC 3601C 3602B 3608AB
223 - 230  BROADCASTING  Fixed  Mobile		223 - 230  FIXED  MOBILE  BROADCASTING
3601/293 3601A 3612D 3608/300 3608A 3608CA 3608B 3608C 3612/304	225 - 235  FIXED  MOBILE	AERONAUTICAL RADIONAVIGATION  Radiolocation   3612A 3612B
230 - 235  FIXED  MOBILE 3608CA   3608/300 3608B 3608C 3612C 3612/304 3612CA		230 - 235  FIXED  MOBILE  AERONAUTICAL RADIONAVIGATION  3612B

SUP 3599/291

SUP 3600/292

ADD 3601C Additional allocation: in China, the band 174 - 184 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis subject to agreement obtained under the procedure set forth in Article N13A. These services should not cause harmful interference to, or claim protection from, existing or planned broadcasting stations.

ADD 3601B Different category of service : in Mexico, the allocation of the band 174 - 216 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141).

ADD 3601A Additional allocation : in Austria, the Federal Republic of Germany, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden and Switzerland, the band 174 - 230 MHz is also allocated to the land mobile service on a permitted basis. Stations of the land mobile service shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in this footnote.

MOD 3601/293 Additional allocation : in the People's Republic of Congo, Ethiopia, Gambia, Guinea, Kenya, Malawi, Uganda, Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174 - 230 MHz is also allocated to the fixed and mobile services on a secondary basis.

SUP 3602/294

ADD 3602A Additional allocation: in Bangladesh, Pakistan and the Philippines, the band 200 - 216 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

ADD 3602B Additional allocation: in Australia and Papua New Guinea, the bands 204 - 208 MHz and 222 - 223 MHz are also allocated to the aeronautical radionavigation service on a primary basis.

MOD 3603/295 Additional allocation: in India, the band 208 - 216 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to agreement between the Administrations concerned.

SUP 3604/296

SUP 3605/297

SUP 3606/298

SUP 3607/299

ADD 3608AB Additional allocation: in China, India and Thailand, the band 216 - 223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.

ADD 3608AA In Region 2, the band 216 - 225 MHz is also allocated to the radiolocation service on a primary basis until 1 January 1990. As of 1 January 1990, no new stations in that service may be authorized. Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.

ADD 3608A Additional allocation: in Somalia, the band 216 - 225 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD 3608/300 Additional allocation: in Oman, the United Kingdom and Turkey, the band 216 - 235 MHz is also allocated to the radiolocation service on a secondary basis.

ADD 3608AC Additional allocation: in Japan, the band 222 - 223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.

ADD 3612D Different category of service : in Spain and Portugal, the band 223 - 230 MHz is allocated to the fixed service on a permitted basis.

Stations of this service shall not cause harmful interference to, or claim protection from broadcasting stations of other countries, whether existing or planned, that operate in accordance with the Table.

ADD 3608B Additional allocation : in Saudi Arabia, Bahrain, the United Arab Emirates, Israel, Jordan, Oman, Qatar and Syria, the band 223 - 235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis.

ADD 3608C Additional allocation : in Spain and Portugal, the band 223 - 235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis until 1 January 1990 and subject to not causing harmful interference to existing or planned broadcasting stations in other countries.

ADD 3608CA Additional allocation : in Sweden, the band 223 - 235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis until 1 January 1990, subject to agreement obtained under the procedure set forth in Article N13A, and on condition, that no harmful interference is caused to existing and planned broadcasting stations in other countries.



SUP 3609/301

SUP 3610/302

SUP 3611/303

MOD 3612/304

Alternative allocation : in Botswana, Lesotho, Namibia, South Africa, Swaziland and Zambia, the bands 223 - 238 MHz and 246 - 254 MHz are allocated to the broadcasting service on a primary basis.

ADD 3612A

Alternative allocation: in New Zealand, Western Samoa, Niue and Cook Islands, the band 225 - 230 MHz is allocated to the fixed, mobile and aeronautical radionavigation services on a primary basis.

ADD 3612B

Additional allocation: in China, the band 225 - 235 MHz is also allocated to the radio astronomy service on a secondary basis.

ADD 3612C

Additional allocation: in Nigeria, the band 230 - 235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to agreement obtained under the procedure set forth in Article N13A.

SUP 3613/305

SUP 3615/306

SUP 3616/307

SUP 3617/308

ADD 3612CA

Additional allocation : in Yugoslavia, the band 230 - 235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, until 1 January 1995. The use of this band by the aeronautical radionavigation service in Yugoslavia is restricted to the stations in operation on 1 January 1980.

MHz  
235 - 335.4

Region 1	Region 2	Region 3
235 - 267	FIXED  MOBILE  3495/201A 3572A 3614/305A 3618/308A 3612/304 3619/309	
267 - 272	FIXED  MOBILE  Space operation (space-to-Earth)  3618/308A 3621/309B	
272 - 273	SPACE OPERATION (space-to-Earth)  FIXED  MOBILE  3618/308A	
273 - 322	FIXED  MOBILE  3618/308A	
322 - 328.6	FIXED  MOBILE  RADIO ASTRONOMY  3622/310	
328.6 - 335.4	AERONAUTICAL RADIONAVIGATION  3624/311	

MOD 3614/305A Additional allocation : in New Zealand, the band 235 - 239.5 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD 3618/308A Subject to agreement obtained under the procedure set forth in Article N13A, the bands 235 - 322 MHz and 335.4 - 399.9 MHz may be used by the mobile-satellite service, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table.

NOC 3619/309 The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes.

SUP 3620/309A

MOD 3621/309B Subject to agreement obtained under the procedure set forth in Article N13A, the band 267 - 272 MHz may be used by Administrations for space telemetry in their countries on a primary basis.

NOC 3624/311 Limited to Instrument Landing Systems (glide path).

MOD 3622/310 In making assignments to stations of other services to which the band 322 - 328.6 MHz is allocated, Administrations are urged to take all practical steps to protect the radio astronomy service from harmful interference. Emissions from space and airborne stations can be particularly serious sources of interference to the radio astronomy service. (See Nos. 3280/116 and 3281/116A and Article N33A.)

SUP 3623/310A

MHz  
335.4 - 401

Region 1	Region 2	Region 3
335.4 - 399.9	FIXED  MOBILE  3618/308A	
399.9 - 400.05	RADIONAVIGATION-SATELLITE  3593/285C	
400.05 - 400.15	STANDARD FREQUENCY-SATELLITE  3626/312B 3627/313	
400.15 - 401	METEOROLOGICAL AIDS  METEOROLOGICAL-SATELLITE (space-to-Earth)  SPACE RESEARCH (space-to-Earth)  Space operation (space-to-Earth)  3627/313	

SUP 3625/311A

NOC 3626/312B

In this band the standard frequency is 400.1 MHz.  
Emissions shall be confined in a band of  $\pm 25$  kHz about this frequency.

MOD 3627/313

Additional allocation : in Afghanistan, Saudi Arabia, Austria, Bahrain, Bulgaria, Colombia, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Hungary, Indonesia, Iran, Iraq, Israel, Kuwait, Liberia, Malaysia, Nigeria, Oman, Pakistan, Philippines, Poland, Qatar, Syria, the German Democratic Republic, Roumania, Singapore, Somalia, Sri Lanka, Czechoslovakia, Thailand, Turkey, the USSR and Yugoslavia, the band 400.05 - 401 MHz is also allocated to the fixed and mobile services on a primary basis.

SUP 3628/314

MHz  
401 - 420

Region 1	Region 2	Region 3
401 - 402	METEOROLOGICAL AIDS  SPACE OPERATION (Space-to-Earth)  Earth exploration-satellite (Earth-to-space)  Fixed  Meteorological-satellite (Earth-to-space)  Mobile except aeronautical mobile	
402 - 403	METEOROLOGICAL AIDS  Earth exploration-satellite (Earth-to-space)  Fixed  Meteorological-satellite (Earth-to-space)  Mobile except aeronautical mobile	
403 - 406	METEOROLOGICAL AIDS  Fixed  Mobile except aeronautical mobile  3633A	
406 - 406.1	MOBILE-SATELLITE (Earth-to-space)  3634/317A	
406.1 - 410	FIXED  MOBILE except aeronautical mobile  RADIO ASTRONOMY  3633A 3531/233B	
410 - 420	FIXED  MOBILE except aeronautical mobile	

ADD	3633A	Additional allocation : in Canada, the bands 405.5 - 406 MHz and 406.1 - 410 MHz are also allocated to the mobile (except aeronautical mobile) satellite service (Earth-to-space), on a primary basis, subject to agreement obtained under the procedure set forth in Article N13A.
SUP	3633/316	
NOC	3634/317A	The band 406 - 406.1 MHz is reserved solely for the use and development of low-power (not to exceed 5 W) emergency position-indicating radiobeacon (EPIRB) systems using space techniques.
SUP	3635/317B	
MOD	3531/233B	In making assignments to stations of other services to which the band 406.1 - 410 MHz is allocated, Administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).
SUP	3628/314	
SUP	3629/315	
SUP	3630/315A	
SUP	3631/315B	
SUP	3632/315C	

MHz  
420 - 470

Region 1	Region 2	Region 3
420 - 430	FIXED	
	MOBILE except aeronautical mobile	
	Radiolocation	
	3640A 3636/318 3640/319	
430 - 440	430 - 440	
AMATEUR	RADIOLOCATION	
RADIOLOCATION	Amateur	
3636/318 3643/320 3644/320A 3646/322 3646A 3646B 3646C 3646D 3646E 3645A 3642/319B 3645/321	3640B 3642/319B 3643/320 3644/320A 3646C 3636/318	
440 - 450	FIXED	
	MOBILE except aeronautical mobile	
	Radiolocation	
	3640A 3636/318 3640/319 3641/319A 3640C 3640D	
450 - 460	FIXED	
	MOBILE	
	3636/318 3641/319A 3638/318B 3639/318C	
460 - 470	FIXED	
	MOBILE	
	Meteorological-satellite (space-to-Earth)	
	3650/324B 3637/318A 3638/318B 3639/318C	

ADD 3640A

Additional allocation : in Australia, the United States of America, Jamaica and the Philippines, the bands 420 - 430 MHz and 440 - 450 MHz are also allocated to the amateur service on a secondary basis.

MOD 3640/319

Different category of service : in Australia, the United States of America, India, Japan and the United Kingdom, the allocation of the bands 420 - 430 MHz and 440 - 450 MHz to the radiolocation service is on a primary basis (see No. 3432/141).

- MOD 3636/318 Additional allocation : in China, India, the German Democratic Republic, the United Kingdom and the USSR, the band 420 - 460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis.
- MOD 3646/322 Alternative allocation : in Denmark, Norway and Sweden, the bands 430 - 432 MHz and 438 - 440 MHz are allocated to the fixed and mobile except aeronautical mobile services on a primary basis.
- ADD 3646A Different category of service : in Denmark, Libya, Norway and Sweden, the allocation of the bands 430 - 432 MHz and 438 - 440 MHz to the radiolocation service is on a secondary basis (see No. 3431/140).
- ADD 3646B Additional allocation : in Finland, Lybia and Yugoslavia the bands 430 - 432 MHz and 438 - 440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- ADD 3646D Different category of service : in France, the allocation of the band 430 - 434 MHz to the amateur service is on a secondary basis (see No. 3431/140).
- MOD 3643/320 Additional allocation : in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei, Burundi, Egypt, the United Arab Emirates Ecuador, Spain, Ethiopia, Greece, Guinea, India, Indonesia, Iran, Iraq, Italy, Jordan, Kenya, Kuwait, Liechtenstein, Libya, Malaysia, Malta, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Switzerland, Tanzania, Thailand and Togo, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis and the bands 430 - 435 MHz and 438 - 440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis.
- ADD 3640B Different category of service : in Argentina, Colombia, Cuba and Venezuela, the allocation of the band 430 - 440 MHz to the amateur service is on a primary basis (see No. 3432/141).
- ADD 3646C Additional allocation : in Bulgaria, Cameroon, Hungary, Israel, Mali, Mongolia, Poland, Syria, the German Democratic Republic, Roumania, Czechoslovakia and the USSR, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis.
- ADD 3645A In Region 1, except countries mentioned in 3645/321, the band 433.05 - 434.79 MHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 433.92 MHz). The use of this frequency band for ISM applications shall be subject to special authorization by the Administration concerned, in agreement with other Administrations whose radio services might be affected. In applying this provision, Administrations shall have due regard to the latest CCIR Recommendations.
- SUP 3647/323
- SUP 3648/324



- MOD 3645/321 In the Federal Republic of Germany, Austria, Liechtenstein, Portugal, Switzerland and Yugoslavia, the band 433.05 - 434.79 MHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 433-92 MHz). Radio services of these countries operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 5002A.
- MOD 3642/319B Additional allocation : in Brazil, France and the French Overseas Departments in Region 2, and India, the band 433.75 - 434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis until 1 January 1990 and subject to agreement obtained under the procedure set forth in Article N13A. After 1 January 1990, the band 433.75 - 434.25 MHz will be allocated in the same countries to the same services on a secondary basis.
- MOD 3644/320A In the bands 435 - 438 MHz, 1 260 - 1 270 MHz, 2 400 - 2 450 MHz, 3 400 - 3 410 MHz (in Regions 2 and 3 only), 5 650 - 5 670 MHz } the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. 3442/148). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. 6362/1567A.
- The use of the bands 1 260 - 1 270 MHz and 5 650 - 5 670 MHz by the amateur-satellite service is limited to Earth-to-space direction.
- ADD 3646E Additional allocation : in Austria, the band 438 - 440 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- ADD 3640C Additional allocation : in Canada, New Zealand and Papua New Guinea, the band 440 - 450 MHz is also allocated to the amateur service on a secondary basis.
- ADD 3640D Different category of service : in Canada, the allocation of the band 440 - 450 MHz to the radiolocation service is on a primary basis (see No. 3422/141).
- MOD 3641/319A Subject to agreement obtained under the procedure set forth in Article N13A, the band 449.75 - 450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space).
- NOC 3638/318B  
Mar2 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. The use of these frequencies in territorial waters may be subject to the national regulations of the Administration concerned. The characteristics of the equipment used shall conform to those specified in Appendix 19A.
- NOC 3639/318C  
Mar2 In the territorial waters of Canada, the United States of America and the Philippines, the preferred frequencies for use by on-board communication stations shall be 457.525 MHz, 457.550 MHz, 457.575 MHz and 457.600 MHz paired, respectively, with 467.750 MHz, 467.750 MHz, 467.800 MHz and 467.825 MHz. The characteristics of the equipment used shall conform to those specified in Appendix 19A.

- MOD 3650/324B                      Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460 - 470 MHz and 1 690 - 1 710 MHz for space-to-Earth transmissions on condition that no harmful interference is caused to stations operating in accordance with the Table.
- MOD 3637/318A                      Different category of service : in Afghanistan, Bulgaria, China, Cuba, Hungary, Japan, Mongolia, Poland, Czechoslovakia and the USSR, the allocation of the band 460 - 470 MHz to the meteorological-satellite service (Space-to-Earth) is on a primary basis (see No. 3422/141) and is subject to agreement obtained under the procedure set forth in Article N13A.

MHz  
470 - 890

Region 1	Region 2	Region 3
470 - 790  BROADCASTING	470 - 512  BROADCASTING  Fixed  Mobile  3650B 3650BA	470 - 585  FIXED  MOBILE  BROADCASTING  3650C 3668/339 3650F
	512 - 608  BROADCASTING    3650E	585 - 610  FIXED  MOBILE  BROADCASTING  RADIONAVIGATION
3653AA 3650A 3651A 3651/325 3653A 3653B 3653/328 3654/329 3657/330A 3659/331 3660/332 3661/332A	608 - 614  RADIO ASTRONOMY  Mobile-satellite (except aeronautical mobile-satellite) (Earth-to-space)	3658/330B 3660/332 3660A
790 - 862  FIXED  BROADCASTING  3662CA 3662DA 3659/331 3662A 3662B 3662/333 3661A	614 - 806  BROADCASTING  Fixed  Mobile  3650B 3661/332A 3657B	610 - 890  FIXED  MOBILE  BROADCASTING
862 - 890  FIXED  MOBILE except aeronautical mobile  BROADCASTING 3662E  3659B 3662/333 3662F 3662G 3662CA 3670C	806 - 890  FIXED  MOBILE  BROADCASTING    3670B	3658/330B 3668/339 3657A 3660A 3660/332 3661/332A 3662C 3670G

- ADD 3650C Additional allocation : in China, the band 470 - 485 MHz is also allocated to the space research (Space-to-Earth) and the space operation (Space-to-Earth) services on a primary basis subject to agreement obtained under the procedure set forth in Article N13A and should not cause harmful interference to existing and planned broadcasting stations.
- ADD 3650B Different category of service : in Chile, Ecuador, the United States of America, Guyana and Jamaica, the allocation of the bands 470 - 512 MHz and 614 - 806 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141), subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3650BA Different category of service : in Mexico and Venezuela, the allocation of the band 470 - 512 MHz to the fixed and mobile services is on a primary basis (see No. 3432/141), subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3650A Additional allocation : in Burundi, Cameroon, Ethiopia, Israel, Kenya, Libya, Sudan and Yemen (P.D.R. of), the band 470 - 582 MHz is also allocated to the fixed service on a secondary basis.
- ADD 3650E Additional allocation : in Costa Rica, Ecuador, the United States of America, Guatemala, Guyana, Jamaica and Venezuela, the band 512 - 608 MHz is also allocated to the fixed and mobile services on a primary basis subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3650F Additional allocation : in India, the band 549.75 - 550.25 MHz is also allocated to the space operation service (Space-to-Earth) on a secondary basis.
- ADD 3651A Additional allocation : in the United Kingdom, the following bands are also allocated to the aeronautical radionavigation service on a primary basis : 582 - 590 MHz until 31 December 1987; 598 - 606 MHz until 31 December 1994.
- All new assignments in the aeronautical radionavigation service in these bands are subject to the agreement of the Administrations of the following countries : Federal Republic of Germany, Belgium, Denmark, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands.
- SUP 3652/327
- MOD 3653/328 Additional allocation : in Belgium, the band 582 - 606 MHz is also allocated to the radionavigation service on a primary basis until 31 December 1984.
- ADD 3653A Additional allocation : in France and Italy, the band 582 - 606 MHz is also allocated to the radionavigation service on a permitted basis until 1 January 1990.

- ADD 3653AA Additional allocation : in Oman and Sudan, the band 582 - 606 MHz is also allocated to the radionavigation service on a secondary basis.
- MOD 3654/329 Additional allocation : in Egypt (A.R.), Israel and Libya, the band 582 - 790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.
- SUP 3655/329A
- SUP 3656/330
- SUP 3656.1/330.1
- ADD 3653B Additional allocation : in Denmark and Kuwait, the band 590 - 598 MHz is also allocated for existing stations in the aeronautical radionavigation service on a primary basis until 1 January 1995.
- MOD 3651/325 Additional allocation : in the United Kingdom, the band 590 - 598 MHz is also allocated to the aeronautical radionavigation service on a primary basis. All new assignments to stations in the aeronautical radionavigation service including those transferred from the adjacent bands shall be subject to coordination with the Administrations of the following countries : Federal Republic of Germany, Belgium, Denmark, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands.
- MOD 3657/330A Additional allocation : in the African Broadcasting Area (see No. 3422A), the band 606 - 614 MHz is also allocated to the radio astronomy service on a permitted basis.
- ADD 3660A Additional allocation : in China, the band 606 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- MOD 3660/332 In Region 1, except in the African Broadcasting Area (see No. 3422A), and in Region 3, the band 608 - 614 MHz is also allocated to the radio astronomy service on a secondary basis. In making assignments to stations of other services to which the band is allocated, Administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 3280/116 and 3281/116A and Article N33A).
- MOD 3658/330B Additional allocation : in India, the band 608 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- ADD 3657A Additional allocation : in New Zealand, the band 610 - 620 MHz is also allocated to the amateur service on a secondary basis.
- ADD 3657B Different category of service : in Costa Rica and El Salvador, the allocation of the band 614 - 806 MHz to the fixed service is on a primary basis (see 3432/141), subject to agreement obtained under the procedure set forth in Article N13A.

- NOC 3661/332A Within the frequency band 620 - 790 MHz, assignments may be made to television stations using frequency modulation in the broadcasting-satellite service subject to agreement between the Administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Resolutions Nos. Spa2 - 2 and Spa2 - 3). Such stations shall not produce a power flux-density in excess of the value  $-129 \text{ dBW/m}^2$  for angles of arrival less than  $20^\circ$  (see Recommendation No. Spa2 - 10) within the territories of other countries without the consent of the Administrations of those countries.
- MOD 3659/331 Additional allocation : in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Roumania, Czechoslovakia and the USSR, the band 645 - 862 MHz is also allocated to the aeronautical radionavigation service on a permitted basis.
- ADD 3662A Alternative allocation : in Spain and France, the band 790 - 830 MHz is allocated to the broadcasting service on a primary basis.
- ADD 3661A Alternative allocation : in Greece, Italy, Morocco and Tunisia, the band 790 - 838 MHz is allocated to the broadcasting service on a primary basis.
- ADD 3662B Additional allocation : in the Federal Republic of Germany, Austria, Denmark, Finland, Liechtenstein, Norway, the Netherlands, Sweden, Switzerland and Yugoslavia, the band 790 - 862 MHz, and in Spain and France the band 830 - 862 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis. In the band 790 - 854 MHz stations of this service shall not cause harmful interference to or claim protection from stations of the broadcasting service in countries other than those mentioned in this note.
- MOD 3662/333 In Region 1, stations of the fixed service using tropospheric scatter may operate in the band 790 - 960 MHz subject to agreement obtained under the procedure set forth in Article N13A. When used for such operations, the allocation of the band 790 - 862 MHz to the fixed service is on a secondary basis to that of the broadcasting service.
- ADD 3662CA Additional allocation : in Norway and Sweden, the bands 806 - 890 MHz and 942 - 960 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite, service on a primary basis. The use of this system is limited to operation within national boundaries and subject to agreement obtained under the procedure set forth in Article N13A. This service shall not cause harmful interference to services operating in accordance with the Table.
- ADD 3670B Additional allocation : in Region 2, the band 806 - 890 MHz is also allocated to the mobile-satellite, except aeronautical mobile-satellite, service on a primary basis. The use of this system is intended for operation within national boundaries and subject to agreement obtained under the procedure set forth in Article N13A
- ADD 3662C Additional allocation : in Region 3, the bands 806 - 890 and 942 - 960 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite, service on a primary basis. The use of this system is limited to operation within national boundaries and subject to agreement obtained under the procedure set forth in Article N13A. This service shall not cause harmful interference to services operating in accordance with the Table.
- ADD 3662DA Alternative allocation : in Italy, the band 838 - 854 MHz is allocated to the broadcasting service on a primary basis as from 1 January 1995.

- ADD 3662E In Region 1, in the band 862 - 960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see No. 3422A) excluding Algeria, Egypt, Libya and Morocco. Such operations shall be in accordance with the Final Acts of the African VHF/UHF Broadcasting Conference, Geneva, 1963.
- ADD 3662F Additional allocation : in the Federal Republic of Germany, Austria, Belgium, Cyprus, Denmark, Spain, the United States of America, Finland, France, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Norway, the Netherlands, Portugal, Sweden, Switzerland and Yugoslavia the band 862 - 960 MHz is also allocated to the aeronautical mobile service on a secondary basis. The operation of aeronautical and aircraft stations in this band shall be limited to the few channels required in a public radio-telephone system and shall be subject to agreement obtained under the procedure set forth in Article N13A.
- ADD 3662G Additional allocation : in Saudi Arabia, the band 862 - 960 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under the procedure set forth in Article N13A and on the condition that no harmful interference is caused to services operating in accordance with the Table.
- ADD 3670C In the Federal Republic of Germany, Austria, Belgium, Cyprus, Denmark, Greece, Ireland, Liechtenstein, Luxembourg, Norway, the Netherlands, Portugal, Sri Lanka, Sweden and Switzerland, in the band 862 - 960 MHz a band of about 2 MHz is intended to be used by low-power stations for short distance radiocommunications.
- ADD 3659B Additional allocation : in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Roumania, Czechoslovakia and the USSR, the band 862 - 960 MHz is also allocated to the aeronautical radionavigation service on a permitted basis until 1 January 1998. Up to this date the aeronautical radionavigation service may use the band subject to agreement obtained under the procedure set forth in Article N13A. After this date, the aeronautical radionavigation service may continue to operate on a secondary basis.

MHz  
890 - 960

Region 1	Region 2	Region 3
890 - 942	890 - 902	890 - 942
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	MOBILE
BROADCASTING 3662E	Radiolocation	BROADCASTING
Radiolocation	3669A	Radiolocation
	902 - 928	
	FIXED	
	Amateur	
	Mobile except aeronautical mobile	
	Radiolocation	
	3669A 3670/340	
	928 - 942	
	FIXED	
	MOBILE except aeronautical mobile	
	Radiolocation	
3662F 3662G 3659B 3670C 3662/333	3669A	3669B 3670C
942 - 960	942 - 960	942 - 960
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	Mobile	MOBILE
BROADCASTING 3662E		BROADCASTING
3662F 3662G 3662/333 3662CA 3659B 3670C	3670A	3662C 3670C



SUP 3669/339A

ADD 3669A

Different category of service : in the United States of America, the allocation of the band 890 - 942 MHz to the radiolocation service is on a primary basis (See No. 3432/141) and subject to agreement obtained under the procedure set forth in Article N13A.

ADD 3669B

Different category of service : in Australia, the allocation of the band 890 - 942 MHz to the radiolocation service is on a primary basis. (See No. 3432/141.)

MOD 3670/340

In Region 2, the band 902 - 928 MHz is designated for industrial, scientific and medical (ISM) applications (centre frequency 915 MHz). Radio services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 5002A.

ADD 3670A

Different category of service : in the United States of America, the allocation of the bands 942 - 947 MHz and 952 - 960 MHz to the mobile service is on a primary basis (See No. 3432/141) and subject to agreement obtained under the procedure set forth in Article N13A.

SUP 3663/334

SUP 3664/335

SUP 3665/336

SUP 3666/337

SUP 3667/338

MOD 3668/339

Alternative allocation : in Pakistan, the bands 470 - 582 MHz and 610 - 890 MHz are allocated to the broadcasting service on a primary basis.

A N N E X 2

DECISIONS CONCERNING CERTAIN RESOLUTIONS AND RECOMMENDATIONS

SUP RESOLUTION No. 11

Relative to the Convening of a Special Regional Conference

Reasons : Action taken.

NOC RESOLUTION No. Aer2 - 6

Relating to the Use of Frequency Bands, Higher than the HF Bands,  
in the Aeronautical Mobile (R) Service and the Aeronautical  
Mobile-Satellite (R) Service for Communication and for  
Meteorological Broadcasts

Reasons : Still valid.

SUP RECOMMENDATION No. 14

To Administrations in Region 1. Relating to the Broadcasting  
Service in the Band 100 - 108 MHz

Reasons : Action taken.

SUP RECOMMENDATION No. 32

Relating to the Radio Astronomy Service

Reasons : Action taken.

NOC RECOMMENDATION No. 33

Relating to the Meteorological Aids Service in the Band 27.5 - 28 MHz

Reasons : Still valid.

NOC RECOMMENDATION No. Spa 8

Relating to the Need to Cease Operations of the Fixed and Mobile Services  
in the Bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz Allocated to the  
Radionavigation-Satellite Service

Reasons : Still valid.

SUP RECOMMENDATION No. Spa2 - 6

Relating to Future Frequency Allocation Requirements for the Maritime  
Mobile-Satellite Service

Reasons : Action taken.

A N N E X 3

RESOLUTION B

Relating to the Convening of a Planning Conference  
for Sound Broadcasting in the Band 87.5 - 108 MHz  
for Region 1 and Certain Countries Concerned in Region 3

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the extension of the primary allocation to the broadcasting service in Region 1 from 87.5 - 100 MHz to 87.5 - 108 MHz;
- b) that in Region 1 the band 100 - 108 MHz is at present allocated to the mobile except aeronautical mobile (R), service and in some countries also to the fixed service;
- c) that several countries in Region 3 with land boundaries adjoining Region 1 also use this band for the broadcasting service;
- d) that for those countries in Region 1 which use or intend to use the band 87.5 - 100 MHz for frequency modulated sound broadcasting, there is a need to establish a new sound broadcasting plan for the whole of the band 87.5 - 108 MHz;
- e) that for the other countries in Region 1 there is a need to establish a sound broadcasting plan for the band 100 - 108 MHz;
- f) that this new plan should in no way affect existing or planned assignments to television stations in the band 87.5 - 100 MHz made in accordance with the Regional Agreement, Stockholm, 1961;
- g) that this new plan in the band 87.5 - 100 MHz should not deteriorate the service areas of those existing sound broadcasting stations operating in accordance with the Regional Agreement, Stockholm, 1961, which are situated in the coordination area with countries using this band for television in accordance with the Regional Agreement, Stockholm, 1961.
- h) the requirement to introduce sound broadcasting stations in the band 100 - 108 MHz in accordance with this plan at the earliest possible date;
- i) that radio equipment used by aircraft for automatic landing purposes, which operates in the adjacent band 108 - 112 MHz, may be subject to harmful interference from nearby broadcasting stations operating in the band 87.5 - 108 MHz, if the frequencies of the respective stations are not selected with care, and that such interference can put human life at risk;

resolves

1. that a regional conference shall be convened before 31 December 1983 to draw up an agreement for Region 1 and the countries concerned in Region 3, and an associated plan for sound broadcasting in the band 87.5 - 108 MHz for Region 1 and those parts of Afghanistan and Iran, which are contiguous with Region 1;
2. that this conference shall take place in two sessions :
  - the first session will establish the technical bases for the preparation of the plan, including the establishment of mutual criteria for sharing between sound broadcasting and other services, including television broadcasting, operating within the band 87.5 - 108 MHz;
  - the second session, preferably to be separated from the first session by a period of more than six months, but not more than 12 months, will draw up the agreement and associated plan;
3. that countries concerned in Region 3 must be given the opportunity to participate in this conference;

requests

the CCIR, as a matter of urgency, to study the technical bases for consideration in planning and for the determination of the protection criteria between sound broadcasting stations and television broadcasting stations and between sound broadcasting stations and stations in the fixed and mobile, except aeronautical mobile (R), services;

invites

the Administrative Council to fix the dates and agenda for this conference;

calls upon Administrations

to bear in mind the problems of incompatibility with radionavigation stations operating in adjacent bands when planning the use of the band 87.5 - 108 MHz.

A N N E X 4

RECOMMENDATION NO. ...

Relating to the Compatibility between the  
Broadcasting Service in the Band 100 - 108 MHz and the  
Aeronautical Radionavigation Service in the Band 108 - 117.975 MHz

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the increasing use of VHF broadcasting, with relatively high powers, in the band 100 - 108 MHz;
- b) that the band 108 - 117.975 MHz is used on a world-wide basis for internationally agreed aeronautical radionavigation systems;
- c) that the portion of the band 108 - 117.975 MHz is used for Instrument Landing Systems (ILS) which is used by aircraft for automatic landing purposes;
- d) that the portion of the band 108 - 117.975 MHz is used for the VHF Omnidirectional Radio Range (VOR) system;
- e) that interference problems between the broadcasting and aeronautical services have occurred in parts of Regions 2 and 3;

realizing

- a) that intermodulation products from combinations of broadcasting transmissions may fall in the aeronautical radionavigation band 108 - 117.975 MHz;
- b) that the intermodulation products may be formed in the radionavigation receiver;
- c) that high power broadcasting transmissions could result in blocking of the radionavigation receivers;
- d) that the emissions of the aeronautical radionavigation service may cause interference to the broadcasting service;

requests the CCIR

- 1. to study urgently the problem of interference between the two services;
- 2. to establish suitable criteria for the protection of both services;

invites

the International Civil Aviation Organization and other appropriate international organizations to study urgently the problem and communicate the results of these studies to the CCIR;

recommends

that Administrations, in assigning frequencies to the broadcasting service in the band 100 - 108 MHz, and to the aeronautical radionavigation service in the band 108 - 117.975 MHz, should take note of the potential interference problems that could exist and apply appropriate protective measures.

A N N E X 5

REC Mar2 - 11/1

MOD

## RECOMMENDATION No. Mar2 - 11

**Relating to the Use of Channels 15 and 17 of Appendix 18  
By On-Board Communication Stations**

The World Administrative Radio Conference, Geneva, 1979,

*considering*

a) that channels 15 and 17 of Appendix 18 were provided by the World Administrative Radio Conference, Geneva, 1967, for use for internal operational communications on board ships within territorial waters and with an effective radiated power not in excess of 0.1 W, and that this power limit has been raised to 1 watt by the present Conference;

b) that considerable use is made of these channels by a number of administrations;

c) that some administrations have not used these channels for on-board communication because of the shortage of VHF channels for other maritime mobile needs;

d) that, for the same reason, these administrations wish to have the use of these channels for on-board communication discontinued;

e) that the present Conference retained the provisions in the Table of Frequency Allocations;

*noting*

that the CCIR has adopted Recommendation No. 542 and Report No. 589-1;

*recognizing*

a) that several common channels for on-board communication are necessary internationally to meet world-wide requirements in the future;

b) that there may be a need for frequencies to provide for the use of repeater stations on large vessels, such as container ships, tankers, etc.;

c) that additional experience concerning the application and effectiveness of the UHF channels made available for this purpose by the present Conference may be required;

MOD

REC Mar2 - 11/2

*recommends*

1. that the next competent World Administrative Radio Conference determine whether the use of channels 15 and 17 of Appendix 18 is still necessary for on-board communication and, if it is not, the date by which such use should cease;
2. that the same Conference review the UHF channels being used for on-board communication stations to determine whether the number of channels and their location in the radio spectrum are satisfactory and meet the requirements of such stations;
3. that the same Conference consider the need for additional allocations for use by on-board communication stations on a world-wide basis, including the territorial waters of all countries;
4. that due consideration be given by administrations to the technical standards and functioning of such stations to ensure their mutual compatibility in an effective international system of operation;



A N N E X 6

MOD

RECOMMENDATION NO. Spa 7

Relating to the Use of the Band 136 - 137 MHz by the  
Aeronautical Mobile (R) Service

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Table of Frequency Allocations as modified by the present Conference includes allocations to the aeronautical mobile (R) service on a primary basis and to the fixed and mobile, except aeronautical mobile (R), services on a secondary basis in the band 136 - 137 MHz;
- b) that provision is also made for allocations to the space operation service (space-to-Earth), the meteorological-satellite service (space-to-Earth) and the space research service (space-to-Earth) on a primary basis up to 1 January 1990, and thereafter on a secondary basis, and that the aeronautical mobile (R) service can be introduced on a primary basis only after 1 January 1990, in conformity with internationally approved plans for that service;
- c) that on that date the aeronautical mobile (R) service may well be subject to interference harmful to the safety of air navigation and that it is of the utmost importance to afford this service protection against interference from stations in the fixed and mobile, except aeronautical mobile (R) services, the space research service (space-to-Earth), the space operation service (space-to-Earth) and the meteorological-satellite service (space-to-Earth);

recommends

1. that Administrations of all Regions operating, or intending to operate, stations in the fixed service, the mobile, except aeronautical mobile (R), service, the space operation service (space-to-Earth), the meteorological-satellite service (space-to-Earth) and the space research service (space-to-Earth) in the band 136 - 137 MHz after 1 January 1990 take all possible steps to give the required protection to the aeronautical mobile (R) service and to cease the operation of stations of the other services to which the band is allocated on a secondary basis as and when the stations of the aeronautical mobile (R) service come into operation;
2. that Administrations notify the International Frequency Registration Board of their plans to bring into operation the aeronautical stations of the aeronautical mobile (R) service;
3. that Administrations notify the International Frequency Registration Board, preferably in advance of the date when stations authorized to operate on a secondary basis will cease operations, and that specific reference should be made to this Recommendation;

and requests the International Frequency Registration Board

A N N E X 7

RECOMMENDATION No. ..

Relating to an Automated UHF Maritime Mobile Radio  
Communication System

The World Administrative Radio Conference, Geneva, 1979,

conscious

- a) of continued growth of world population and associated needs of safe and efficient transportation of foodstuffs and other essential goods;
- b) of the need for a worldwide rapid and efficient economic growth;

- c) that the maritime fleets are increasingly engaged in trade and these fleets are growing substantially;

considering

- a) that the international maritime mobile VHF band (Appendix 18) has become congested in many areas of the world;
- b) that the future requirements for additional UHF radio telephone channels for ship operations, vessel traffic and public correspondence in the maritime mobile service have been estimated to be as many as 200 - 240 duplex channels in some congested areas;
- c) that it is highly desirable for the UHF maritime and other international mobile public correspondence systems to become fully automated to ensure the efficient utilization of the channels and the economic operation of the services, to the benefit of the users;
- d) that standardization is of great importance in international mobile services;
- e) that Administrations may wish to use some or all of the channels designated for maritime use, for other automated mobile services. Examples of such usage are joint or combined radio-communications in ports, waterways and adjacent piers. In other areas where there is no need for mobile services, these channels could be used for other radio services;

noting

- a) CCIR Report 587-1 on this subject in response to Question 23-2/8;
- b) CCIR Decision 30 directing Interim Working Party 8/5 to further study this subject on the basis of Question 23-2/8 and taking into account results of studies in Report 587-1;
- c) IMCO COM Circular 73 stating short range telecommunications requirements of 10 MHz of bandwidth for automated international maritime services;

recommends

that the next competent World Administrative Radio Conference :

- 1. designate suitable bands from those allocated worldwide to the mobile service with sufficient spectrum for a maritime mobile radiocommunication system including public correspondence.
- 2. identify the means for establishing, as required, regional assignment plans which take into account the worldwide needs of the maritime mobile service and allow for compatibility with other radio services;

invites the CCIR

- 1. to study preferred bands from operational and sharing aspects as a matter of urgency and to issue a Recommendation of a Report prior to the next competent Administrative Radio Conference;
- 2. to study, in consultation with the CCITT, the technical and operational aspects of an integrated maritime and land mobile automated system;

requests the Secretary-General

to communicate this Recommendation to the Intergovernmental Maritime Consultative Organization for consideration and comments.

A N N E X 8

ADD 3499A

For the use of the bands allocated to the amateur service at [ 3.5 MHz ] [ 7.0 MHz ] [ 10.1 MHz ] [ 14.0 MHz ] [ 18.068 MHz ] [ 21.0 MHz ] [ 24.89 MHz ] and 144 MHz in the event of natural disasters, see Resolution [ ... ]

RESOLUTION [ ... ]

Relating to the International Use of Radiocommunications in  
Frequency Bands Allocated to the Amateur Service in the  
Event of Natural Disasters

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that in the event of natural disaster normal communication systems are frequently overloaded, damaged, or completely interrupted;
- b) that rapid establishment of communication is essential to facilitate world-wide relief actions;
- c) that the amateur bands are not bound by international service plans or notification procedures, and are therefore well adapted for short-term use in emergency cases;
- d) that international disaster communications would be facilitated by temporary use of certain frequency bands allocated to the amateur service;
- e) that under those circumstances the stations of the amateur service, because of their widespread distribution and its demonstrated capacity in such cases, can assist in meeting essential communications needs;
- f) that national and regional amateur emergency networks exist that use frequencies throughout the bands allocated to the amateur service;
- g) that in the event of a natural disaster direct communication between amateur stations and other stations might also be useful so that vital communications can be carried out until normal communications are restored;

recognizing

that the rights and responsibilities for communications in the event of a natural disaster rest with the Administrations involved;

resolves

1. that the bands allocated to the amateur service which are specified in No. 3499A may be used by Administrations to provide for the needs of international disaster communications;
2. that such use of these bands shall be only for communications in relation to relief operations in connection with natural disasters;
3. that use of specified bands allocated to the amateur service by non-amateur stations for disaster communications shall be limited to the duration of the emergency and for the specific geographical areas as defined by the responsible authority of the affected country;
4. that disaster communications take place within the disaster area and between the disaster area and the permanent location of the organization providing relief;
5. that such communications shall be carried out only with the consent of the Administration of the country in which the disaster has occurred;
6. that relief communications from a source outside the country in which the disaster has occurred shall not replace existing national or international amateur emergency networks;
7. that close cooperation is desirable between amateur stations and the stations of other radio services which may find it necessary to use amateur frequencies in disaster communications;
8. that such international relief communications shall avoid as far as practicable interference to the amateur service networks;

invites Administrations

1. to provide for the needs of international disaster communications;
2. to provide for the needs of emergency communications within their national regulations.

A N N E X 9

ARTICLE N1

Terms and Definitions

- NOC      3042/76      *Meteorological Aids Service:* A radiocommunication service used for meteorological, including hydrological, observations and exploration.
- NOC      3043/77      *Radiosonde:* An automatic radio transmitter in the meteorological aids service usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data.
- NOC      3120/74      *Radio Astronomy:* Astronomy based on the reception of radio waves of cosmic origin.
- NOC      3121/75      *Radio Astronomy Service:* A service involving the use of radio astronomy.
- NOC      3122/75A      *Radio Astronomy Station:* A station in the radio astronomy service.
- ADD           *Passive Sensors :* A measuring instrument in the Earth exploration-satellite service or in the space research service by means of which information is obtained by reception of radiowaves of natural origin.
- ADD           *Active Sensors :* A measuring instrument in the Earth exploration-satellite service or in the space research service by means of which information is obtained by transmission and reception of radiowaves.
-

UNION INTERNATIONALE DES TELECOMMUNICATIONS  
**CONFERENCE ADMINISTRATIVE  
MONDIALE  
DES RADIOCOMMUNICATIONS**  
(Genève, 1979)

Addendum N° 2 au ✓  
Document N° 787-F/E/S  
26 novembre 1979  
Original : français  
                  anglais  
                  espagnol

SEANCE PLENIERE  
PLENARY MEETING  
SESIÓN PLENARIA

CINQUIEME RAPPORT DE LA COMMISSION 5  
FIFTH REPORT OF COMMITTEE 5  
QUINTO INFORME DE LA COMISIÓN 5

Dans l'Annexe, avant Israël 3662/F ajouter Inde 3662/F.

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In the Annex, before Israel 3662/F add India 3662/F.

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En el Anexo, antes de Israel 3662/F añádase India 3662/F.

M. HARBI  
Président de la Commission 5



**CONFERENCE ADMINISTRATIVE  
MONDIALE  
DES RADIOCOMMUNICATIONS**  
(Genève, 1979)

Addendum N° 1 au ✓  
Document N° 787-F/E/S  
23 novembre 1979  
Original: français  
anglais  
espagnol

SEANCE PLENIERE  
PLENARY SESSION  
SESION PLENARIA

CINQUIEME RAPPORT DE LA COMMISSION 5  
FIFTH REPORT OF COMMITTEE 5  
QUINTO INFORME DE LA COMISION 5

Dans l'Annexe après Etats-Unis d'Amérique 3595/287  
ajouter Espagne 3596A.

In the Annex, after United States of America 3595/287,  
add Spain 3596A.

En el Anexo, después de Estados Unidos de América 3595/287,  
añádase España 3596A.

M. HARBI  
Président de la Commission 5





# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 787-E

22 November 1979

Original : English

## PLENARY MEETING

### FIFTH REPORT OF COMMITTEE 5

1. Committee 5 has adopted the following :
  - 1.1 Table of Frequency Allocations for the frequency bands between 27.5 MHz and 960 MHz;
  - 1.2 Decisions concerning certain Resolutions and Recommendations (Resolution No. 11, No. Aer2 - 6, Recommendation No. 14, No. 32, No. 33, No. Spa 8, No. Spa2 - 6);
  - 1.3 New Resolution relating to the convening of a **planning** Conference for sound broadcasting in the band 87.5 - 108 MHz for Region 1 and certain countries concerned in Region 3;
  - 1.4 New Recommendation relating to the compatibility between the broadcasting service in the band 100 - 108 MHz and the aeronautical radionavigation service in the band 108 - 117.975 MHz;
  - 1.5 Updating of the Recommendation No. Mar2 - 11 relating to the use of channels 15 and 17 of Appendix 18 by on-board communication stations;
  - 1.6 Updating of the Recommendation No. Spa 7 relating to the use of the band 136 - 137 MHz by the aeronautical mobile (R) service;
  - 1.7 New Recommendation relating to an automated UHF maritime mobile radiocommunication system;
  - 1.8 New Resolution relating to the international use of radiocommunications in frequency bands allocated to the amateur service in the event of natural disasters;
  - 1.9 Article N1/1 - Terms and Definitions (in continuation of Document No. 606).
2. In respect of the Table of Frequency Allocations mentioned in 1.1 above, several delegations reserved their right to revert to certain items in the Plenary Session. A list of such reservations is enclosed as Annex to the present document.
3. The texts mentioned above have been submitted to the Editorial Committee for subsequent submission to the Plenary Meeting. (See Document No. 786.)

M. HARBI  
Chairman of Committee 5

Annex : 1



A N N E X

The delegations of the following countries reserved the right to revert in the Plenary Session to the items listed against their names :

<u>Country name</u>	<u>Provision No.</u>
USSR	3594A
United States of America	3595/287
Federal Republic of Germany, Australia, Denmark, United States of America, France, Italy, Israel, Norway and United Kingdom	3618/308A
United States of America	Introduction of fixed and mobile services in the bands 420 - 430 MHz and 440 - 450 MHz
China and USSR	Status of the service in No. 3636/318
United States of America	3650B, 3650E, 3669A, 3670A
Israel	3662/F

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**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 788(Rev.1)-1

22 November 1979

Original : Spanish

COMMITTEE 5

EIGHTH AND LAST REPORT OF WORKING GROUP 5BA

1. Working Group 5BA has reviewed all the proposals submitted on allocations in the frequency bands below 4 000 kHz together with the Resolutions and Recommendations relating to the use of these bands and has thus completed its work.
2. After considering the above documents, Working Group 5BA submitted its recommendations to Committee 5.
3. Annex 1 gives a summary of all the documents submitted to Committee 5. Annex 2 lists the ad hoc Groups set up.
4. The Chairman wishes to thank all participating delegations and the delegates who chaired the various ad hoc Groups of Working Group 5BA.
5. The Chairman also wishes to thank the IFRB for its technical and organizational support, Mr. F.G. Perrin for his participation, Mr. J. Balfroid in particular for his constant advice and Mr. M. Frachet for his assistance.
6. Finally, the Chairman wishes to thank the secretarial and interpreting staff without whom the work of the Group would not have been possible.

Leopoldo COOK  
Chairman of Working Group 5BA

Annexes : 2



A N N E X 1

First Report WG 5B	Below 9 kHz 9 - 14 kHz 19.95 - 20.05 kHz	Document No. 221
Second Report WG 5B	14 - 19.95 kHz 70 - 110 kHz 25 010 - 25 110 kHz	Document No. 228(Rev.2)
First Report WG 5BA	20.05 - 70 kHz 110 - 130 kHz 130 - 285 (R2 and R3) kHz 285 / R1: 283.5 / - 405 kHz	Document No. 388 Addendum No. 1
Second Report WG 5BA	405 - 415 kHz Resolution relating to the date of entry into force of the 10 kHz guardband for the frequency 500 kHz in the mobile service (distress and calling)	Document No. 402 Addendum No. 1
Third Report of WG 5BA	415 - 495 (R2, R3) kHz 495 - 505 kHz 505 - 1 606.5 (R2: 1 605) kHz 2 170 - 2 194 kHz 2 850 - 3 230 kHz 3 400 - 3 500 kHz	Document No. 645
Note from the Chairman of Working Group 5BA to the Chairman of Committee 5	Allocation of the band 415 - 495 kHz in Region 1	Document No. 537
Fourth Report of WG 5BA	1 606.5 (1 605 R2) - 1 800 kHz 1 800 - 2 000 kHz 2 000 - 2 170 kHz 2 194 - 2 850 kHz 3 230 - 3 400 kHz 3 500 - 4 000 kHz	Document No. 764
Fifth Report WG 5BA	Recommendation relating to the designation of a frequency in the bands 415 - 490 or 510 - 526.5 kHz (525 kHz in Region 2) on a worldwide basis for the transmission by coast stations of navigational and meteorological warnings to ships using narrow-band direct printing telegraphy	Document No. 765
Sixth Report WG 5BA	130 - 285 (R1) kHz	Document No. 766
Note from the Chairman of WG 5BA to the Chairman of Committee 5	Footnote in the band 160 - 285 kHz in Region 1 limiting the power of broadcasting stations in the direction of previously notified radionavigation stations	Document No. 506

Seventh Report WG 5BA	<p>-Resolution relating to the reassignment of stations in the fixed and mobile services in the bands allocated to the radiolocation and amateur services in Region 1 (1 625 - 1 635 kHz, 1 800 - 1 810 kHz, 1 810 - 1 850 kHz, 2 160 - 2 170 kHz)</p> <p>-Recommendation relating to the preparation of a Broadcasting Plan in the band 1 605 - 1 705 kHz in Region 2</p>	Document No. 767(Rev.1)
Report of ad hoc Group 5BA 12 to Committee 5	Recommendation relating to planning for the use of frequencies by the maritime mobile service in the band / 415 - 526.5_7 kHz	Document No. 755(Rev.1)
Report of ad hoc Group 5BA 13 to Committee 5	Resolution based on Document No. 623 and Resolution No. 7 and Recommendation No. 2 of the Regional Administrative LF/MF Broadcasting Conference in Regions 1 and 3	Document No. 780
Report of ad hoc Group 5BA 14 to Committee 5	Resolution relating to the modification of carrier frequencies of LF broadcasting stations in Region 1	Document No. 750(Rev.1)
Eighth and last report of Working Group 5BA	Summary	Document No. 788(Rev.1)

A N N E X 2

## AD HOC GROUPS

Group	Chairman	Terms of Reference	Output
5B-RA	B. Olstrup (Sweden)	Allocation for radio astronomy at 25 MHz	Document No. 222
5B1	W.G. Longman (Canada)	Allocations 130 - 160 kHz R1	Document No. 237
5BA1	G. Malmgren (Sweden)	Allocations <u>148.5 - 495</u> kHz R1 (DL/105)	Document No. 445
5BA2	M. Bencheman (Algeria)	Resolution relating to the date of entry into force of the 10 kHz guardband for the frequency 500 kHz in the mobile service (distress and calling)	Document No. 354
5BA3	V. Fernandez (Cuba)	Allocations 525 - 2 000 kHz R2	Document No. 381
5BA4	A.T. Zamanian (Iran)	Allocations 1 800 - 2 000 kHz R3	Document No. 380
5BA5	G. Vedder (Netherlands)	Recommendation relating to the designation of a frequency for the transmission by coast stations of navigational and meteorological warnings to ships	Document No. 364 Corrigendum 1 to Document No. 364
5BA6	R.O. Hewitt (Canada)	Resolution relating to the future use of the band 2 170 - 2 194 kHz	Document No. 420
5BA7	L.K. Chau (Canada)	Recommendation relating to the preparation of a broadcasting plan in the band 1 605 - 1 705 kHz in Region 2	Document No. 513
5BA8	P. Laurent (France)	Allocations for the radiolocation service in R1 in 1 606.5 - 2 000 kHz and channel allocation in 3 200 - 3 700 kHz	Document No. 510 (Rev.1)
5BA9	H.A. Kieffer (Switzerland)	Resolution relating to the use of certain frequency bands allocated to the amateur service in the event of natural disasters	Document No. 542

Group	Chairman	Terms of reference	Output
5BA10	F.V.V. Watson (Malawi)	Sharing of the band 2 160 - 2 170 kHz for the radiolocation service in Region 1 and drafting of a Resolution relating to the reassignments of stations in the fixed and mobile services in the bands allocated to the radiolocation service	Document No. 689
5BA11	R.C. Davies (Australia)	Modification of the Recommendation given in Document No. 513 for coordination among Regions	Document No. 672
5BA12	B. Erikson (Sweden)	Recommendation relating to the planning of the use of frequencies by the maritime mobile service in the band <u>415 - 526.5</u> kHz	Document No. 755
5BA13	W.G. Longman (Canada)	Preparation of a Resolution based on Document No. 623 and Resolution No. 7 and Recommendation No. 2 of the Regional Administrative LF/MF Broadcasting Conference in Regions 1 and 3	Document No. 780
5BA14	Miss M. Huet (France)	Resolution relating to the modification of carrier frequencies of LF broadcasting stations in Region 1	Document No. 750 (Rev.1)
Joint ad hoc 5BA, 5BB	Mr. Railton (Papua New Guinea)	Remaining Resolutions and Recommendations	Document No. 789

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 788-E

21 November 1979

Original : Spanish

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COMMITTEE 5

EIGHTH AND LAST REPORT OF WORKING GROUP 5BA

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5. The Chairman also wishes to thank the IFRB for its technical and organizational support, Mr. F.G. Perrin for his participation, Mr. J. Balfroid in particular for his constant advice and Mr. M. Frachet for his assistance.
6. Finally, the Chairman wishes to thank the secretarial and interpreting staff without whom the work of the Group would not have been possible.

Leopoldo COOK  
Chairman of Working Group 5BA

Annexes : 2





A N N E X 1

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First Report WG 5BA	20.05 - 70 kHz 110 - 130 kHz 130 - 285 (R2 and R3) kHz 285 [ R1: 283.5 ] - 405 kHz	Document No. 388 Addendum No. 1
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Sixth Report WG 5BA	130 - 285 (R1) kHz	Document No. 766
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Report of ad hoc Group 5BA 14 to Committee 5	Resolution relating to the modification of carrier frequencies of LF broadcasting stations in Region 1	Document No. 750
Eighth and last report of Working Group 5BA	Summary	Document No. 788

A N N E X 2

## AD HOC GROUPS

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5B1	W.G. Longman (Canada)	Allocations 130 - 160 kHz R1	Document No. 237
5BA1	G. Malmgren (Sweden)	Allocations $\overline{148.5 - 495}$ kHz R1 (DL/105)	Document No. 445
5BA2	M. Bencheman (Algeria)	Resolution relating to the date of entry into force of the 10 kHz guardband for the frequency 500 kHz in the mobile service (distress and calling)	Document No. 354
5BA3	V. Fernandez (Cuba)	Allocations 525 - 2 000 kHz R2	Document No. 381
5BA4	A.T. Zamanian (Iran)	Allocations 1 800 - 2 000 kHz R3	Document No. 380
5BA5	G. Vedder (Netherlands)	Recommendation relating to the designation of a frequency for the transmission by coast stations of navigational and meteorological warnings to ships	Document No. 364 Corrigendum 1 to Document No. 364
5BA6	R.O. Hewitt (Canada)	Resolution relating to the future use of the band 2 170 - 2 194 kHz	Document No. 420
5BA7	L.K. Chau (Canada)	Recommendation relating to the preparation of a broadcasting plan in the band 1 605 - 1 705 kHz in Region 2	Document No. 513
5BA8	P. Laurent (France)	Allocations for the radiolocation service in R1 in 1 606.5 - 2 000 kHz	Document No. 510 (Rev.1)
5BA9	H.A. Kieffer (Switzerland)	Resolution relating to the use of certain frequency bands allocated to the amateur service in the event of natural disasters	Document No. 542

Group	Chairman	Terms of reference	Output
5BA10	F.V.V. Watson (Malawi)	Sharing of the band 2 160 - 2 170 kHz for the radiolocation service in Region 1 and drafting of a Resolution relating to the reassignments of stations in the fixed and mobile services in the bands allocated to the radiolocation service	Document No. 689
5BA11	R.C. Davies (Australia)	Modification of the Recommendation given in Document No. 513 for coordination among Regions	Document No. 672
5BA12	B. Erikson (Sweden)	Recommendation relating to the planning of the use of frequencies by the maritime mobile service in the band / 415 - 526.5 / kHz	Document No. 755
5BA13	W.G. Longman (Canada)	Preparation of a Resolution based on Document No. 623 and Resolution No. 7 and Recommendation No. 2 of the Regional Administrative LF/MF Broadcasting Conference in Regions 1 and 3	Document No. 780
5BA14	Miss M. Huet (France)	Resolution relating to the modification of carrier frequencies of LF broadcasting stations in Region 1	Document No. 750
Joint ad hoc 5BA, 5BB		Remaining Resolutions and Recommendations	Document No. 789

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 789-E

21 November 1979

Original : Spanish

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COMMITTEE 5

REPORT OF THE AD HOC SUB-GROUP FOR THE ANALYSIS OF RESOLUTIONS AND  
RECOMMENDATIONS ASSIGNED TO WORKING GROUPS 5BA AND 5BB\*)

The Sub-Group reached the following conclusions :

- 
- \*) In accordance with the decisions taken by Working Groups 5BA and 5BB respectively, this report is submitted directly to Committee 5.



SUP      **RESOLUTION No. 3 Relating to a Study by a Panel of Experts of Measures to Reduce Congestion in the Bands between 4 and 27.5 MHz**

NOC      **RESOLUTION No. 10 Relating to the Use of the Bands 7 000 to 7 100 kHz and 7 100 to 7 300 kHz by the Amateur Service and the Broadcasting Service**

(To be retained)

MOD      **RESOLUTION No. 13 Relating to the Preparation of revised Allotment Plans for the Aeronautical Mobile Service**

(See draft Recommendation in Annex)

NOC      **RESOLUTION No. 15 Relating to Inter-ship Frequencies in the Bands between 1 605 and 3 600 kHz in Region 1**

(See Document No. B11, page 4).

SUP      **RESOLUTION No. Mar 11 Relating to the Transfer of Frequency Assignments to Coast Radiotelephone Stations in the Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz**

SUP      **RESOLUTION No. Mar 15 Relating to the Use of the New High Frequency Channels made available for Maritime Radiotelephony by the Present Conference**

(See Document No. B6, page 14).

NOC      **RESOLUTION No. Mar 19 Relating to the Manner in which the I.F.R.B. shall treat Notifications dealing with Frequency Assignments to Oceanographic Stations**

(See Document No. B11, page 4)

NOC      **RESOLUTION No. Mar 20 Concerning the Establishment of a Co-ordinated World-wide System for the Collection of Data relating to Oceanography**

(See Document No. B6, page 14)

SUP      **RESOLUTION No. Mar2 - 2 Relating to the Implementation of the New Arrangement of Radiotelegraphy and Radiotelephony Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 27 500 kHz**

(See Document No. B6, page 14)

SUP      **RESOLUTION No. Mar2 - 3 Relating to the Transfer of certain Frequency Assignments of Stations operating in the Bands allocated exclusively to Coast Radiotelegraphy in the Maritime Mobile Service between 4 000 and 23 000 kHz**

(See Document No. B6, page 14)

NOC      **RESOLUTION No. Mar2 - 4 Relating to the Implementation of the New Channelling Arrangement for A1 Morse Radiotelegraphy in the Bands allocated to the Maritime Mobile Service between 4 000 and 27 500 kHz**

(See Document No. B6, page 14)

SUP      **RESOLUTION No. Mar2 - 6 Relating to the Implementation of the Rearrangement of the Coast Radiotelegraphy and Radiotelephony Bands between 4 000 and 27 500 kHz**

(See Document No. B6, page 14)

NOC      **RESOLUTION No. Mar2 - 7 Relating to the Use and Notification of Paired Frequencies reserved for Narrow-Band Direct-Printing Telegraph and Data Transmission Systems in the HF Bands allocated to the Maritime Mobile Service**

(See Document No. B11, page 4)

NOC

**RESOLUTION No. Mar2 - 8 Relating to the Notification of Non-Paired Ship Station Frequencies used for Narrow-Band Direct-Printing Telegraph and Data Transmission Systems**

(See Document No. B11, page 4)

SUP

**RESOLUTION No. Mar2 - 9 Relating to the Power Limits for Coast Radiotelephone Stations operating in the Maritime Mobile Bands between 1 605 and 4 000 kHz**

SUP

**RESOLUTION No. Mar2 - 10 Relating to the Power Limits for Coast Radiotelephone Stations operating in the Maritime Mobile Bands between 4 000 and 23 000 kHz**

(See Document No. B6, page 14)

SUP

**RESOLUTION No. Mar2 - 11 Relating to Co-ordination prior to Notifying to the I.F.R.B. Frequency Assignments pursuant to Resolution No. Mar2 - 12**

(See Document No. B6, page 14)

SUP

**RESOLUTION No. Mar2 - 12 Relating to the Implementation of Appendix 17 Rev., Section A, and Appendix 25 Mar2**

(See Document No. B6, page 14)

SUP

**RESOLUTION No. Mar2 - 13 Relating to the Use of Single Sideband Technique in the Radiotelephone Maritime Mobile Service Bands between 4 000 and 23 000 kHz**

(Date expired)



NOC

**RESOLUTION No. Aer2 — 1 Relating to the Use of Frequencies 3 023 and 5 680 kHz common to the Aeronautical Mobile (R) and (OR) Services**

NOC

**RESOLUTION No. Aer2 — 2 Relating to the Unauthorized Use of Frequencies in the Bands Allocated to the Aeronautical Mobile (R) Service**

NOC

**RESOLUTION No. Aer2 — 7 Relating to the Use of Frequencies of the Aeronautical Mobile (R) Service**

SUP      **RECOMMENDATION No. 5 to the C.C.I.R. and to Administrations Relating to International Monitoring in the Bands below 28 000 kHz**

NOC      **RECOMMENDATION No. 10 Relating to the Means of Reducing the Congestion in Band 7 (3-30 MHz)**

NOC      **RECOMMENDATION No. 11 Relating to the More Efficient Consolidation of National and International Radiocommunication Circuits operating in the Bands between 4 000 and 27 500 kHz**

NOC      **RECOMMENDATION No. 20 Concerning the Matter of Providing a Suitable Frequency Allocation for a Collision Avoidance System in the Aeronautical Radionavigation Service**

SUP      **RECOMMENDATION No. 31 Relating to the Protection of Standard Frequency Guard-Bands for Use by Radio Astronomy**

(Approval of Article 33A still pending)

SUP      **RECOMMENDATION No. 34 Relating to the Use of Radiotelegraph and Radiotelephone Links by Red Cross Organizations**

(Replaced)

SUP      **RECOMMENDATION No. 37 Relating to a Study by a Panel of Experts of Measures to reduce Congestion in the Bands between 4 and 27.5 MHz**

SUP      **RECOMMENDATION No. Spa 11 Relating to the Radio Astronomy Service**

SUP      **RECOMMENDATION No. Spa2 – 7 Relating to the future Provision of a Band near 10 MHz for the Radio Astronomy Service**

(Obsolete)

SUP      **RECOMMENDATION No. Mar2 – 1 Relating to the Use of Low Power Radiolocation Stations in the Bands between 1 605 and 2 850 kHz**

SUP      **RECOMMENDATION No. Mar2 – 2 On the Choice of a Frequency in the Mobile Maritime Bands between 1 605 and 3 800 kHz to be reserved for Safety Requirements**

SUP      **RECOMMENDATION No. Mar2 – 3 Relating to the Improvement of the Present Use by the Maritime Mobile Service of the Bands between 1 605 and 4 000 kHz**

NOC

**RECOMMENDATION No. Mar2 - 7 Relating to the Improved Use of the HF Radiotelephone Channels for Coast Stations in the Bands allocated exclusively to the Maritime Mobile Service**

NOC

**RECOMMENDATION No. Mar2 - 8 Relating to the Use of Frequency Bands between 23 000 and 27 500 kHz by the Maritime Mobile Service**

SUP

**RECOMMENDATION No. Mar2 - 9 Relating to a Study of the Feasibility of Expanding the High-Frequency Bands allocated to the Maritime Mobile Service**

(Frequency Table extended)

NOC

**RECOMMENDATION No. Aer2 - 1 Relating to the Development of Techniques which would help to reduce Congestion in the High Frequency Bands Allocated to the Aeronautical Mobile (R) Service**

NOC

**RECOMMENDATION No. Aer2 - 2 Relating to the Efficient Use of Aeronautical Mobile (R) World-Wide Frequencies**

NOC

**RECOMMENDATION No. Aer2 - 5 Relating to the Inclusion of the Band 21 924 - 22 000 kHz in the Frequency Allotment Plan for the Aeronautical Mobile (R) Service (Appendix 27 Aer2 to the Radio Regulations)**

(Draft Resolution being considered in Committee 5)

SUP

**RECOMMENDATION No. Aer2 - 8 To the World Administrative Radio Conference, 1979, Relating to the Inapplicability of Resolution No. 13 to the Aeronautical Mobile (R) Service**

(Replaced by Resolution No. ...)

NOC

**RECOMMENDATION No. Mar 5 Relating to the Designation of Common Frequencies in the Medium Frequency Bands for Use by Coast Radiotelephone Stations for Communicating with Ships of other Nationalities**

SUP

**RECOMMENDATION No. Mar 6 Relating to the Preparation of a new Frequency Allotment Plan for High Frequency Coast Radiotelephone Stations**

(Obsolete)

Annex : 1

A N N E X

DRAFT RECOMMENDATION No.

Relating to the Revision of the Frequency Allotment Plan for the  
Aeronautical Mobile (OR) Service

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Frequency Allotment Plans for the aeronautical mobile service prepared by the International Administrative Aeronautical Radio Conference (IAARC), Geneva, 1949, and adopted by the Extraordinary Administrative Radio Conference, Geneva, 1951, were substantially adopted by the Administrative Radio Conferences, Geneva, 1959, and included in the Radio Regulations;
- b) that the Extraordinary Administrative Radio Conference responsible for revising the Allotment Plan for the aeronautical mobile (R) service, Geneva, 1966, decided to include this Plan as Appendix 27;
- c) that the World Administrative Radio Conference on the aeronautical mobile (R) service, Geneva, 1978, adopted technical principles for establishing the Frequency Allotment Plan for the aeronautical mobile (R) service, in particular the use of the 3 kHz separation between carrier frequencies for particular classes of emission and powers which can be directly applied in establishing an allotment plan for the aeronautical mobile (OR) service;
- d) that the Allotment Plan for the aeronautical mobile (OR) service has not been revised since the Ordinary Administrative Radio Conference, Geneva, 1959;
- e) that, since 1959, many countries have become Members of ITU;
- f) that the present Conference has adopted Resolution No. Aer2 - 1 relating to the use of the frequencies 3 023 kHz and 5 680 kHz common to the aeronautical mobile (R) and (OR) services;
- g) that the International Telecommunication Convention, Malaga-Torremolinos, 1973, in Article 7, No. 44, provides that a World Administrative Radio Conference may partially revise the Radio Regulations;

is of the opinion

that the Plan for the aeronautical mobile (OR) service contained in Appendix 26 of the Radio Regulations will have to be reviewed and Administrations should urgently study the communications requirements of their national and international air operations in order to establish when, in the best interests of aviation, such a review shall be undertaken;

recommends

that the Administrative Council should convene a World Administrative Radio Conference to review Appendix 26 and the related provisions of the Radio Regulations.

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**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 790  
21 November 1979**E**

B.28

PLENARY MEETING**28th SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for first reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
C.9	--	Article N14
		Article N15

Note by Editorial Committee

Although Article N15/10 is not on the agenda of the Conference, it would appear to be desirable to delete the first sentence of No. 4878/641, which refers to provisions applied in 1960. If this is done, it will be necessary to delete the word "subsequent" in the second sentence, third line of the paragraph.

P. BASSOLE  
Chairman of the  
Editorial Committee

Annex: 12 pages

## ARTICLE N14/9B

**Procedure for Bringing Up To Date the Frequency  
Allotment 1 Plan for Coast Radiotelephone Stations  
Operating in the Exclusive Maritime Mobile Bands between  
4 000 and 23 000 kHz**

(Appendix 25 Mar2)

4751      639DY      § 1. (1) Before notifying to the  
Mar2      International Frequency Registration Board or bringing  
into use at any coast radiotelephone station a frequency  
assignment not covered by an allotment in the Frequency  
Allotment Plan contained in Appendix 25 Mar2, an  
administration which

a) intends to establish a coast  
radiotelephone station and has no allotment  
in the Plan, or

b) intends to expand its coast  
radiotelephone service and requires an  
additional allotment,

shall send the information listed in Appendix 1C to  
the Board not earlier than two years in the case of a)  
above, or not earlier than six months in the case of b)  
above, before the projected date of bringing into service  
of the planned coast radiotelephone service but in any  
case not later than three months before that date.

(MOD) 4752      639DZ      (2) The Board shall publish the information  
Mar2      sent under No. 4751/639DY in a special section of the  
IFRB weekly circular together with such apparent  
incompatibilities between the proposed allotment which is  
the subject of the publication and any other existing or  
proposed allotments which the Board can indentify. The  
Board shall also indicate any information of a technical  
nature and make such suggestions as it may be able to  
offer with a view to avoiding these incompatibilities.



4753 639EA  
Mar2

(3) If it is requested by any administration, particularly by an administration of a country in need of special assistance, and if the circumstances appear to warrant, the Board, using such means at its disposal as are appropriate in the circumstances, shall render the following assistance:

- a) indication of a suitable channel or channels for the service projected by the administration before that administration submits the information for publication;
- b) carry out the procedure for which provision is made in No. 4754/639EB;
- c) any other assistance of a technical nature for completion of the procedure in the present Article.

4754 639EB  
Mar2

§ 2. (1) At the same time as sending the information listed in Appendix 1C to the Board for publication, an administration shall seek the agreement of the administrations having an allotment in the same channel as the proposed allotment. A copy of the relevant correspondence shall be sent to the Board.

(MOD) 4755 639EC  
Mar2

(2) Any administration which, upon examining the information published by the Board, considers that its existing services or services planned within the time limits mentioned in No. 4751/639DY would be affected, shall have the right to be brought into the procedure undertaken pursuant to No. 4754/639EB.

4756 639ED  
Mar2

§ 3. (1) An administration which receives a request under No. 4754/639EB shall acknowledge receipt thereof immediately by telegram. If no acknowledgement is received within thirty days after the date of the IFRB weekly circular containing the information published under No. 4752/639DZ, the administration seeking agreement shall dispatch a telegram requesting acknowledgement, to which the receiving administration shall reply within a further period of fifteen days.

(MOD) 4757 639EE  
Mar2

(2) Upon receipt of the request under No. 4754/639EB, an administration shall, having regard to the proposed date of bringing into use of the assignment(s) corresponding to the allotment for which agreement was requested, promptly examine the matter with regard to harmful interference which would be caused to the services rendered by its coast station(s):

- a) using a frequency assignment corresponding to an allotment appearing in the Plan, or

- b) to be brought into service in conformity with an allotment appearing in the Plan within the time limit prescribed in No. 4774/639EV, or
- c) to be brought into service within the time limit prescribed in No. 4774/639EV, in conformity with a proposed allotment for which the information has been submitted to the Board under No. 4751/639DY for publication under No. 4752/639DZ.

(MOD) 4758      639EF  
Mar2

(3) Any administration which receives a request under No. 4754/639EB and which considers that the proposed use of a channel will not cause harmful interference to the services rendered by its coast stations as outlined in No. 4757/639EE shall, as soon as possible and not later than two months from the date of the relevant IFRB weekly circular, notify its agreement to the administration seeking agreement.

(MOD) 4759      639EG  
Mar2

(4) Any administration which receives a request under No. 4754/639EB and which considers that the proposed use of a channel may cause harmful interference to the services rendered by its coast stations as outlined in No. 4757/639EE, shall inform the administration concerned of the reasons for its disagreement as soon as possible and not later than two months from the date of the relevant IFRB weekly circular and shall furnish any information and suggestions with a view to reaching a satisfactory solution of the problem. The administration seeking agreement shall try, as far as possible, to adjust its requirements according to the comments received.

4760            639EH  
Mar2

(5) In a case where the administration seeking agreement has no allotment in the band concerned, the administration(s) with which agreement is sought shall, in consultation with the requesting administration, explore all means of meeting the requirement of the requesting administration.

(MOD) 4761      639EI  
Mar2

§ 4. (1) An administration seeking agreement may request the Board to endeavour to obtain such agreement in those cases where:

- a) an administration to which a request has been sent under No. 4754/639EB fails to acknowledge receipt of the request within forty-five days from the date of the IFRB weekly circular containing the pertinent information;

- b) an administration has acknowledged receipt under No. 4756/639ED but fails to give a decision within two months from the date of the IFRB weekly circular containing the pertinent information;
- c) there is disagreement between the administration seeking agreement and an administration with which agreement is sought as to the sharing possibilities;
- d) it is not possible to reach agreement for any other reason.

- 4762      639EJ      (2) Either the administration seeking  
Mar2      agreement or an administration with which agreement is sought, or the Board, may request additional information which it may require in studying any problem relating to this agreement.
- 4763      639EK      (3) Where the Board receives a request under  
Mar2      No. 4761/639EI a), it shall forthwith send a telegram to the administration concerned requesting immediate acknowledgement.
- 4764      639EL      (4) Where the Board receives an  
Mar2      acknowledgement following its action under No. 4763/639EK, or where the Board receives a request under No. 4761/639EI b), it shall forthwith send a telegram to the administration concerned requesting an early decision in the matter.
- 4765      639EM      (5) Where the Board receives a request under  
Mar2      No. 4761/639EI d), it shall endeavour to obtain agreement to which reference is made in No. 4754/639EB. Where the Board receives from an administration no acknowledgement to the request it made under the terms of No. 4754/639EB for agreement within the period specified in No. 4756/639ED, it shall act, in so far as this administration is concerned, in accordance with No. 4763/639EK.
- 4766      639EN      (6) Where an administration fails to reply  
Mar2      within fifteen days of the Board's telegram requesting an acknowledgement sent under No. 4763/639EK, or fails to give a decision in the matter within thirty days of

dispatch of the Board's telegram of request under No. 4764/639EL, it shall be deemed that the administration with which agreement was sought has undertaken, once the projected allotment is included in the Plan:

- a) that no complaint will be made in respect of any harmful interference which may be caused to the services rendered by its coast radiotelephone stations by the use of assignments in accordance with the allotment for which agreement was requested and
- b) that its existing or projected coast radiotelephone stations will not cause harmful interference to the use of assignments in conformity with the allotment for which agreement was requested.

The Board shall enter a remark in the Remarks Column of the Master Register for each assignment covered by the allotment in question, indicating that this assignment does not benefit from the provisions of No. 4439/607 of the Radio Regulations with respect to assignments of the administration seeking the agreement.

(MOD) 4767      639EO  
Mar2

(7) The Board shall examine the proposed allotment with respect to the probability of harmful interference which it may receive from an allotment in the Plan of the administration which failed to reply or which indicated disagreement without supplying the reasons; if the finding is favourable and where the application of the present procedure with respect to the other administrations concerned permits, the Board shall enter the proposed allotment in the Plan.

(MOD) 4768      639EP  
Mar2

(8) In the event of an unfavourable finding resulting, the Board shall inform the administration concerned of the result of the examination; if the administration insists, and where the application of the present procedure with respect to the other administrations concerned permits, the Board shall enter the proposed allotment in the Plan.

4769      639EQ  
Mar2

(9) Where the Board receives a request under No. 4761/639EI c), it shall assess the sharing possibilities and it shall inform the administrations concerned of the results obtained.

- (MOD) 4770      639ER  
Mar2      (10) In the case of continuing disagreement the Board shall examine the proposed allotment from the point of view of harmful interference which may be caused to the services rendered by the stations of the administration having declared its disagreement. In the case where the Board's finding is favourable and where the application of the present procedure with respect to the other administrations concerned permits, it shall enter the proposed allotment in the Plan.
- 4771      639ES  
Mar2      (11) If, after the examination under No. 4770/639ER, the Board reaches an unfavourable finding, it shall then examine the proposed allotment from the point of view of harmful interference which may be caused to the services on all the various channels in the band. Should the Board reach an unfavourable finding in each case, it shall determine the channel which is the least affected and, if so requested by the administration seeking agreement, it shall enter the proposed allotment in this channel in the Plan.
- (MOD) 4772      639ET  
Mar2      § 5.      An administration seeking agreement for a proposed allotment shall inform the Board of the results of its consultations with the administrations concerned. When the Board finds that the procedure prescribed in this Article has been applied with respect to each administration concerned the Board shall publish its finding in a special section of the IFRB weekly circular and, as the case may be, bring the Plan up to date.
- (MOD) 4773      639EU  
Mar2      § 6.      Notwithstanding the above provisions and if the circumstances justify, an administration may, in exceptional circumstances, notify to the Board for provisional entry in the Master Register an assignment which is not covered by an allotment in the Plan. That Administration shall, however, begin forthwith the procedure prescribed in this Article.
- 4774      639EV  
Mar2      § 7.      When, within twelve months from the date of the inclusion of the allotment in the Plan, the Board does not receive a notice of a first frequency assignment corresponding to this allotment, or where the first notified frequency assignment has not been brought into use within the time limits prescribed in the Radio Regulations, before proceeding with the deletion of the allotment from the Plan, it shall consult with the administration concerned on the appropriateness of such a deletion and of publishing this information in connection with bringing the Plan up to date. However, in the case where the Board, in the light of a request from the administration concerned, finds that exceptional circumstances warrant an extension of this period, the extension shall in no case exceed six months, except in the case of an administration which has no coast station in service in which case the period may be extended to eighteen months.

B.28-7

(MOD) 4775      639EW      § 8.      Any administration in whose name an  
Mar2      allotment is shown in the Plan, and which has a need to  
replace this allotment by another allotment in the same  
frequency band with a view to improving its service,  
shall apply the procedure described in this Article.  
When that administration arrives at a positive result  
in applying this procedure, the Board, at its request,  
shall replace the existing allotment in the Plan by  
the proposed allotment.

4776      639EX      § 9.      The Board shall maintain an up-to-date  
Mar2      master copy of the Plan resulting from the application of  
this procedure. It shall prepare in a suitable form,  
for publication by the Secretary-General, the whole or  
part of the revised version of the Plan as and when the  
circumstances justify and in any case once annually.

4777  
to  
4876      NOT allocated.

B.28-8

## ARTICLE N15/10

Procedure for the Bands Allocated Exclusively  
to the Broadcasting Service between [5 950 and 26 100]kHz

{ }

Section I. Submission of Seasonal High Frequency  
Broadcasting Schedules

(MOD) 4877 640 § 1. Periodically, administrations shall submit to the International Frequency Registration Board the projected seasonal schedules of their broadcasting stations in the bands allocated exclusively to the broadcasting service between [5 950 and 26 100]kHz. These schedules shall cover each of the following seasonal propagation periods and shall be implemented at 0100 UTC on the first Sunday of the period concerned:

{ }

March Schedule	— March and April
May Schedule	— May, June, July and August
September Schedule	— September and October
November Schedule	— November, December, January and February.

4878 641 § 2. The first schedules, to become effective on 4 September 1960, for the September-October period (1960), should be received by the Board by 1 March 1960. The closure dates for the receipt of the subsequent schedules will be set by the Board in order to permit the advance period to be reduced gradually to the minimum found practicable by the Board. Those assignments in a schedule the characteristics of which are not expected to change may be submitted up to a limit of one year in advance. Each such assignment shall be confirmed by the closing date for the submission of the schedules for the respective seasonal periods. The Board shall take appropriate steps to send reminders to administrations in carrying out this procedure.

4879 642 § 3. Two or more administrations may submit coordinated schedules containing their agreed projected frequency usage.

- 4880 643 § 4. The frequencies shown in the schedules shall be frequencies that actually will be used for that particular seasonal period and their number should be the minimum necessary to provide satisfactory reception of the particular programme in each of the areas for which it is intended. Each administration should prepare its schedule from season to season by using to the maximum extent practicable the same frequencies in each band as were used in previous schedules.
- 4881 644 § 5. The schedules shall be submitted in the form prescribed in Appendix 2, which specifies the data to be furnished for each assignment.
- 4882 645 § 6. The frequencies included in the schedules shall be in conformity with No. 4296/501 of these Regulations. To the extent practicable, the frequencies selected should correspond to listings in the Master International Frequency Register. Those administrations not having suitable listings in the Master Register may suggest any frequency considered appropriate, or may, if they so desire, indicate only the frequency band.

## Section II. Preliminary Examination and Preparation of Tentative High Frequency Broadcasting Schedule

- (MOD) 4883 646 § 7. (1) On receipt of the seasonal schedules, including confirmation in appropriate cases of the continuing validity of assignments included in preceding schedules, the Board shall incorporate the proposed frequency usage of all administrations into a combined schedule and make the appropriate preliminary examination required to prepare the Tentative High Frequency Broadcasting Schedule (hereafter called the Tentative Schedule) for the particular seasonal period. This Tentative Schedule shall include:
- a) all specific frequency assignments in cases where no alternatives were given by the administration concerned;
  - b) the selections made by the Board in cases where alternatives were given by the administration concerned;



- c) frequencies suggested by the Board in respect of all services for which no specific frequency was included in the submitted schedule, such suggestions to be made with due overall consideration for No. 4884/647, for compatibility within the Tentative Schedule, and for possible changes to the projected frequency usage which might be desirable to achieve more equitable satisfaction of administrations' requirements;
- d) such apparent incompatibilities between frequency assignments which the Board can indicate within the time available.

(MOD) 4884 647

(2) At the request of administrations, particularly those of countries in need of special assistance and which have no suitable listings in the Master Register, the Board shall give special consideration to the requirements of those administrations in preparing the Tentative Schedule.

4885 648

(3) The Board shall begin the work outlined in No. 4883/646 early enough for the Tentative Schedule to be issued to administrations not later than two months before the date when the particular seasonal period begins.

### Section III. Technical Examination and Revision of the Tentative Schedule

(MOD) 4886 649

§ 8. (1) The Board shall continue its technical examination of the Tentative Schedule with a view not only to identifying further incompatibilities between frequency assignments which become apparent in the technical examination and correcting them where possible, but also to improving the technical aspects of the Tentative Schedule by amendments to be agreed upon in consultation with the administrations concerned.

4887 650

(2) In preparing its recommendations to administrations the Board shall take into account monitoring observations and all other available data. However, when actual frequency usage is apparently not in conformity with the assignments in a submitted schedule, the Board shall seek from the administration concerned confirmation of this information.

B.28-11

- 4888 651 (3) Administrations, having considered the Tentative Schedule together with such recommendations as may have been furnished by the Board, should notify, as soon as possible, preferably before the date of commencement of the seasonal period concerned, any amendments to the Tentative Schedule which are intended for implementation.
- 4889 652 (4) Changes in the assignments of broadcasting stations which are implemented after the date on which the seasonal period begins shall be notified to the Board as soon as they can be forecast.
- (MOD) 4890 653 (5) For changes notified in accordance with Nos. 4888/651 and 4889/652, the Board shall apply the same procedure as that specified in Nos. 4884/647, 4886/649 and 4887/650. Such revisions to the Tentative Schedule as result from the application of the procedure in this Section shall be published in the IFRB weekly circulars in order that administrations can keep up to date their copies of the Tentative Schedule.

#### Section IV. Publication of the High Frequency Broadcasting Schedule

- 4891 654 § 9. After the end of each seasonal period, the Board shall publish the High Frequency Broadcasting Schedule, which shall reflect the Tentative Schedule as amended by all the changes notified to the Board since the publication of the Tentative Schedule. This High Frequency Broadcasting Schedule shall indicate by appropriate symbols:
- a) those assignments which administrations found in practice to be unsatisfactory and so notified to the Board; and
  - b) those assignments not included in the Tentative Schedule which were taken into account by the Board in the examination under Section III of this Article.

**Section V. Annual High Frequency Broadcasting Frequency List**

4892 655 § 10. A High Frequency Broadcasting Frequency List shall be published at the end of the first year of implementation of the procedure prescribed in this Article, including all frequency assignments which appear in the High Frequency Broadcasting Schedules for the year concerned. This list shall be issued as a supplement to the International Frequency List, and in the same general format. It shall also include symbols to indicate those assignments which were notified to the Board as being unsatisfactory in practice, as well as symbols to indicate the seasonal periods during which each assignment was used. A recapitulative list shall be issued annually thereafter.

**Section VI. Miscellaneous Provisions**

4893 656 § 11. The technical standards used by the Board when applying the provisions of this Article should be based, not only on the factors listed in No. 4471/636, but also on past experience in broadcasting planning and on the experience gained by the Board in the application of the provisions of this Article.

4894 657 § 12. With a view to the ultimate evolution of compatible technical plans for the frequency bands concerned, the Board shall take all necessary steps to carry out engineering studies on a long-term basis. For this purpose, the Board shall use all information made available to it on frequency usage in the application of the procedure prescribed in this Article. The Board shall also keep administrations informed of the progress and results of such studies at regular intervals.

4895 658 § 13. In applying the provisions of Article N20/15 of these Regulations, problems of harmful interference which may arise in frequency usage in the bands concerned shall be resolved by administrations by exercising the utmost goodwill and mutual cooperation and by giving due consideration to all the relevant technical and operational factors involved.

4896  
to  
4995

NOT allocated.

**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 791 -E

21 November 1979

Original: English

COMMITTEE 6

NOTE FROM THE CHAIRMAN OF COMMITTEE 5

TO THE CHAIRMAN OF COMMITTEE 6

Committee 5, at its 20th meeting held on 21 November 1979, considered paragraph 8 of Document No. 764 and agreed to draw the attention of Committee 6 to the need to include the bands 1625 - 1635 kHz, 1800 - 1810 kHz and 2160 - 2170 kHz (which have been allocated to the radiolocation service on an exclusive basis in Region 1), and the band 1810 - 1850 kHz (which has been allocated to the amateur service on an exclusive basis in Region 1) in the procedure in preparation for the transfer of the fixed and mobile services which use these bands at present.

Committee 6 is requested to take the necessary action for this purpose.

M. HARBI

Chairman of Committee 5



# WORLD ADMINISTRATIVE RADIO CONFERENCE

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## COMMITTEE 6

### TWELFTH REPORT OF WORKING GROUP 6A

1. Working Group 6A has considered a draft Resolution presented by the delegates of China, France and Jordan, relating to the period of validity of frequency assignments to space stations using the geostationary satellite orbit. The text of this Resolution, as agreed by the Working Group, is submitted herewith.

The delegates of Brazil and of the United States expressed the view that the application of this procedure would not produce significant data on its utility in the short period of its application, i.e. from 1 July 1980 to the proposed 1984 Space Conference. Both delegates felt that there was no need for this procedure now and that it had better be considered at the proposed 1984 Space Conference.

2. The Working Group has further considered Section VI of Article N13 and has agreed on the annexed texts. The provisions of Nos. 4642A to 4642D have been put within square brackets, pending the result of the decision of Committee 6 on the above Resolution.

J.K. BJÖRNSJÖ

Chairman of Working Group 6A

Annexes : 2



A N N E X 1

RESOLUTION No. / COM6A - 2 /

On the Period of Validity of Frequency Assignments to Space Stations  
using the Geostationary Satellite Orbit

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that rational and efficient use must be made of the frequency spectrum and the geostationary satellite orbit and that account should be taken of the provisions of Resolution No. Spa2 - 1 relating to the use by all countries, with equal rights, of frequency bands for space radiocommunication services;
- b) that limiting the period of validity of frequency assignments to space stations using the geostationary satellite orbit is a concept which could promote the attainment of these objectives;
- c) that amortizing the considerable investments made in connection with the development of space radiocommunications is a particularly heavy burden for all Administrations and that these investments should be spread over a predetermined period;
- d) that efforts should be made to encourage Administrations in a position to do so to develop techniques designed to improve the utilization of the frequency spectrum and the geostationary orbit with a view to increasing the total radiocommunication facilities available to the world community;
- e) that a World Space Radiocommunication Conference is due to meet around 1984 to deal with the use of the geostationary satellite orbit and the planning of the space services using this orbit;
- f) that it would be advantageous to introduce an experimental procedure to gain experience from application of the new concept of notifying the period of validity of an assignment in space radiocommunications, but that it is not desirable to impose on Administrations a statutory period identical in all cases but that on the contrary Administrations should be left to propose the period of validity themselves in the light of their requirements and of the common interest;

resolves

- 1. that as from 1 July 1980 until the World Space Radiocommunication Conference / see Resolution / COM6-6 / in Document No. 678 /, frequency assignments to space radiocommunication stations located on the geostationary satellite orbit shall be dealt with as follows :

1.1 a frequency assignment to a space station<sup>1)</sup> on a geostationary satellite shall be deemed definitively discontinued after the expiry of the period of operation shown on the assignment notice, reckoned from the date on which the assignment was brought into service. This period shall be limited to the period for which the satellite network was designed. The Board shall then invite the notifying Administration to take steps to cancel the assignment. If the Board receives no reply within ninety days following the expiry of the period of operation, the entry of the assignment in the Master Register shall be cancelled;

1.2 if a notifying Administration which wishes to extend the period of operation originally shown on the assignment notice of a frequency assignment of an existing space station<sup>1)</sup> informs the Board accordingly more than three years before the expiry of the period in question and if all other basic characteristics of that assignment remain unchanged, the Board shall amend as requested the period of operation originally recorded in the Master Register and publish that information in a special section of the weekly circular;

1.3 if, at least three years before the expiry of the period of operation recorded in the Master Register of a frequency assignment of an existing space station<sup>1)</sup>, an Administration initiates the coordination procedure specified in No. 4114/639AJ to bring into service a new space station using the same assigned frequency and the same orbital position but with different technical characteristics, and if the Board finds after the notification that the new assignment conforms with the provisions of No. 4587/639BM and does not increase, in relation to the preceding assignment, the probability of interference to the detriment of a frequency assignment recorded in the Master Register or involved in the coordination procedure, the new assignment shall be given a favourable finding and shall be entered in the Master Register;

1.4 a notifying Administration which wishes to modify a basic characteristic of a frequency assignment of a space station<sup>1)</sup> recorded in the Master Register shall initiate, in any case other than those covered by paragraphs 1.2 and 1.3, the appropriate modification procedure in accordance with Nos. 4619/639CS to 4622/639CV;

1.5 that for the application of the provisions of paragraph 1.1 above, the information concerning the period of validity of frequency assignments to space stations shall be notified in addition to that contained in Appendices 1A and 1B to the Radio Regulations.

1) The expression "space station" may apply to more than one satellite provided that only one satellite is in operation at any particular moment and that the stations installed on board successive satellites have identical basic characteristics.

invites the World Space Radiocommunication Conference provided for in  
Resolution No. [COM6 - 6]

to take note of the initial results obtained in implementing the present Resolution, to  
examine this Resolution within the more general framework of the rearrangement of the regulatory  
procedures and to decide whether the text of the Resolution should be incorporated in the  
Radio Regulations.



A N N E X 2

NOC

**Section VI. Modification, Cancellation and Review of Entries  
in the Master Register**

ADD

4636A

§ 23A. The Board shall at intervals not exceeding two years request confirmation from the notifying Administration that its assignment has been and will continue to be in regular use in accordance with its recorded characteristics.

NOC

**4637 639DK  
Spa2**

§ 24. (1) Where the use of a recorded assignment to a space station is suspended for a period of eighteen months, the notifying administration shall, within this eighteen-month period, inform the Board of the date on which such use was suspended and of the date on which the assignment is to be brought back into regular use.

NOC

**4638 639DL  
Spa2**

(2) Whenever it appears to the Board, whether or not as a result of action under No. 4637/639DK, that a recorded assignment to a space station has not been in regular use for more than eighteen months, the Board shall inquire of the notifying administration as to when the assignment is to be brought back into regular use.

NOC

**4639 639DM  
Spa2**

(3) If no reply is received within six months of action by the Board under No. 4638/639DL, or if the reply does not confirm that the assignment to a space station is to be brought back into regular use within this six-month limit, a mark shall be applied against the entry in the Master Register. Thereafter, the assignment shall be treated in accordance with No. 4593/639BS as one which has been established as having been out of regular use for two years.

MOD

**4640 639DN** § 25. In case of permanent discontinuance of the use of any recorded frequency  
**Spa2** assignment, the notifying administration shall inform the Board within ~~ninety days~~ of such  
discontinuance, whereupon the entry shall be removed from the Master Register.

three months

MOD

**4641 639DO** § 26. Whenever it appears to the Board from the information available that a recorded  
**Spa2** assignment has not been brought into regular operation in accordance with the notified basic  
characteristics. is not being used in accordance with those basic characteristics, the Board  
shall consult the notifying administration and, subject to its agreement, shall cancel,  
suitably modify the entry.

or retain the basic characteristics of

MOD

**4642 639DP** § 27. If, in connection with an inquiry by the Board under No. 4641/639DO, the  
**Spa2** notifying administration has failed to supply the Board within with the  
necessary or pertinent information, the Board shall make suitable entries in the Remarks  
Column of the Master Register to indicate the situation.

three months from the date of  
the enquiry

on board a geostationary satellite

ADD

**/ 4642A** §27A. (1) A frequency assignment to a space station<sup>1)</sup> shall be deemed  
definitively discontinued after the expiry of the period of operation shown on  
the assignment notice, reckoned from the date on which the assignment was  
brought into service. The Board shall then invite the notifying Administration  
to take steps to cancel the assignment. If the Board receives no reply within  
ninety days following the expiry of the period of operation, the entry of the  
assignment in the Master Register shall be cancelled.]

This period shall be limited to the period for which the  
satellite network is designed. /In any case, this period shall  
be no longer than .... years /

/1) The expression "space station" may include more than one satellite provided that  
only one is operating at any time and that the stations on board the successive  
satellites have the same basic characteristics. /

ADD / 4642B

(2) If a notifying Administration which wishes to extend the period of operation originally shown on the assignment notice of a frequency assignment of an existing space station, informs the Board accordingly more than 3 years before the expiry of the period in question and if all other basic characteristics of that assignment remain unchanged, the Board shall amend as requested the period of operation originally recorded in the Master Register and **shall** publish that information in a special section of the Weekly Circular. / Such an extension shall not exceed .... years. /

under No. 4114/639AJ

ADD / 4642C

(3) If, at least three years before the expiry of the period of operation recorded in the Master Register of a frequency assignment of an existing space station<sup>1)</sup>, an Administration initiates the coordination procedure to bring into service a new space station using the same assigned frequency and the same orbital position but with different technical characteristics, and if the Board finds that the new assignment conforms with the provisions of No. 4587/639BM and does not increase, in relation to the preceding assignment, the probability of interference to the detriment of a frequency assignment recorded in the Master Register, the new assignment shall be given a favourable finding and shall be entered in the Master Register with the notification date of the preceding assignment. /

**, after notification,**

**or in the process of coordination**

/ 4642C

(3) If at least three years before the expiry of the period of operation recorded in the Master Register of a frequency assignment of an existing space station<sup>1)</sup> an Administration informs the Board of its intention to bring into service a new space station using the same assigned frequency and the same orbital position but with different technical characteristics, and if the Board finds that the new assignment conforms with the provisions of No. 4587/639BM and does not increase, in relation to the preceding assignment, the probability of interference to the detriment of a frequency assignment mentioned in No. 4114A, the new assignment shall be given a favourable finding and shall be entered in the Master Register. /

ADD / 4642D

(4) A notifying Administration which wishes to modify a basic characteristic of a frequency assignment of a space station<sup>1)</sup> recorded in the Master Register shall initiate, in any case other than those covered by Nos. 4642B and 4642C, the appropriate modification procedure in accordance with Nos. 4619/639CS to 4622/639CV. /

/ 1) The expression "space station" may include more than one satellite provided that only one is operating at any time and that the stations on board the successive satellites have the same basic characteristics. /

WORLD ADMINISTRATIVE  
RADIO CONFERENCE

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COMMITTEE 6

THIRTEENTH REPORT OF WORKING GROUP 6A

Working Group 6A has agreed on the texts of the following draft Resolutions and Recommendation, which are submitted to Committee 6:

- Draft Resolution No. [6A-3] relating to a procedure for the bringing into use of earth stations in the amateur-satellite service;
- Draft Resolution No. [6A-4] relating to the preparation of a handbook to explain and illustrate the procedures of the Radio Regulations;
- Draft Resolution No. [6A-5] relating to the introduction and development of computer assistance;
- Recommendation No. [6A-1] relating to the preparation by the CCIR of a handbook for computer-aided techniques;
- Resolution No. [5] which constitutes the updating of the existing Resolution No. 5.

With respect to Resolution No. [6A-5], Working Group 6A was of the opinion that, in initiating the review of the problems relating to computer assistance in radio frequency management within administrations, the Secretary-General should as usual, consult with the permanent organs of the Union.

In the examination of Resolution No. [5], due consideration should be given to Nos. 4577A and 4577A.1 in Article N13 and Nos. 4282A and 4282A.1 in Article N12, as well as to the possible insertion by Committee 6 of the inclusion in the Radio Regulations of a Preamble covering this subject.

J.K. BJORNSJO  
Chairman of Working Group 6A

Annexes: 5



A N N E X . 1

DRAFT RESOLUTION No. [ 6A-3 ]

Relating to the Bringing into Use of Earth Stations  
in the Amateur Satellite Service

The World Administrative Radio Conference, Geneva, 1979,

recognizing

that the procedures of Articles N11 and N13 may be applied to the amateur-satellite service;

recognizing further

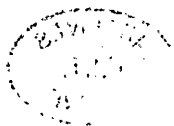
- a) that the characteristics of Earth stations in the amateur-satellite service vary widely;
- b) that space stations in the amateur-satellite service are intended for multiple access by amateur Earth stations in all countries;
- c) that coordination among stations in the amateur and amateur-satellite services is accomplished without the need for formal procedures;
- d) that the burden of terminating any harmful interference is placed upon the Administration authorizing a space station in the amateur-satellite service pursuant to No. 6362/1567A of the Radio Regulations;

notes

that certain information specified in Appendices 1A and 1B cannot reasonably be provided for Earth stations in the amateur-satellite service; and

resolves

- 1. that when an Administration (or one acting on behalf of a group of named Administrations) intends to establish a satellite system in the amateur-satellite service and wishes to publish information with respect to Earth stations of its amateur-satellite system it may :
  - a) communicate to the IFRB all or part of the information listed in Appendix 1A and the IFRB shall publish such information in a special section of its weekly circular requesting comments to be communicated within a period of four months after the date of publication;
  - b) notify under No. 4575/639BA all or part of the information listed in Appendix 1A; the IFRB shall record it in a special list;
- 2. that this information shall include at least the characteristics of a typical amateur Earth-station having the facility to transmit signals to the space station to initiate, modify, or terminate the functions of the space station.



A N N E X 2

DRAFT RESOLUTION No. [6A-4]

Relating to the Preparation of a Handbook to Explain  
and Illustrate the Procedures of the Radio Regulations

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the complexity of the regulatory procedures contained in Chapter NIV of the Radio Regulations;
- b) the need of many Administrations for a handbook to give their staff a better understanding of these procedures to help in their application;
- c) the possible use of diagrams, flow charts and other graphical aids to the understanding of complex procedures;

recognizing

- 1. that the World Administrative Radio Conference, 1979, has insufficient time to develop explanatory material and diagrams for inclusion in or attachment to the Final Acts;
- 2. that a special effort will be required to develop a handbook to adequately meet the need referred to in b) above;
- 3. that the format of a handbook that is compatible with the format of the Radio Regulations would have advantages;

resolves

that the IFRB should as soon as possible after the World Administrative Radio Conference, 1979, prepare a handbook, incorporating appropriate graphical material including flow charts, to help the staff of Administrations to apply the regulatory procedures of Chapter NIV of the Radio Regulations;

instructs the Secretary-General

- 1. to publish the handbook prepared by the IFRB;
- 2. to suitably insert in published editions of the Radio Regulations the flow charts, when available, clearly marked to the effect that they are an aid to understanding and that they do not form part of the Radio Regulations.

A N N E X 3

DRAFT RESOLUTION No. [ 6A-5 ]

Relating to the Introduction and Development  
of Computer Assistance in Radio Frequency  
Management within Administrations

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) Resolution [ COM 6-2 ] [ see Document No. 412 ] relating to the development of national radio frequency management;
- b) Resolution [ Annex II of this Document ] relating to the preparation of a handbook to explain and illustrate certain provisions of the Radio Regulations;
- c) Recommendation [ Annex IV of this Document ] to the CCIR relating to the preparation of a handbook on computer-aided techniques in radio frequency management;

considering also

- a) the potential value of computer aids in many aspects of radio frequency management;
- b) the need for further assistance, particularly to developing countries, in introducing and developing computer facilities or in maximizing the use of their existing computer facilities as aids to radio frequency management;

resolves

that the Secretary-General shall promptly initiate a review of these problems to ensure that the following actions shall be taken in the most effective manner :

- 1. the holding of regional seminars particularly directed to education in this field, bearing in mind the national requirements of Administrations;
- 2. the use of all educational resources available to the Union to provide further training in this field appropriate to the national requirements of Administrations;
- 3. the establishment of appropriate arrangements, within the existing framework of the ITU, for aiding Administrations in the identification of special problems in this field and helping to provide solutions, by the best possible application of computer technology;

invites the Administrative Council

to consider the recommendations of the Secretary-General and to find the necessary resources;

[ urges Administrations

to support this project through their representatives at the United Nations. ]

A N N E X 4

RECOMMENDATION No. [6A-1]

To the CCIR relating to a Handbook for Computer-aided  
Techniques in Radio Frequency Management

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that due to the growing demands on the radio frequency spectrum, there is a need to improve spectrum utilization;
- b) that radio frequency management problems require data storage, data retrieval, and analysis capabilities, and consequently are amenable to the application of computer methods;
- c) that Administrations are facing increasingly voluminous and complex tasks in radio frequency management;
- d) that technological developments have made powerful computers, particularly mini-computers, available at reasonable cost;
- e) that guidance is required by many Administrations with respect to computer-aided techniques in radio frequency management;
- f) that a certain degree of compatibility is desirable to ease coordination between Administrations and the exchange of data with the IFRB;
- g) that many Administrations are interested in, and some are actively developing, computer systems for radio frequency management; and
- h) that the General Secretariat provides computer resources including advice to all permanent organs of the ITU and further, provides advice, as appropriate, to Administrations;

recommends

- 1. that a handbook be prepared by the CCIR by 1982 which describes the various aspects involved in applying computer-aided techniques to radio frequency management, discusses the approaches which have been made, provides guidelines for various levels of practical application and makes recommendations for those aspects involving international cooperation;
- 2. that the CCIR should periodically review and revise the handbook;

invites

the General Secretariat and the IFRB to participate in the development of this handbook.



A N N E X 5

MOD

RESOLUTION No. 5

Relating to Notification of Frequency Assignments

The World Administrative Radio Conference, Geneva, 1979,

referring to

- the Preamble of the Convention,
- Article 31 of the Convention (Special Arrangements),
- Article N6/4 of the Radio Regulations (Special Agreements),
- Article N12/9 of the Radio Regulations (Notification and Recording in the Master International Frequency Register of Frequency Assignments to Terrestrial Radiocommunication Stations),
- Article N13/9A of the Radio Regulations (Notification and Recording in the Master International Frequency Register of Frequency Assignments to Radio Astronomy and Space Radiocommunication Stations except stations in the Broadcasting-Satellite Service),
- Article N15/10 of the Radio Regulations (Procedure for the Bands Allocated Exclusively to the Broadcasting Service between 5 950 and 26 100 kHz);

/ considering

that a new Resolution is required to supersede Resolution No. 5 of the Administrative Radio Conference, Geneva, 1959; 7

resolves

that, unless specifically stipulated otherwise by special arrangements communicated to the Union by the Administrations, any notification of a frequency assignment to a station shall be made by the Administration of the country on whose territory the station is located.

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# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

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22 November 1979

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COMMITTEE 6

## FOURTEENTH REPORT OF WORKING GROUP 6A

Working Group 6A has considered the revised version of Appendix 1, and has agreed upon the text which is attached hereto and submitted to Committee 6.

J.K. BJÖRNSJÖ

Chairman of Working Group 6A

Annex : 1



## APPENDIX 1

(See Article N12/9)

**Section A. Basic Characteristics to be Furnished for Notification  
under No. 4280/486 of the Radio Regulations**

(MOD)

NOC

**Column 1** Assigned frequency.

NOC

**Column 2c** Date of putting into use.

NOC

**Column 3** Call sign (Identification).

NOC

*This is not a basic characteristic for stations referred to in  
No. 5339.1/735.1.*

NOC

**Column 4a** Name of the transmitting station.

(MOD)

**Column 4b** Country or geographical area in which the transmitting  
station is located.

NOC

**Column 4c** Longitude and latitude of the transmitter site.

MOD

**Column 5a** Name of the receiving station.

MOD

*This is not a basic characteristic for broadcasting, land,  
radionavigation land, radiolocation land or / standard  
frequency / stations, or for ground-based stations in the  
meteorological aids service.*

MOD

**Column 5b** Country or geographical area in which the receiving station  
is located.

*This is not a basic characteristics for broadcasting, land,  
radionavigation land, radiolocation land or / standard  
frequency / stations, or for ground-based stations in the  
meteorological aids service.*

Note : The / around standard frequency is to remind Committee 6 or 9 to verify if  
this term is modified by this Conference.

## AP1 Section A (cont.)

ADD	Column 5c	Longitude and latitude of the site of the receiving station.  This is not a basic characteristic for broadcasting, land, radionavigation land, radiolocation land or standard frequency stations, or for ground-based stations in the meteorological aids service.
ADD	Column 5d	Locality or area(s) of the receiving stations.  This is a basic characteristic only for broadcasting, land, radionavigation land, radiolocation land and standard frequency stations.
ADD	Columns 5e and 5f	to be used only if the area is not adequately defined in Column 5d.
ADD	Column 5e	Longitude and latitude of the centre of the circular receiving area.  This is a basic characteristic only for land, radionavigation land, radiolocation land and <u>/</u> standard frequency <u>/</u> stations.
ADD	Column 5f	Nominal radius (km) of the circular receiving area.  This is a basic characteristic only for land, radionavigation land, radiolocation land and <u>/</u> standard frequency <u>/</u> stations.
NOC	Column 6	Class of station and nature of service.
NOC	Column 7a	Class of emission, necessary bandwidth and description of transmission.
ADD	Column 7b	<u>/</u> Class of operation of the assignment.  <u>This is a basic characteristic only for the assignments to stations of the fixed service in the frequency bands allocated to this service between 3 000 kHz and 27 500 kHz.</u> <u>/</u>
MOD	Column 8	Power (in dBW).
NOC	Column 9a	Azimuth of maximum radiation.

Note 1 /standard frequency/, see previous page.

Note 2 Column 7b is placed between square brackets awaiting the results of Working Group 6A1 on a related portion of Article N12/9 (No. 4983A).

## AP1 Section A (cont.)

ADD	Column 9b	Elevation angle of maximum directivity.
		<u>This is a basic characteristic</u> only for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and shall be provided to an accuracy of one tenth of a degree <sup>1</sup> .
MOD	Column 9c [ex-Col. 9b]	Angular width of radiation main lobe.
		This is <u>not</u> a basic characteristic if Column 9j is completed.
ADD	Column 9d	Polarization.
		<u>This is a basic characteristic</u> only for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and for broadcasting stations in the VHF/UHF bands in the African and European broadcasting areas.
ADD	Column 9e	Height of antenna (metres) for a simple vertical antenna.
		<u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Region 1 and MF bands in Region 3.
ADD	Column 9f	Maximum effective height of the antenna.
		<u>This is a basic characteristic</u> for broadcasting stations in the VHF/UHF bands in the African and European broadcasting areas and is defined in the Final Acts of these Conferences.
		<u>This is a basic characteristic</u> for terrestrial stations operating in the bands above 1 GHz that are shared between space and terrestrial services and shall be indicated in metres above mean sea level.
MOD	Column 9g [ex-Col. 9c]	Maximum antenna gain (isotropic, relative to a short vertical antenna or relative to a half-wave dipole, as appropriate).
		This is <u>not</u> a basic characteristic if the effective radiated power or the e.i.r.p. is notified in Column 8 or if the Column 9j data are supplied.
ADD	Column 9h	Azimuths defining the sectors of limited radiation in degrees (clockwise) from True North.
		<u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Region 1 and MF bands in Region 3.

1 This data shall be provided to an accuracy of one tenth of a degree only if the station is within the coordination area of an earth station or if the direction of the maximum radiation is within three degrees of the geostationary satellite orbit.

AP1 Section A (cont.)

ADD	Column 9i	Maximum agreed radiation in the sectors  <u>This is a basic characteristic</u> for broadcasting stations in the LF/MF bands in Region 1 and MF bands in Region 3.
ADD	Column 9j	Type of antenna (see CCIR Book "Antenna Diagrams")  This is <u>not</u> a basic characteristic if the Columns 9c and 9g data are supplied.
ADD	Column 10b	Regular hours of operation of the frequency assignment (UTC)
MOD	Column 11	Coordination with other Administrations  <u>This is a basic characteristic</u> for the bands and services concerned.

Supplementary information:

- |     |    |  |
|-----|----|--|
| MOD | a) | In any case where there are one or more <u>reference frequencies</u> in a particular transmission (e.g. in the case of (a) the frequency of the reduced carrier in an independent or single sideband emission, and (b) the frequencies of the sound and vision carriers in a television emission), such reference frequencies shall be supplied; |
| NOC | b) | any coordination required by No. 4160/492A;  |
| NOC | c) | the name of any administration with which an agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.  |

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AP1 Section B. Basic Characteristics to be Furnished for Notification  
under No. 4281/487 of the Regulations

NOC	Column 1	Assigned frequency.
NOC	Column 2c	Date of putting into use.

## API Section B (cont.)

MOD	<b>Column 4a</b>	<b>The letter " M ".</b>
(MOD)	<b>Column 4b</b>	The country or geographical area in which the transmitting mobile station is located.
MOD	<b>Column 4c</b>	The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.
ADD	<b>Column 4d</b>	The nominal radius (in km) of the circular transmitting area.
ADD	<b>Column 4e</b>	Indicate a standard defined area using the symbols contained in standard references, e.g. MWARA, RDARA, geographical zones etc. (See also the preface to the International Frequency List.)
ADD	<b>Column 5a</b>	<b>Name of the receiving land station.</b>
ADD	<b>Column 5b</b>	Country or geographical area in which the receiving station is located.
ADD	<b>Column 5c</b>	Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.
NOC	<b>Column 6</b>	<b>Class of mobile stations and nature of service.</b>
NOC	<b>Column 7 a</b>	<b>Class of emission of mobile stations and necessary bandwidth and description of transmission.</b>
(MOD)	<b>Column 8</b>	Power (in dBW)
ADD	<b>Column 10b</b>	Regular hours of operation of the frequency assignment (UTC).

NOC

**Supplementary information:**

- a) any co-ordination required by No. 4160/492A;
  - b) the name of any administration with which an agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.
-

AP1    **Section C.    Basic Characteristics to be Furnished for Notification**  
   **under No. 4284/490 of the Regulations**

NOC	<b>Column 1</b>	<b>Assigned frequency.</b>
NOC	<b>Column 2c</b>	<b>Date of putting into use.</b>
(MOD)	<b>Column 4b</b>	Country or geographical area in which the transmitting station is located.
ADD		For the remainder of Column 4 complete either 4e alone, or 4c and 4d.
ADD	<b>Column 4c</b>	The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.
ADD	<b>Column 4d</b>	The nominal radius (in km) of the circular transmitting area.
ADD	<b>Column 4e</b>	Indicate a standard defined area using the symbols appearing in the preface to the International Frequency List.
NOC	<b>Column 6</b>	<b>Class of station and nature of service.</b>
NOC	<b>Column 7</b>	<b>Class of emission, necessary bandwidth and description of transmission.</b>
(MOD)	<b>Column 8</b>	<b>Power (in dBW).</b>
ADD	<b>Column 10b</b>	Regular hours of operation of the frequency assignment (UTC).
NOC		<b>Supplementary information:</b> <ul style="list-style-type: none"><li>- the name of any administration with which an agreement has been effected to exceed the limits prescribed in these Regulations and the contents of such agreement.</li></ul>

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MOD

AP1 Section D. Form of Notice

The Board shall develop and keep up to date a form of notice to meet fully the statutory provisions of this Appendix and related decisions of future conferences.

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AP1 Section E. General Instructions

NOC

1. A separate notice shall be sent to the International Frequency Registration Board for notifying :

- Each new frequency assignment,
- Any change in the characteristics of a frequency assignment recorded in the Master International Frequency Register (hereinafter called the *Master Register*),
- Any total deletion of a frequency assignment recorded in the Master Register.

ADD

1bis. When a frequency assignment is used by a station to perform different services, a separate notice shall be submitted for each class of service (e.g. FA, FB, FC, FX, etc.)

NOC

2. Frequencies prescribed by these Regulations for common use, as specified in Appendix   7  , should not be notified (see No.   488  ).

NOC

3. Separate entries, in Columns 5a to 10, should be made for the various characteristics when they do not apply to the assignment as a whole, for instance when the class of emission or the power differ according to the localities or areas of reception.

NOC

4. When submitting notices for television broadcasting stations in Region 1, separate notices shall be submitted for the sound and vision channels. In such cases, the notice shall relate to the sound and vision carrier frequencies.

AP1 Section E (cont.)

NOC

**I. General Notes**

- (a) The name of the notifying administration should be indicated.
- (b) Indicate in this box by the letter "X" when the notice reflects :
  - the first use of a frequency by a station,
  - or
  - the first use of an additional frequency by a station.
- (c) Indicate in this box by the letter "X" when the notice reflects a change in the characteristics of a frequency assignment recorded in the Master Register.
  - (1) In the case where existing particulars (including the frequency) are changed, the new characteristics in the appropriate place should be underlined ; the original characteristics which have been changed should be shown in brackets underneath or at the side.
  - (2) In the case where the change is an addition to existing particulars, the additional characteristics should be shown in the appropriate place and should be underlined.
  - (3) In the case where the change is a cancellation of a particular characteristic or characteristics, this should be shown in the appropriate place by a dash and, underneath or at the side, the characteristics which have been cancelled should be shown in brackets.
- (d) Indicate in this box by the letter "X" when the notice reflects a deletion of an assignment, in all of its notified characteristics.
- (e) The serial number of the notice and the date on which the notice is sent to the Board shall be shown here.

**II. Notes Concerning Information to be Entered in the Notice  
Pertaining to Specific Columns of the Master Register**

NOC

*Column 1* Assigned frequency

AP1 Section E.II (cont.)

1) 2) 3)

MOD 1. Indicate the assigned frequency as defined in Article 1, in kHz up to 28 000 kHz inclusive, in MHz above 28 000 kHz to 10 500 MHz inclusive, and in GHz above 10 500 MHz.

NOC 2. *This information is a basic characteristic.*

NOC **Column 2c** Date of putting into use

1. In the case of a new assignment, insert the date (actual or foreseen, as appropriate) of putting the frequency assignment into use.

MOD 2. Whenever the assignment is changed in any of its basic characteristics, as defined in this Appendix except in the case of a change in Columns 3 or 4a or 10a or 11, then the date to be indicated shall be that of the latest change (actual or foreseen, as appropriate).

NOC 3. *This information is a basic characteristic.*

NOC **Column 3** Call sign (Identification)

1. Indicate the call sign or other identification used in accordance with Article N23/19.

2. *This information is a basic characteristic*, except for stations referred to in Nos. 490 and 735.1 or when the frequency assignment is used for reception in the circumstances described in No. 487.

---

NOC 1) For television broadcasting stations in Region 1, the frequencies to be notified are those of the sound and vision carriers.

ADD 2) For the radiotelephone maritime mobile service see No. 8045/445A.

ADD 3) For the Aeronautical Mobile (R) Service, see Appendix 27 Aer 2 revised paragraph 27/72.

## AP1 Section E.II (cont.)

MOD	<b>Column 4</b>	Particulars of the transmitting station
ADD		When the frequency assignment is used in the circumstances described in <u>No. 4280/486</u> , the <u>basic characteristics</u> to be provided in Column 4 are as follows :
	Column 4a	Indicate the name of the locality by which the transmitting station is known or in which it is situated.
(MOD)	Column 4b	Indicate the country or geographical area in which the station is located. Symbols from the Preface to the International Frequency List shall be used.
MOD	Column 4c	Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the transmitter site. For frequency assignments above 1 000 MHz (1 GHz) in the bands shared between terrestrial radiocommunication and space radiocommunication services, indicate the geographical coordinates (longitude and latitude in degrees, minutes and seconds with an accuracy of one tenth of a minute <sup>1</sup> or, as an alternative, indicate the longitude and latitude in degrees and minutes and, in Column 9a, the azimuth of maximum directivity of the antenna to an accuracy of one tenth of a degree.
		When the frequency assignment is used for reception in the circumstances described in <u>No. 4281/487</u> , the <u>basic characteristics</u> to be provided in Column 4 are as follows :
MOD	Column 4a	The letter "M".
(MOD)	Column 4b	The country or geographical area in which the transmitting mobile station is located. If the station is not located within a country, indicate the country responsible. Symbols from the Preface to the International Frequency List shall be used.
MOD	Column 4c	The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.
ADD	Column 4d	The nominal radius (in km) of the circular transmitting area.

<sup>1</sup> The seconds with an accuracy of one tenth of a minute need only be notified if the station is within the coordination area of an earth station.

AP1 Section E.II (cont.)

- ADD                      Column 4e      Indicate a standard defined area using the symbols contained in standard references, e.g. MWARA, RDARA, geographical zones etc. (see also the Preface to the International Frequency List).
- ADD                      When the frequency assignment is used in the circumstances in No. 4284/490, the basic characteristics to be provided in Column 4 are as follows :
- ADD                      Column 4b      Indicate the country or geographical area in which the station is located. Symbols from the Preface to the International Frequency List shall be used.
- ADD                      For the remainder of Column 4 complete either 4e alone, or 4c and 4d.
- ADD                      Column 4c      The geographical coordinates (longitude and latitude in degrees and minutes) of the centre of the circular transmitting area.
- ADD                      Column 4d      The nominal radius (in km) of the circular transmitting area.
- ADD                      Column 4e      Indicate a standard defined area using the symbols appearing in the Preface to the International Frequency List.
- ADD                      Column 5       Particulars of the receiving station.
- ADD                      When the frequency assignment is used in the circumstances in No. 4280/486, the basic characteristics to be provided in Column 5 are as follows :
- ADD                      Column 5a      Name of the receiving station. Indicate the name of the locality by which the receiving station is known or in which it is situated.
- ADD                      1. For reception points in the fixed service, it is necessary to notify only sufficient stations to define the reception area, provided that that area is well defined and sufficiently small to make it easy to forecast the conditions of the use of the frequency from the propagation point of view.
- ADD                      2. However, for broadcasting, land, radionavigation land, radiolocation land and / standard frequency / stations, and ground-based stations in the meteorological aids service, it is not necessary to indicate any information in this column.

---

/ standard frequency / stations : the new term should be inserted.

## AP1 Section E.II (cont.)

ADD Column 5b Country or geographical area in which the receiving station is located. Symbols from the Preface to the International Frequency List shall be used.

ADD However, for broadcasting, land, radionavigation land and / standard frequency / stations, and ground-based stations in the meteorological aids service, it is not necessary to indicate any information in this column.

ADD Column 5c Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.

ADD However, for broadcasting, land, radiolocation land or / standard frequency / stations, or for ground-based stations in the meteorological aids service, it is not necessary to indicate any information in this column.

ADD Column 5d Locality or area(s) of the receiving station(s).

1. For broadcasting stations, the area of reception shall be indicated. Each area should be expressed either
  - as interior (INTR),
  - or the symbol designating a country(ies) or geographical area(s) (Preface to the International Frequency List),
  - or one of the geographical zones appearing on the map annexed to the present Appendix. In the event the area of reception cannot be defined in the above manner Columns 5e and 5f shall be completed.

This is not a basic characteristic for broadcasting stations in the LF/MF or VHF/UHF bands unless specified in a relevant Regional Agreement.

2. For land, radionavigation land, radiolocation land, / standard frequency / stations, and ground-based stations in the meteorological aids service, indicate an area only if it is standardly described. If the area of reception is not standardly defined describe the area in Columns 5e and 5f.

ADD Column 5e Longitude and latitude of the centre of the circular receiving area.

1. Indicate the geographical coordinates (in degrees and minutes).
2. This column is not to be used if the area of reception is adequately defined in Column 5d : If this column is used a corresponding entry must be made in Column 5f.

AP1 Section E.II (cont.)

ADD Column 5f Nominal radius of the circular receiving area.

1. Indicate the radius (in km) of the circular receiving area.
2. This column is not to be used if the area of reception is adequately defined in Column 5d. If this column is used a corresponding entry is required in Column 5e.

ADD When the frequency assignment is used in the circumstances in No. 4281/487, the basic characteristics to be provided in Column 5 are as follows :

ADD Column 5a Name of the receiving station. Indicate the name of the locality by which the receiving station is known or in which it is situated.

ADD Column 5b Country or geographical area in which the receiving station is located. Symbols from the Preface to the International Frequency List shall be used.

ADD Column 5c Indicate the geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.

ADD When the frequency assignment is used in the circumstances in No. 4284/490, no entry is required in Column 5.

NOC *Column 6* Class of station and nature of service

1. Indicate the class of station and nature of service performed, using the symbols shown in Appendix[10.]
2. When the frequency assignment is used for reception in the circumstances described in No.[487,] the class of station and nature of service applicable to the mobile stations should be indicated.
3. *This information is a basic characteristic.*

MOD Column 7 Class of emission and class of operation

AP1 Section E.II (cont.)

NOC      *Column 7a*    Class of emission, necessary bandwidth and description of transmission.

1. Indicate, for each locality or area of reception shown in Column 5a, the class of emission, necessary bandwidth and description of transmission, in accordance with Article[2] and Appendix[5.]
2. When the frequency assignment is used for reception in the circumstances described in No.[487,] the particulars to be indicated are those applicable to the mobile stations.
3. *This information is a basic characteristic.*

ADD      *Column 7b*    [ Class of operation of the assignment.

This is a basic characteristic. For the assignments to stations of the fixed service in the frequency bands allocated to this service between 3 000 kHz and 27 500 kHz, indicate the class of operation of the assignment by the symbols A, B or C, as follows :

Symbol A - for regular operational use; or

Symbol B - for use as a standby to some other means of telecommunication; or

Symbol C - for occasional use on a reserve basis and not requiring protection from harmful interference. ]

---

N.B. Column 7b is placed between square brackets awaiting the results of Working Group 6A1 on a related portion of Article N12/9 (No. 4283A).



AP1 Section E.II (cont.)

**Column 8** Power (in dBW)

- MOD 1. The power supplied to the antenna transmission line shall be notified as follows, according to the class of emission and shall be provided in dBW :
- NOC a) Carrier power  $[P_c]$  for  $[A3]$  sound broadcasting (see  $[No. 97]$ );
- NOC b) Mean power  $[P_m]$  for other amplitude modulated emissions using unkeyed full carrier, and for all frequency modulated emissions (see  $[No. 96]$ );
- NOC c) Peak envelope power  $[P_p]$  for all classes of emission other than those referred to in a) or b), including  $[A5]$  television (vision) (see  $[No. 95]$ ).
- MOD 2. In the bands above 28 000 kHz which are not allocated on a shared basis to the space radiocommunication and terrestrial services, except for notices referred to in  $[No. 490]$ , the power notified shall be the effective radiated power (see  $[No. 98]$ ).
- ADD 2A. In the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services, the equivalent isotropically radiated power (e.i.r.p.) shall be notified.
- MOD 3. The appropriate symbol  $[P_c, P_m]$  or  $[P_p]$  shall follow the indication of the value of the power. In cases where the effective radiated power is notified, this symbol shall be followed by the letter "e". In cases where the e.i.r.p. is notified, this symbol shall be followed by the letter "i".
- MOD 4. The power normally used to each locality or area of reception shall be indicated.
- NOC 5. When the frequency assignment is used for reception in the circumstances described in  $[No. 487]$  the power of the mobile stations should be indicated. If not all of the stations use the same power, the highest power should be indicated.

AP1 Section E.II (cont.)

NOC

6. *This information is a basic characteristic.*

NOC

**Column 9** Transmitting antenna characteristics

**Column 9a** Azimuth of maximum radiation

1. If a directive transmitting antenna is used, indicate the azimuth of maximum radiation of the transmitting antenna in degrees (clockwise) from True North.
2. If a transmitting antenna with non-directional characteristics is used, insert "ND" in this column.

ADD

- 2A. For frequency assignments above 1 GHz in the bands shared between terrestrial radiocommunication and space radiocommunication services, the azimuth shall be provided to an accuracy of one tenth of a degree<sup>1</sup> in those cases where the required accuracy in the geographical coordinates (to a tenth of a minute) has not been specified in Column 4c.

3. *This information is a basic characteristic, except for stations referred to in No. [490] or when the frequency assignment is used for reception in the circumstances described in No. [487].*

ADD

**Column 9b** Elevation angle of maximum directivity

This is a basic characteristic for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and shall be provided to an accuracy of one tenth of a degree<sup>2</sup>.

MOD

**Columns 9c and 9g**

If the radiation characteristics of the antenna concerned differ from those recommended by the CCIR, Columns 9c and 9g should be notified. Where the radiation characteristics are to be found in the CCIR Book "Antenna Diagrams" indicate an appropriate reference in Column 9j.

- 
- 1 The seconds with an accuracy of one tenth of a minute need only be notified if the station is within the coordination area of an earth station.
  - 2 This data shall be provided to an accuracy of one tenth of a degree only if the station is within the coordination area of an earth station or if the direction of the maximum radiation is within three degrees of the geostationary satellite orbit.

AP1 Section E.II (cont.)

MOD	Column 9c [ ex Column 9b ]	<b>Angular width of radiation main lobe</b>  The total angle measured horizontally in a plane containing the direction of maximum radiation, in degrees, within which the power radiated in any direction does not fall more than 3 dB below the power radiated in the direction of maximum radiation, should be indicated.
ADD	Column 9d	<b>Polarization</b>  <u>This is a basic characteristic for stations in the bands above 1 GHz allocated on a shared basis to the space radiocommunication and terrestrial radiocommunication services and for broadcasting stations in the VHF/UHF bands in the African and European broadcasting areas.</u>
ADD	Column 9e	<b>Height of antenna (metres) for a simple vertical antenna</b>  <u>This is a basic characteristic for broadcasting stations in the LF/MF bands in Region 1 and MF bands in Region 3.</u>
ADD	Column 9f	<b>Maximum effective height of the antenna</b>  <u>This is a basic characteristic for broadcasting stations in the VHF/UHF bands in the African and European Broadcasting Areas and is defined in the Final Acts of these Conferences.</u>  <u>This is a basic characteristic for terrestrial stations operating in the bands above 1 GHz that are shared between space and terrestrial services and shall be indicated in metres above mean sea level.</u>
MOD	Column 9g [ ex Column 9c ]	<b>Maximum antenna gain (isotropic, relative to a short vertical antenna or relative to a half-wave dipole, as appropriate).</b>  <ol style="list-style-type: none"><li>1. The relative gain of the antenna in the direction of maximum radiation for the assigned frequency should be indicated (see No. [101].)</li><li>2. This is not a basic characteristic if the effective radiated power or the e.i.r.p. is notified in Column 8.</li></ol>

## AP1 Section E.II (cont.)

- ADD                      Column 9h    Azimuths defining the sectors of limited radiation in degrees (clockwise) from True North
1. Indicate the azimuths defining the sectors of limited radiation in degrees (clockwise) from True North.
  2. This is a basic characteristic for broadcasting stations in the LF/MF bands in Regions 1 and MF bands in Region 3.
- ADD                      Column 9i    Maximum agreed radiation in the sectors
1. Indicate the maximum agreed radiation in the sector, in dB relative to a c.m.f. of 300 V or an e.m.r.p. of 1 kW determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses.
  2. This is a basic characteristic for broadcasting stations in the LF/MF bands in Regions 1 and MF bands in Region 3.
- ADD                      Column 9j    Type of antenna (see CCIR book "Antenna Diagrams")
- Indicate the appropriate reference from the CCIR book "Antenna Diagrams". See Columns 9c and 9g above.
- MOD                      Column 10    Hours of operation
- MOD                      Column 10a    Maximum hours of operation of the circuit to each locality or area (UTC)
- NOC                      1. When the frequency assignment is used for reception in the circumstances described in No. [487] the maximum hours of operation are those relating to the mobile stations.
- NOC                      2. As complementary information, indicate by the letter "I" any part of the period during which the operation of the circuit is intermittent.
- MOD                      3. This information is not a basic characteristic.
- ADD                      Column 10b    Regular hours of operation of the frequency assignment (UTC).
1. If known indicate the regular hours of operation of the frequency assignment in UTC. Otherwise indicate the hours of operation as day service (HJ), night service (HN), or transition period service (HT).
  2. This is a basic characteristic.

AP1 Section E.II (cont.)

- |     |           |  |
|-----|-----------|--|
| MOD | Column 11 | <p>Coordination with other Administrations</p> <ol style="list-style-type: none"> <li>1. Identify the country or geographical area with which coordination has been successfully completed and indicate the provision (RR No., Regional Agreement, or other arrangement) requiring such coordination.</li> <li>2. <u>This is a basic characteristic</u> for the bands and services concerned.</li> </ol> |
|-----|-----------|--|

NOC	<p><b>Column 12a</b> Operating Administration or Company *</p> <p><i>This information is not a basic characteristic, but it is recommended it be supplied in cases where the same agency operates in more than one country.</i></p>
-----	---

- |     |  |
|-----|--|
| NOC | <p><b>Column 12b</b> Postal and telegraphic address of the administration responsible for the station *</p> <ol style="list-style-type: none"> <li>1. The addresses required are those to which communication should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of the circuit (see Article [15]).</li> <li>2. This information is not a basic characteristic.</li> </ol> |
|-----|--|

*Supplementary Information*

NOC	<p>Any supplementary information supplied by the administration should be indicated within the frame provided on the notice.</p>
-----	--

NOC	<p>1. If the assignment is made in application of a regional or service agreement, the relevant agreement shall be indicated in the appropriate place; otherwise, insert the indication "Nil".</p>
-----	--

NOC	<p>2. Indicate after the symbol COORD/---- the name of any administration with which co-ordination has been effected for the use of the frequency; if no co-ordination has been effected, the indication "Nil" should be inserted. In the case of a notification under No. 490 in a frequency band above 28 000 kHz, the area or areas of the actual agreed use to which the co-ordination refers should be indicated.</p>
-----	--

\* Where this information already appears in the Preface to the International Frequency List, the appropriate reference number or letter may be used.

AP1 Section E.II (cont.)

NOC

3. In any case where there are one or more reference frequencies in a particular transmission (e.g. in the case of *a*) the frequency of the reduced carrier in an independant or single-sideband emission, and *b*) the frequencies of the sound and vision carriers in a television emission), such reference frequencies shall be supplied. In the case of television broadcasting stations in Region 1, each notice shall include, as supplementary information, both the frequency of the other carrier and the assigned frequency.

NOC

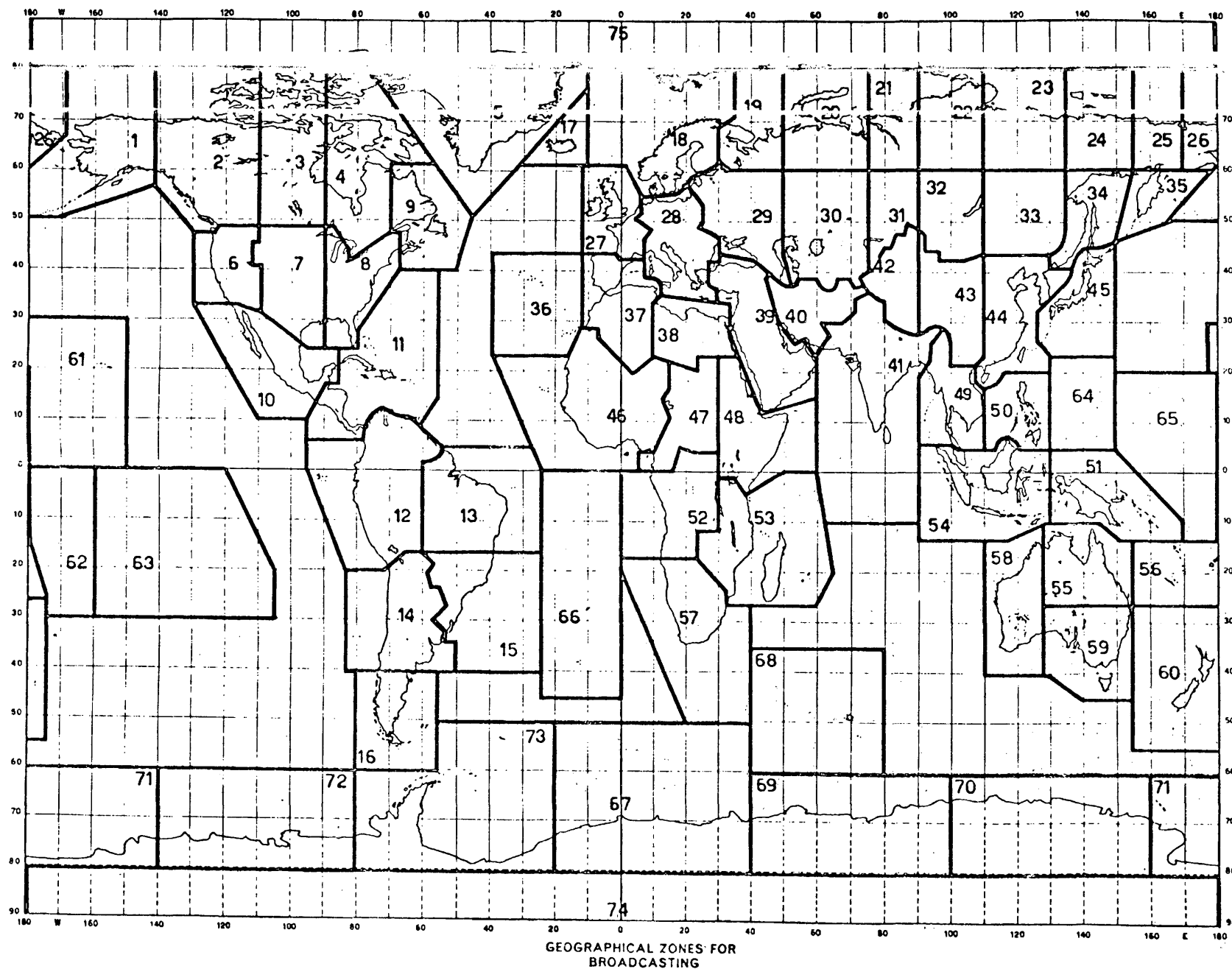
4. Any other information which the administration considers to be relevant should be indicated, such as, for example, an indication that the assignment concerned would be operating in accordance with No. [115] of these Regulations, or information concerning the use of the notified frequency if such use is restricted or if the frequency is not used during all the time which is possible according to propagation conditions.

MOD

5. *Only the information specified in paragraph 3 above is a basic characteristic; it is recommended, however, that the information under paragraph 1 above be supplied. However, in the case of stations in the terrestrial radiocommunication services referred to in No. [492A,] the name of any Administration with which coordination of the use of the frequency has been sought and the name of any Administration with which such coordination has been effected are basic characteristics.*

# ANNEX TO APPENDIX 1

AP1-17



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 795-E  
23 November 1979  
Original : French  
English

COMMITTEE 6

SUMMARY RECORD

OF THE

NINTH MEETING OF COMMITTEE 6

(REGULATORY PROCEDURES).

Friday, 9 November 1979, at 2000 hrs

Chairman : Dr. M. JOACHIM (Czechoslovakia)

Subjects discussed

Document No.

- |   |   |
|---|---|
| 1. Summary record of the seventh meeting of Committee 6                   | 526   |
| 2. Fourth report of Working Group 6A                                      | 552   |
| 3. Fifth report of Working Group 6A                                       | 550   |
| 4. Note from the Chairman of Working Group 6B                             | 536, 492  |
| 5. Note from the Chairman of Working Group 6A                             | 527   |
| 6. Note from the Chairman of Committee 4                                  | 538   |
| 7. Documents allocated to Committee 6                                     | 91(Add.2) + Corr.1, 487,<br>515, 516, 48 + Corr.5,<br>553, 556, 557 |
| 8. Note from the Chairman of Committee 6 to the Chairman of Committee 7   | 539   |
| Third series of texts submitted by Committee 6 to the Editorial Committee | 532   |
| 9. Other business   | -   |





1. Summary record of the seventh meeting of Committee 6 (Document No. 526)

The document was approved without comment.

2. Fourth report of Working Group 6A (Document No. 552)

2.1 The Chairman reminded the meeting that, at the request of the Chairman of Committee 9, the Conference had decided in plenary meeting to suspend consideration of Recommendation No. A (page B.1-7, Document No. 424), which had served as the basis for the draft Resolution contained in the Annex to Document No. 552.

2.2 At the request of the delegate of Jordan, it was agreed to place the reference "Article N3" in square brackets.

2.3 In reply to a question by the delegate of Morocco, the Chairman of Working Group 6A said that 1 October 1980 mentioned in operative paragraph 1 of the Resolution was the date when the IFRB must make the documentation concerned available to administrations. It would certainly be earlier than the date of entry into force of the revised version of the Radio Regulations mentioned in operative paragraph 4.

2.4 The delegate of Morocco, supported by the delegates of Algeria and Jordan, proposed that the words "before 1 October 1980" should be replaced by "as early as possible and not later than 1 October 1980" at the end of the first operative paragraph.

It was so decided.

2.5 Referring to operative paragraph 4, the delegate of Sweden said that the words "date of" should be added before "entry" in the first line of the English text.

2.6 On a proposal by the Vice-Chairman of the IFRB, it was decided to replace the words "the IFRB shall accept .... only ..." by "administrations shall use ... the ..." in the second and third lines of operative paragraph 4.

2.7 The delegate of the United Kingdom expressed the wish that the term "emissions" should appear in operative paragraph 4 of the Resolution.

2.8 The Chairman said that the matter would be referred to Working Group 6R, which would also have to make certain editorial amendments to the text to take other comments into account, particularly those made by the delegate of India.

With that reservation, Document No. 552, as amended, was approved.

3. Fifth report of Working Group 6A (Document No. 550)

3.1 Introducing the document, the Chairman of Working Group 6A said that the definitive wording of certain provisions would depend on decisions to be taken by other Working Groups or Committees. For example, Nos. 4579 and 4681 might be modified according to the results arrived at by Working Group 6A3 and Committee 4. In No. 4626, "4599/639BY" should be deleted and the word "Nos." put in the singular.

3.2 The Chairman invited the Committee to examine the Annex to Document No. 550 page by page.

Pages 2 and 3 were approved without amendment.

3.3 Page 4

3.3.1 Referring to No. ADD 4577A, the delegate of Cuba pointed out that the word "están" should be replaced by "serán" in the Spanish version. He also asked that "Article 31" in the fifth line should be replaced by "the relevant provisions".

It was so decided.



3.3.2 The Chairman of Working Group 6A explained that No. ADD 4577A.1 had been placed in square brackets because it had not yet been decided whether that text, which was based on the one contained in Appendix 27 to the present Radio Regulations, should take the form of a footnote to the headings of Articles N12 and N13 or to the relevant provisions of those Articles or whether it should also be added to the Preamble of the revised version of the Radio Regulations.

3.3.3 The Deputy Secretary-General observed that the question was of a complex and general nature exceeding the scope of Articles N12 and N13, and other provisions of the Radio Regulations involving the coordination and publication of information by the Secretary-General. It should also be dealt with by Committee 7. He reminded the Committee that in the Radio Regulations, the word "country" (Article N24) was not synonymous with "Member State". In addition Administrative Council Resolution No. 88 gave authority for exchanges of telecommunication information from non-Member authorities, including radiocommunications, and the Plenipotentiary Conference, 1965, had endorsed a special Report from the Chairman of the IFRB on the matter. Committee 6 could review the matter again after having Committee 7's conclusions.

3.3.4 After a lively discussion in which the delegates of Algeria, Jordan, Morocco, the United States of America, the United Kingdom and the USSR and the Chairman of Working Group 6A participated, the Chairman proposed that the Committee should refer the matter to Committee 7 and at its next plenary meeting examine the text under consideration which, in the meantime, should remain in square brackets.

3.3.5 The Vice-Chairman of the IFRB requested that, without prejudice to the decision which would be made, a footnote to No. 4577A should be provided so that the Board could examine and deal with all the notices received. It was essential that the IFRB should not be required to give a decision on whether a territory belonged to a given country or on the fact that the territory was in dispute. Those were extremely complex matters with which the Board was not concerned.

3.3.6 The delegate of Jordan wished the concept of a "territory over which there is a dispute of sovereignty" to be extended to include occupied territories.

3.3.7 Supporting that request, the delegate of Iraq said that they were nevertheless rather different concepts and that simply a footnote to the relevant provision or the title of an Article would not solve the problem posed by certain occupied territories, for example, those still considered by the United Nations to be under the control of a particular country.

3.3.8 The Vice-Chairman of the IFRB said that the problem was not a new one : it had already been taken into account when the Convention and Radio Regulations were adopted at Atlantic City. At that time, the Union had agreed that the status of a frequency assignment was linked exclusively with the geographical position of the station concerned. Resolution 5 had then been adopted to cover certain cases and the IFRB had always considered that the Resolution concerned administrations only and should enable them to settle any question resulting from notification of a frequency assignment to a station outside the country of the notifying administration, for example, in the case of an embassy. The Board had thus never concerned itself with political considerations connected with the status of a station which was the subject of a frequency assignment notice. The IFRB accepted and published all the notice forms which it received and, in case of dispute, could only request the administrations concerned to settle their difference bilaterally. In no event could the Board be called upon to study the political status of a station before dealing with a notice.

3.3.9 Speaking on a point of order, the delegate of the United Kingdom said that the Committee was considering problems which exceeded its competence. He asked that the question should be referred to Committee 7 as suggested by the Chairman, who should put an end to discussion on the matter.

3.3.10 The proposal was supported by the delegates of Morocco and Ireland and was opposed by the delegates of Iraq and Cuba. The Chairman requested the Committee to vote on whether discussion on No. ADD 4577A.1 should be closed.

3.3.11 The proposal made by the United Kingdom was adopted by 37 votes to 14 with 9 abstentions.

Consequently it was decided to maintain the text of No. 4577A.1 in square brackets until Committee 7 had given its opinion on a Preamble to the Radio Regulations and on the place it should occupy.

3.4 Page 5 was approved without amendment.

3.5 Pages 6 - 7

Approved.

3.6 Page 8

In reply to the delegate of Morocco, the delegate of France confirmed that in the French version of MOD 4590 the word "nuisible" remained in square brackets for the moment.

On that understanding, the page was approved.

3.7 Pages 9 - 14

Approved.

3.8 Page 15

The delegate of Iran, referring to Provision 4612, queried the use of the term "interference noise". At the suggestion of the Vice-Chairman of the IFRB, and with the agreement of the Chairman of Working Group 6A it was agreed to delete the word "noise".

Page 15 was approved, as amended.

3.9 Pages 16 - 18

Approved.

3.10 Page 19

The delegate of Morocco pointed out that Provision 4626 should be amended as a result of deletion of one of the references. It was agreed to further delete the words "as appropriate".

The page was approved, as amended.

3.11 Pages 20 - 22

Approved.

3.12 Pages 23 - 25

The Chairman drew attention to the square brackets around the whole of Section VI, which was to be left in abeyance until a decision on the text had been taken in Working Group 6A, taking into consideration the views of Working Group ad hoc 2 of Committee 6 and its Sub-Group 6A3.

The remaining provisions on pages 23 - 25 (excluding Section VI) were approved.

3.13 Page 26

Approved.

3.14 Page 27

3.14.1 The delegate of Qatar, supported by the delegate of Syria, proposed an addition to Provision 4648 reading "and especially the conducting effect prevailing in some regions due to abnormal propagation conditions".

3.14.2 The delegate of Algeria asked whether there would be implications on the functions of the IFRB.

3.14.3 The Vice-Chairman of the IFRB said that there would be no such repercussions but he had some doubts about referring in the text to a single criterion when there were other special conditions due to electrical or atmospheric phenomena in several parts of the spectrum.

3.14.4 The Chairman proposed that the provision be left in square brackets pending a discussion between the IFRB and the delegate of Qatar, the latter to inform the Committee of the outcome.

It was so agreed.

Document No. 550 was thus approved, as amended, and Working Group 6A was requested to prepare a Note concerning the Preamble to the Radio Regulations for the Chairman of Committee 7, indicating that the text had been discussed in the Working Group.

4. Note from the Chairman of Working Group 6B (Documents Nos. 536, 492)

4.1 Document No. 536 was introduced by the delegate of the Federal Republic of Germany, acting as spokesman for Working Group 6B in the absence of the Chairman. The question of the use of Coordinated Universal Time and a statement in the Radio Regulations concerning the type of calendar and presentation of the date had been referred back to Working Group 6B as a whole, but owing to inadequate time and facilities the document presented was the result of discussion in a small drafting group only. He drew attention to the square brackets around "by Committee 7" which should be removed if it was the wish of Committee 6 that Committee 7 draft a text, and to the fact that the final sentence of Document No. 492 on the same subject, issued by the CCIR, had been reworded because some delegations had found difficulty in understanding its meaning.

4.2 The Chairman of Working Group 6A referred to the fact that the ISO advocated an alternative presentation of the date. The spokesman for Working Group 6B said that the drafting group had been aware of the ISO standard but felt that it was not as yet recognized internationally on a wide enough scale. The Chairman of Working Group 6A said he would not press the point, although he would have thought an organization such as the ITU should adhere to a standard issued by the ISO.

4.3 The wording of the second paragraph gave rise to a short discussion, as a result of which the following wording was agreed : "...the date corresponding to the zero degree meridian".

4.4 The Chairman noted that paragraph 3 concerning the date sequence would be left as it stood.

4.5 The spokesman for Working Group 6B indicated that the Group was of the opinion that UTC and the standard date should be introduced throughout the Regulations and not only in Appendices 6, 7 and 8.

4.6 The Chairman said that the substance of the document would be incorporated into a Note to the Chairman of Committee 7 which dealt with definitions or basic regulations.

5. Note from the Chairman of Working Group 6A (Document No. 527)

5.1 The Chairman of Working Group 6A introduced the document.

5.2 The delegate of the Federal Republic of Germany proposed the insertion of the words "for example" before "be part of a satellite network ..." and the delegate of the USSR, supporting that proposal, said the sentence should end after the mention of the fixed satellite service.

5.3 The delegate of India said that such an amendment rendered another definition unnecessary because the text as proposed made a transportable Earth station simply a station in the fixed satellite service.

5.4 The delegate of Jordan proposed a minor drafting change to the second paragraph, to the effect that the Committee "... wished to have a definition of the term 'transportable Earth station'".

5.5 The delegate of France and the United Kingdom expressed concern at the amendments proposed, which changed the text substantially; the latter said he would revert to the matter when the definition was submitted for examination.

5.6 The delegate of Australia said he had no objection to requesting Committee 5 to prepare a definition, but pointed out that it should not be assumed that the definition would be automatically accepted.

5.7 The Chairman suggested that the delegates of the Federal Republic of Germany, the USSR and France be requested to draw up a new text for submission to the following meeting of Committee 6.

It was so agreed.

6. Note from the Chairman of Committee 4 (Document No. 538)

6.1 The Chairman requested the Chairman of Working Group 6A to consider the above document.

7. Documents allocated to Committee 6 (Documents Nos. 91(Add.2) + Corr.1, 487, 515, 516, 535, 556 and 557)

7.1 The Chairman requested Working Group 6A to consider Documents Nos. 91(Add.2) + Corr.1, 487, 515 and Corrigendum No. 5 to Document No. 48.

7.2 The delegate of India said the last-named document appeared to relate to a single service and he wondered if it rightly came under the agenda of the Conference. The delegate of the United States explained that the document in question concerned a proposed change to Article N12 which was within the terms of reference of Committee 6 even though it referred to one service only. That view was endorsed by the delegate of Australia.

7.3 The Chairman pointed out that the decision was merely to transmit the document to the appropriate Working Group; no decision was being taken on the substance itself.

7.4 With regard to Document No. 516, the Chairman of Working Group 6A said that Group 6A/ad hoc 2 dealing with Resolutions had anticipated the Committee's request in order to accelerate its work : the document would be studied in conjunction with a draft Resolution on the same subject submitted by Argentina.

7.5 The Chairman requested Working Group 6A to consider Document No. 553, pending a communication from the Chairman of Committee 5.

7.6 The delegate of Brazil said that Working Group 5BB which had submitted that document was encountering considerable difficulty, as administrations took very firm positions. The Working Group had concluded that the only way for it to complete its work was to adopt solutions based on the transfer procedures described in the document. He drew special attention to the need to take account of the fact that many administrations used frequencies for national purposes which were not notified to the IFRB.

7.7 It was agreed to transmit Document No. 556 to Working Group 6A and Document No. 557 to the same Working Group and its appropriate ad hoc Group, the two Chairmen concerned to decide which parts were relevant to their particular Group.

8. Note from the Chairman of Committee 6 to the Chairman of Committee 7 (Document No. 539)

Third series of texts submitted to Committee 6 to the Editorial Committee  
(Document No. 532)

The Committee took note of the above two documents.

9. Other business

9.1 The delegate of Morocco said that a pertinent problem had been raised in Committee 5 in relation with the numerous footnotes being introduced. It was specified in the Radio Regulations that notification was not compulsory in the band above 28.5 MHz but some of the footnotes referred to very important services and Committee 6 should examine the question very seriously.

The Chairman asked the delegate of Morocco to raise the matter in Working Group 6A.

The meeting rose at 2300 hours.

The Secretary :

R. PLUSS

The Chairman :

M. JOACHIM

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

Document No. 796-E

21 November 1979

Original : Spanish

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Note by the Secretary-General

Republic of Maldives

TRANSFER OF POWERS

As the delegation of the Republic of Maldives is obliged to leave the Conference, it has given the delegation of the Republic of India the power to represent it at the Conference.

M. MILI

Secretary-General



# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 797-E

21 November 1979

Original : English

## COMMITTEE 5

### REPORT OF THE CHAIRMAN OF WORKING GROUP 5/AD HOC 10

Working Group 5/ad hoc 10 had two meetings on 21 November 1979 to identify the preferred frequency bands for up-links to 12 GHz broadcasting satellites for the three Regions.

It was agreed unanimously that it was essential to provide two or more frequency bands at this Conference for broadcasting-satellite feeder links, and that Administrations should be free to determine which band they would prefer on the occasion of the appropriate planning conference.

There was a unanimous conclusion as to the frequency bands to be available for Regions 2 and 3, as follows :

#### Region 2

The main band for up-links to broadcasting-satellites will be the 17.3 - 18.1 GHz band. As well, the 14.0 - 14.8 GHz band will also be available.

#### Region 3

The band 14.0 - 14.3 GHz is available for feeder links to broadcasting-satellites on a coordinated basis with up-links for fixed-satellite networks. The band 14.3 - 14.5 GHz would be shared between up-links for broadcasting-satellites and fixed-satellite networks on a "permitted"\*) basis. The band 14.5 - 14.8 GHz is allocated for broadcasting-satellite feeder links only among the space radiocommunication services. Finally, the band 17.3 - 18.1 GHz would also be available.

For Region 1 it was agreed that the bands 10.7 - 11.7 GHz and 17.3 - 18.1 GHz and a band around 14.5 GHz should be used for broadcasting-satellite feeders. There was not complete agreement as to the preferred arrangement at 14.5 GHz, but the following alternatives are offered to Committee 5 for further consideration :

- a) The bands 14.0 - 14.3 GHz, 14.3 - 14.5 GHz and 14.5 - 14.8 GHz would be available as in Region 3.
- b) The band 14.0 - 14.5 GHz is available for broadcasting-satellite feeder links on a coordinated basis and the band 14.5 - 14.8 GHz is available for broadcasting-satellite feeder links only.

In addition a third proposal was considered but it was not widely supported, namely that 14.2 - 14.5 GHz would be available on a coordinated basis and 14.5 - 15.0 GHz would be available for broadcasting-satellite feeders only.

It was considered that it might be desirable to express these complex sharing arrangements through a Resolution rather than by footnotes to the Table.

Dr. I.Y. AHMED

Chairman of Working Group 5/ad hoc 10

\*) The word "permitted" as used in this Report means that during the broadcasting-satellite feeder link planning conference, preference will be given to broadcasting-satellite feeder links with due consideration to existing up-link assignments.





# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Document No. 798-E

22 November 1979

Original: English

## COMMITTEE 6

### FIFTEENTH REPORT FROM WORKING GROUP 6A

Submitted herewith is the revised version of Article N12/9, as agreed by the Working Group.

2. The new procedure, concerning the notification and recording in the Master International Frequency Register of frequency assignments to terrestrial radio-communication stations, has been worked out in several steps:

- a) Sub-Working Group 6A4 first established the twelve basic principles to be applied in the revision of Article N12/9 as contained in Document No. 488;
- b) after these general principles had been approved by Working Group 6A, Ad Hoc Group 1 to Working Group 6A considered all the proposals submitted to the Conference and relating to this Article, and established a first draft which was then revised by Drafting Group 6A1.

3. Despite the very great amount of work involved, this task was accomplished, thanks to the goodwill and co-operation of all delegates who participated in these groups.

J.K. BJÖRNSJÖ  
Chairman of Working Group 6A

Annex : 1



A N N E X

ARTICLE N12/9

**Spa2 Notification and Recording in the Master International Frequency Register of Frequency Assignments<sup>1</sup> to Terrestrial Radiocommunication Stations<sup>2</sup> / 2A /**

**Section I. Notification of Frequency Assignments**

MOD 4280 486  
Spa2

§ 1. (1) Any frequency assignment<sup>3</sup> to a fixed, land, broadcasting,<sup>4</sup> radionavigation land, radiolocation land or standard frequency station, or to a ground-based station in the meteorological aids service, shall be notified to the International Frequency Registration Board:

- a) if the use of the frequency concerned is capable of causing harmful interference to any service of another administration;<sup>5</sup> or
- b) if the frequency is to be used for international radiocommunication; or
- c) if it is desired to obtain international recognition of the use of the frequency.<sup>5</sup>

ADD 4280A

(1A) Similar notice<sup>6)</sup> shall be given when an Administration desires to request the assistance of the Board in selecting a frequency assignment to a station of the fixed service in any of the bands allocated exclusively or on a shared basis, to that service between 3 000 kHz and 27 500 kHz, or when an Administration wishes to use for the same type of station a predetermined frequency assignment; in the latter case, the Administration indicates the reasons on which the request is based together with the possible modifications which could be made to the characteristics of its assignment, and the Board will take account of this information when searching for a satisfactory solution. For this purpose an individual notice shall be drawn up as specified in Appendix 1. It is recommended that the notifying Administration should provide the additional information called for in that Appendix, together with such further information as it may consider appropriate. The procedure to be followed is given in Nos. 4326A - 4326M.

ADD 4280A.1

<sup>6</sup> See Resolution No. / DC 7.

A.N12/9

<sup>1</sup> The expression *frequency assignment*, wherever it appears in this Article, shall be understood to refer either to a new frequency assignment or to a change in an assignment already recorded in the Master International Frequency Register (hereinafter called *Master Register*).

A.N12/9

<sup>2</sup> For the notification and recording in the Master International Frequency Register of frequency assignments to radio astronomy and space radiocommunication stations, see Article N13/9A.

ADD / A.N12/9

<sup>2A</sup> For notification and recording of frequency assignments to terrestrial stations in the frequency bands 11.7 - 12.2 GHz (in Regions 2 and 3) and 11.7 - 12.5 GHz (in Region 1), so far as their relationship to the broadcasting-satellite service in the bands is concerned, see also Article N13B. /

4280.1 486.1  
Spa2

<sup>3</sup> In the case where a frequency is used by numerous stations under the jurisdiction of the same administration, see Appendix I (Section E, II, Column 5a, paragraphs 2c and 2d).

4280.2 486.2  
Spa2

<sup>4</sup> With respect to assignments to broadcasting stations in the bands allocated exclusively to the broadcasting service between 5 950 kHz and 26 100 kHz, see Article N15/10.

4280.3 486.3  
Spa2

<sup>5</sup> The attention of administrations is specifically drawn to the application of the provisions of Nos. 4280/486 a) and 4280/486 c) in those cases where they make a frequency assignment to a terrestrial station, located within co-ordination area of an earth station (see No. 4160/492A), in a band which terrestrial radiocommunication services share with equal rights with space radiocommunication services in the frequency spectrum above 1 GHz.

NOC

4281 487  
Spa

(3) Similar notice shall be given for any frequency to be used for the reception of mobile stations by a particular land station in each case where one or more of the conditions specified in No. 4280/486 are applicable.

[listed in Appendix / 1D /, which are]

MOD

4282 488

(4) Specific frequencies prescribed by these Regulations for common use by stations of a given service (for example, international distress frequencies 500 kHz and 2 182 kHz, frequencies of ship radiotelegraph stations operating in their exclusive high frequency bands, etc.), shall not be notified to the Board.

[ADD 4282A (4A) Frequency assignments to a station shall be notified by the Administration of the country on whose territory <sup>1</sup> the station is located, unless specifically stipulated otherwise by special arrangements in accordance with the relevant provisions of the Convention communicated to the Union by the Administrations.]

MOD 4283 489 § 2. (1) For any notification under Nos. 4280/486 or 4281/487 an individual notice for each frequency assignment shall be drawn up as prescribed in [Sections A or B] of Appendix 1, which specify the basic characteristics to be furnished, according to the case. It is recommended that the notifying administration should also supply the additional ~~data~~ called for in that Appendix, together with such further ~~data~~ as it may consider appropriate.

information

information

ADD 4283A (1A) Notices concerning assignments to stations of the fixed service in the bands allocated to that service between 3 000 kHz and 27 500 kHz, that are submitted under No. 4280/486 or 4280A shall also indicate the class of operation, with the use of the following symbols :

Symbol A - assignment for regular operational use; or

Symbol B - assignment for use as a standby to some other means of telecommunication; or

Symbol C - assignment for occasional use on a reserve basis and not requiring international protection from harmful interference.

[ADD 4282A.1 <sup>1</sup>If a notice is received from an Administration for a frequency assignment to a station located on a territory over which there is a dispute of sovereignty, an entry in the Master Register, after examination by the Board, does not signify recognition of the sovereignty of a country over the territory in question.]

MOD

4284 490  
Spa2

(2) When stations of the same service, such as the land mobile service, use a band of frequencies above 28 000 kHz in a specific area or areas, an individual notice should be drawn up, as prescribed in Section C of Appendix 1, which specifies the basic characteristics to be furnished, for each frequency on which there are assignments within the band: however, the particulars should relate only to a typical station. This does not apply

- a) to broadcasting stations, or
- b) to other terrestrial stations to which the provisions of Sub-Section IIE of this Article apply, or
- c) to other stations of the fixed or mobile service which operate in frequency bands listed in Table II of Appendix 28 with equivalent isotropically radiated power exceeding the corresponding values listed in the table, or
- d) to the terrestrial stations in the frequency bands listed in Nos. [ 6009/470D, 6010/470DA and 6011/470DB ],

under Nos. 4280/486, 4281/487 or 4284/490

MOD

4285 491

Spa2

~~two months~~  
~~months~~

§ 3. (1) Whenever practicable, each notice should reach the Board before the date on which the assignment is brought into use. It must reach the Board not earlier than three ~~ninety~~ days before the date on which it is to be brought into use, but in any case not later than thirty days after the date it is actually brought into use. ~~However, for a frequency assignment to one of the terrestrial stations mentioned in Sub-Section IIE of this Article or in No. 4146/639AQ, the notice must reach the Board not earlier than three years and not later than ninety days before the date on which the assignment is to be brought into use.~~

thirty days

ADD

4285A

(1A) A notice under No. ADD 4280A must reach the Board not earlier than one year before the date on which the requested frequency is to be brought into use.

ADD 4285B (1B) A notice concerning a frequency assignment to one of the terrestrial stations mentioned in Sub-Section IIE of this Article or in No. 4146/639AQ and 4146A must reach the Board not earlier than three years and not later than three months before the date on which the assignment is to be brought into use.

4280A and 4285A

Except for cases covered by Nos.

three months

MOD 4286 492  
Spa2

(2) Any frequency assignment, the notice of which reaches the Board more than thirty days after the notified date of bringing into use, or in the case of a terrestrial station mentioned in Sub-Section IIE of this Article, any frequency assignment, the notice of which reaches the Board less than ninety days before it is brought into use, shall, where it is to be recorded, bear a remark in the Master Register to indicate that it is not in conformity with No. 4285/491 or 4285B.

However, such a remark will not be made in the Master Register against an assignment to a terrestrial station which has not been notified under No. 4280/486 but which is required to be notified after its entry into use as a result of coordination for or notification of an earth station assignment.

SUP 4287/492GB §4.  
Spa2

NOC 4288 493 § 5. (1) Whatever the means of communication, including telegraph, by which a notice  
Spa2 is transmitted to the Board, it shall be considered complete if it contains at least those  
appropriate basic characteristics specified in Appendix 1.

SUP 4289-494 (2)  
Spa

NOC 4290 495 § 6. When a service or regional agreement has been concluded, the Board shall be  
informed of the details of this agreement.

NOC **Section II. Procedure for the Examination of Notices and the Recording  
of Frequency Assignments in the Master Register**

or

MOD 4291 496 § 7. Any notice submitted under Nos. 4280/486,  
4281/487 ~~and~~ 4284/490 which does not contain at least those basic  
characteristics specified in Appendix 1 shall be returned by the  
Board, by airmail, to the notifying administration with the  
reasons therefor unless the information not provided is immediately  
forthcoming in response to an enquiry of the Board. The Board  
shall advise the administration by telegram when a notice is  
returned under this provision.

MOD 4292 497 § 8. Upon receipt of a complete notice, the  
Board shall include the particulars thereof, with the date of  
receipt, in a weekly circular to be published within a period of  
forty days after receipt of the notice and sent by airmail to  
all administrations. When the Board is not in a position to  
comply with this time-limit, it shall, as soon as possible, so  
inform the administrations concerned giving the reasons therefor.

MOD 4293 498

§ 9. The circular shall contain the full particulars, of all such notices received since the publication of the previous circular and shall constitute the acknowledgement to each notifying Administration of the receipt of the complete notice.

ADD 4293A

For the purpose of Nos. 4292/497 and 4293/498, notices submitted under No. 4280A in the form of a request for assistance of the Board shall be grouped together and specially identified.

MOD 4294 499

§ 10. Complete notices shall be considered by the Board in the order specified in ~~No. 4289/494~~. The Board cannot postpone the formulation of a finding unless it lacks sufficient data to render a decision in connection therewith; moreover, the Board shall not act upon any notice which has a technical bearing on an earlier notice still under consideration by the Board, until it has reached a finding with respect to such earlier notice.

of their receipt, however, notices submitted under No. 4280A shall be treated immediately upon receipt.



NOC

Spa2

**Sub-Section IIA. Procedure to be followed in cases not covered by  
Sub-Sections IIB to IIE of this Article**

which are dealt with in  
Nos. 4326A - 4326M

No. 4280A ←

MOD 4295 500

§ 11. (1) Except for notices referred to in ~~Nos. 4336/541, 4344/547, 4351/552, 4359/561 and 4366/568~~, the Board shall examine each notice with respect to

MOD 4296 501  
Spa2

a) its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations with the exception of those relating to the probability of harmful interference which are the subject of the ~~following paragraphs~~ :

NOC 4297 502

b) the probability of harmful interference to the service rendered by a station for which a frequency assignment already recorded in the Master Register:

1) bears a date in Column 2a (see No. 4439/607); or

2) is in conformity with the provisions of No. 4296/501 and bears a date in Column 2b (see No. 4440/608), but has not, in fact, caused harmful interference to any frequency assignment with a date in Column 2a or to any assignment in conformity with No. 4296/501 with an earlier date in Column 2b; or

NOC 4298 503

c) the probability of harmful interference to the service rendered by a station for which a frequency assignment already recorded in the Master Register :

provisions of Nos. 4297/502 and 4298/503;

- 1) is in conformity with the provisions of No. 4296/501 and either bears a symbol<sup>1</sup> in Column 2d (see No. 4442/610), or was recorded in the Master Register with a date in this column as a result of a favourable finding with respect to No. 4298/503: or
- 2) is in conformity with the provisions of No. 4296/501 and was recorded in the Master Register with a date in Column 2d after an unfavourable finding with respect to No. 4298/503, but has not, in fact, caused harmful interference to any frequency assignment previously recorded in the Master Register and which is in conformity with No. 4296/501.

ADD 4298A

In conducting the examination under No. 4297/502 or No. 4298/503, the Board shall apply protection criteria for class of operation A higher than for class of operation B. The Board shall disregard the probability of interference to frequency assignments of class of operation C.

MOD 4299 504

(2) ~~The Board shall not make the examination specified in No. 4297/502 where the notice refers to a broadcasting station in Region 2 in the band 535-1 605 kHz.~~ When the notice relates to a frequency above 28 000 kHz, the Board shall only make the examination specified in No. 4298/503 at the request of an administration directly concerned or affected when co-ordination has not been possible between the administrations involved.

NOC 4300 505

(3) Where appropriate, the Board shall also examine the notice with respect to its conformity with a regional or service agreement. The procedure to be followed in connection with frequency assignments made pursuant to such an agreement shall be as specified in Nos. 4296/501 and 4297/502 or 4298/503 except that the Board shall not consider the question of the probability of harmful interference among the parties to such agreement. Similarly, the Board shall not consider the probability of harmful interference to the assignments of any administration with which co-ordination has been effected.

4298.1 503.1

<sup>1</sup> This symbol indicates an assignment notified pursuant to No. 272 of the Agreement of the Extraordinary Administrative Radio Conference, Geneva, 1951, or, in the frequency bands above 27 500 kHz, an assignment for which the notice was received by the Board before 1 April 1952.

MOD 4301 506

§ 12. Depending upon the findings of the Board subsequent to the examination prescribed in Nos. 4296/501 and 4297/502 or 4298/503, further action shall be as follows:

and the result of the action undertaken by the Board pursuant to Nos. 4326A and 4326AA

NOC 4302 507

§ 13. (1) *Finding Favourable with Respect to No. 4296/501 in cases where the Provisions of Nos. 4297/502 or 4298/503 are not applicable (see No. 4299/504).*

NOC 4303 508

(2) The assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt of the notice by the Board.

NOC 4304 509

§ 14. (1) *Finding Favourable with Respect to Nos. 4296/501 and 4297/502 or 4298/503.*

NOC 4305 510

(2) The assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt of the notice by the Board.

- NOC 4306 511 (3) However, should the examination show that the probability of harmful interference for certain hours, seasons, or periods of solar activity is slightly greater than is considered desirable, a remark shall be included in the Master Register to show that there exists a slight probability of harmful interference and hence precautions must be taken in the use of the assignment to avoid harmful interference to assignments already recorded in the Master Register.
- NOC 4307 512 § 15. (1) *Finding Favourable with Respect to No. 4296/501 but Unfavourable with Respect to Nos. 4297/502 or 4298/503.*
- MOD 4308 513 (2) The notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem in respect of those administrations it has identified.
- NOC 4309 514 (3) Should the notifying administration resubmit the notice with modifications which result, after re-examination, in a favourable finding by the Board with respect to Nos. 4297/502 or 4298/503, the assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the original notice. The date of receipt by the Board of the resubmitted notice shall be indicated in the Remarks Column.

MOD 4310/515

(4) The notifying administration may resubmit the notice either unchanged, or with modifications which decrease the probability of harmful interference. In cases where ~~such~~ modifications do not permit the application of No. 4309/514 and the Board's finding remains unchanged, should the notifying administration insist upon reconsideration of its notice and state that it has brought its assignment into use, the Board shall :

there are no modifications or the

ADD 4310A

a) publish information contained in the notice received under No. 4310/515 in the weekly circular indicating all the administrations which are likely to be affected;

ADD 4310B

b) simultaneously send a telegram to each of the administrations referred to in No. 4310A advising them of the notice and requesting them to inform the Board :

- if the recorded assignment is still in use and, if so whether it is being used with the notified basic characteristics;
- of any harmful interference that occurs within a period of two months from the date of publication of the weekly circular referred to in No. 4310A.

ADD 4310BA

c) take appropriate action in conformity with Nos. 5144 to 5146, if the assignment, which is the basis of the unfavourable Finding, had been submitted under No. 4280A,

ADD 4310C

d) record the assignment in the Master Register, if, on expiry of the period referred to in No. 4310B the Board has received no information that harmful interference; the date to be entered in the appropriate part of Column 2 according to the relevant provision of Section III of this Article shall be the date of receipt by the Board of the original notice;

ADD 4310D

e) immediately return the notice to the notifying administration informing it of the reported interference and shall make such suggestions as it may be able to offer for the elimination of the interference, if the Board receives information that harmful interference has occurred during the two months mentioned in No. 4310B.

ADD 4310E

(4A) If information that harmful interference has occurred is received by the Board after the recording of an assignment under the provisions of No. 4310C, the Board shall investigate the matter and, where appropriate, shall enter a special remark against such an assignment to show that it will not be taken into account when acting upon any later notice.

MOD 4311 516 (5) If, as a result of the information received under No. 4310B, the Board \_\_\_\_\_ is able to reach a favourable finding with respect to Nos. 4297/502 or 4298/503 with regard to any assignment recorded under the provisions of No. 4310/515, the appropriate changes shall be made in respect of the entry of that assignment in the Master Register. If the finding remains unfavourable, the Board shall enter suitable remarks in the Master Register for the entry or entries concerned which describe the situation as it has been found by the Board to exist.

SUP 4312/517 (6)

NOC 4313 518

(7) Should the notifying administration resubmit the notice with modifications which increase the probability of harmful interference, and should the Board's finding remain unchanged, the resubmitted notice shall be treated under No. 4308/513.

NOC 4314 519

§ 16. (1) *Finding Unfavourable with Respect to No. 4296/501 in cases where the Provisions of Nos. 4297/502 or 4298/503 are not applicable (see No. 4299/504).*

MOD 4315 520

(2) Where the notice includes a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, the assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the notice.

subject to the provisions of No. 4443/611.

NOC 4316 521

(3) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, it shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.

SUP 4317 522

(4)

NOC 4318 523

*§ 17. (1) Finding Unfavourable with Respect to No. 4296/501 in cases where the Provisions of Nos. 4297/502 or 4298/503 are applicable.*



NOC 4319 524

(2) Where the notice includes a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, it shall be examined immediately with respect to Nos. 4297/502 or 4298/503, and the provisions of Nos. 4320/525 or 4321/526 applied, as appropriate.

MOD 4320 525

(3) If the finding is favourable with respect to Nos. 4297/502 or 4298/503 the assignment shall be recorded in the Master Register. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the notice.

subject to the provisions of No. 4443/611.

MOD 4321/526

(4) If the finding is unfavourable with respect to Nos. 4297/502 or 4298/503, the notice shall be returned immediately by airmail to the notifying administration. Should the administration insist upon reconsideration of the notice, the assignment shall be recorded in the Master Register. However, this entry shall be made only if the notifying administration informs the Board that the assignment has been in use for at least sixty days without any complaint of harmful interference having been received. The date to be entered in the appropriate part of Column 2 according to the relevant provisions of Section III of this Article shall be the date of receipt by the Board of the original notice. The date of receipt by the Board of the advice that no complaint of harmful interference has been received shall be indicated in the Remarks Column. The procedure set forth in Nos. 4310/515 to 4310E shall be applied. Any entry in the Master Register shall be made subject to the provisions of No. 4443/611. The notice shall be recorded with an appropriate remark referring to No. 4443/611, for information only,

the frequency assignment

MOD 4322 527

(5) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115 of these Regulations, it shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.

is

together

SUP 4323 528

(6)

SUP 4324 529

(7)

SUP 4325 530

(8)

SUP 4326 531 (9)

ADD 4326bis §17A Procedure to be followed in respect of Notices under No. 4280A.

ADD 4326A (1) In the case of a notice under No. 4280A relating to the selection of a frequency assignment for regular operational use (class of operation A), the Board shall as quickly as possible, select an appropriate frequency which shall :

- a) be capable of providing the service required;
- b) be in conformity with Nos. 4296/501 and 4297/502 or 4298/503 as appropriate to ensure a favourable finding;
- c) be free from harmful interference from any assignment recorded in the Master Register which is itself in conformity with Nos. 4296/501 and 4297/502 or 4298/503 as appropriate.]

ADD 4326AA (2) In the case of a notice submitted under No. 4280A relating to a predetermined frequency, the notifying Administration may request the Board, in addition to the examination under Nos. 4296/501, 4297/502 or 4298/503 to examine the notice to assess the probability of harmful interference to the assignment from assignments recorded in the Master Register. The Board shall advise the notifying Administration of the results of the examination and where necessary shall make suggestions to avoid any possible harmful interference to the assignment.

- ADD 4326B (3) When applying the provisions of Nos. 4326A and 4326AA, and, in case of difficulty, the procedure given below shall be followed :
- ADD 4326BA a) the Board shall first seek access to one of the least loaded parts of an appropriate band, without considering the possibility of adjustment to any existing recorded assignment;
- ADD 4326BB b) if necessary the Board shall consult the Administration having sent a notice under No. 4280A as to the possibility of modifying the characteristics of the required assignment;
- ADD 4326BC c) should action under Nos. 4326BA and 4326BB fail, and should the requesting Administration find the selected frequency acceptable, the Board shall consider whether the required assignment could be found by suppressing or downgrading an existing recorded assignment. The enquiries to be made in such an event are those described in Section VII of this Article;
- ADD 4326BD d) should action under No. 4326BC fail, the Board shall then seek alternative means of finding the required assignment in such a way as to involve the minimum necessary modification of the characteristics of any existing recorded assignment;
- ADD 4326BE e) for the purposes of the action envisaged under No. 4326BD the Board shall concentrate its enquiries upon the older recorded assignments for which the Board believes there to be satisfactory alternative means of telecommunications;
- ADD 4326BF f) the Board, having identified in such a case the minimum modification to the characteristics of an existing recorded assignment that would be needed to accommodate a new assignment requested under No. 4280A, shall invoke the relevant provisions of the Convention and shall seek the assistance of the appropriate administration to agree to make, at the appropriate stage, that modification to its recorded assignment;
- ADD 4326BG g) should action under No. 4326BF fail, the Board shall bring to the attention of the Administration concerned that in such a case there is then an obligation to reduce the assigned bandwidth, if operationally feasible, or to move the assigned frequency by an amount not exceeding the assigned bandwidth of the recorded frequency assignment on the condition that no harmful interference is caused to adjacent frequency assignments;
- ADD 4326BH h) the Administration concerned shall then either :
- 1) give its agreement to effect the necessary modification to its existing recorded assignment together with the date upon which these will be effected, or;
  - 2) give any reasons why the necessary modifications cannot be made;

- ADD 4326BI i) in the event of such a case remaining unresolved within three months of the request for an assignment being made under No. 4280A, the Board shall publish a report on the matter for the information of all Members of the Union;
- ADD 4326BJ j) the Board shall, when appropriate during this procedure, consult the Administration requesting an assignment under No. 4280A as to the acceptability of the selected frequency.
- ADD 4326BK k) if, in application of this paragraph, an Administration agrees to a change in the basic characteristics of its frequency assignment, that change shall be recorded in the Master Register without change in the original date or dates.
- [ADD 4326C Administrations are urged to afford all possible assistance through their monitoring stations to help the Board in the successful discharge of its duties under this sub-section.]
- ADD 4326D §17B. 1) Result of the Action of the Board under No. 4326A relating to a request for Assistance under No. 4280A.
- ADD 4326E 2) Having selected a frequency under No. 4326A the Board shall forthwith submit the selected frequency by telegram for the approval of the notifying administration, and shall make a provisional entry in the Master Register in accordance with No. 4332/537. The date of receipt of the request to the Board under No. 4280A shall be entered in the appropriate part of Column 2.
- ADD 4326F 3) The notifying administration, upon receipt of the telegram mentioned in No. 4326E, shall promptly examine the matter and in the event of non-acceptance of the selected frequency shall notify the Board thereof and shall give its reasons for such rejection.

- ADD 4326G 4) In the circumstances mentioned in No. 4326F, the Board shall cancel that entry and inform the Administration concerned accordingly. In such a case, if the notifying Administration so requests, the Board shall make a further attempt to select an acceptable frequency but the request shall be regarded as a new notice under No. 4280A.
- ADD 4326H 5) The notifying administration, upon accepting a frequency selected by the Board, shall, as soon as possible, inform the Board thereof.
- ADD 4326I 6) If the Board receives no reply within two months to its telegram seeking approval for the selected frequency sent under No. 4326E, the provisional entry shall be cancelled and the Board shall inform the Administrations accordingly.
- ADD 4326J §17C. Result of the Action of the Board under No. 4326B relating to a request for Assistance under No. 4280A
- ADD 4326K Having selected a frequency under No. 4326B, and if the necessary modifications to the previously recorded assignment are accepted in accordance with No. 4326BH 1), the Board shall treat the selected assignment in accordance with No. 4326D.

ADD 4326L

Having selected a frequency under No. 4326B, if the necessary modification to this previously recorded assignment cannot be made as the result of action under sub-paragraph 2 of No. 4326BH and if the selected frequency is still acceptable to the requesting Administration, the Board shall make an entry in the Master Register in the name of the requesting Administration. The date of receipt of the request sent to the Board under No. 4280A is entered in the appropriate part of Column 2.

ADD 4326M

Any harmful interference which results from the simultaneous use of both assignments should be resolved by consultations between the Administrations concerned.

NOC 4327 532

*§ 18. (1) Change in the basic Characteristics of Assignments already recorded in the Master Register.*

MOD 4328 533

(2) A notice of a change in the basic characteristics of an assignment already recorded, as specified in Appendix 1 (except those entered in Columns 3, 4a and 11 of the Master Register), shall be examined by the Board according to Nos. 4296/501 and 4297/502, 4298/503 or 4299/504, as appropriate, and the provisions of Nos. 4302/507 to 4326/531 inclusive applied. Where the change should be recorded, the assignment shall be amended according to the notice.

2c,

NOC 4329 534

(3) However, in the case of a change in the basic characteristics of an assignment (except a change of the assigned frequency which exceeds half of the frequency band originally assigned, as defined in No. 3138/89) which is in conformity with No. 4296/501, should the Board reach a favourable finding with respect to Nos. 4297/502 or 4298/503, or find that the change does not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date in the appropriate part of Column 2. In addition, the date of receipt by the Board of the notice relating to the change shall be entered in the Remarks Column.

ADD 4329A

(3A) The projected date of bringing into use of a frequency assignment may be delayed on request of the notifying Administration by three months. In the case where the Administration states that, due to exceptional circumstances, it needs a further extension of this period, such extension may be provided but it shall in no case exceed six months from the original projected date of bringing into use.

MOD 4330 535  
Spa

§ 19. In applying the provisions of the whole of ~~this Sub-Section~~ Sub-Sections IIA to IID, any resubmitted notice which is received by the Board more than ~~one hundred and eighty~~ days after the date of its return by the Board shall be considered as a new notice.

six months

NOC 4331 536

§ 20. (1) *Recording of Frequency Assignments notified before being brought into use.*



NOC 4332 537

(2) If a frequency assignment notified in advance of bringing into use has received favourable findings by the Board with respect to Nos. 4296/501 and 4297/502 or 4298/503 it shall be entered provisionally in the Master Register with a special symbol in the Remarks Column indicating the provisional nature of that entry.

MOD 4333 538

(3) Within thirty days (see No. 4285/491) after the date of bringing into use either as originally notified or as modified in application of No. 4329A, the notifying Administration shall confirm that the frequency assignment has been brought into use. When the Board is informed that the assignment has been brought into use, the special symbol shall be deleted from the Remarks Column.

MOD 4334 539

(4) If the Board does not receive this confirmation within the period referred to in No. 4333/538, the entry concerned shall be cancelled. The Board shall consult the Administration concerned before taking such action.

MOD 4335 540  
Mar2

(5) The provisions of Nos. 4332/537 to 4334/539 do not apply to frequency assignments which are in conformity with the Allotment Plans appearing in Appendices [25 Mar2], [26] and [27 Aer2] to these Regulations; such frequency assignments shall be entered in the Master Register on receipt of the notice by the Board.

and [27 Rev.]

NOC

**Sub-Section IIB. Procedure to be followed for Coast Radiotelephone Stations operating in the Bands allocated exclusively to the Maritime Mobile Service between [4 000 and 23 000] kHz**

NOC 4336 541  
Mar2

**§ 21. (1) Examination of Notices concerning Frequency Assignments to Coast Radiotelephone Stations in the Bands allocated exclusively to the Maritime Mobile Service between [4 000 and 23 000] kHz for Coast Radiotelephone Stations (see No. 4295/500).<sup>6</sup>**

NOC 4337 542  
Mar2

(2) The Board shall examine each notice covered by No. 4336/541:

NOC 4338 542A  
Mar2

a) with respect to the provisions of No. 4296/501 and in particular those of No. 8219/1351C;

NOC 4339 542B  
Mar2

b) in order to determine whether the notified assignment is in conformity with an allotment in the Allotment Plan contained in Appendix [25 Mar2] to these Regulations.

SUP 4336.1 541.1  
Mar2

NOC

**4340** 543  
Mar2

(3) Any frequency assignment for which the finding is favourable with respect to Nos. **4338/542A** and **4339/542B** shall be recorded in the Master Register (see also No. **4335/540**). The date to be entered in Column 2a shall be that determined according to the relevant provisions of Section III of this Article.

NOC

**4341** 543A  
Mar2

(4) Any frequency assignment for which the finding is unfavourable with respect to No. **4338/542A** shall be examined with respect to Nos. **4315/520** and **4316/521**. The date to be entered in Column 2b shall be determined according to the relevant provisions of Section III of this Article.

NOC

**4342** 545  
Mar2

(5) In the case of a notice which has received a favourable finding with respect to No. **4338/542A** but unfavourable with respect to No. **4339/542B**, the Board shall examine this notice with respect to the probability of harmful interference to the service rendered by a radiotelephone coast station for which a frequency assignment:

- a) is in conformity with an allotment in the Allotment Plan and is already recorded in the Master Register or may be so recorded in the future: or
- b) was recorded in the Master Register on a frequency specified in Appendix **[17 Rev]** as a result of a favourable finding with respect to No. **4342/545**: or
- c) was recorded in the Master Register on a frequency specified in Appendix **[17 Rev]** after an unfavourable finding with respect to No. **4342/545**, but has not, in fact, caused harmful interference to any frequency assignment to a coast radiotelephone station previously recorded in the Master Register.

NOC

**4343** 546  
Mar2

(6) According to the finding of the Board with respect to No. **4342/545**, further action shall be in accordance with the provisions of Nos. **4304/509** to **4313/518** inclusive, or Nos. **4327/532** to **4329/534** inclusive, as appropriate, it being understood that in those provisions No. **4342/545** shall be read for No. **4297/502**.

NOC      4344 547      § 22. (1) *Examination of Notices concerning Frequencies used for Reception by Coast Radiotelephone Stations in the Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Ship Radiotelephone Stations (see Nos. 4281/487 and 4295/500).*  
Mar2

NOC      4345 548      (2) The Board shall examine each notice covered by No. 4344/547:  
Mar2

NOC      4346 548A      a) with respect to the provisions of No. 4296/501 and in particular those of  
Mar2      No. 8220/1351D:

NOC      4347 548B      b) in order to determine whether the notified assignment corresponds to a  
Mar2      frequency associated, according to Appendix [17 Rev.] with a frequency allotted to the notifying administration in the Allotment Plan contained in Appendix [25 Mar2] to these Regulations.

NOC      4348 549      (3) Any frequency assignment for reception by a coast radiotelephone station for  
Mar2      which the finding is favourable with respect to Nos. 4346/548A and 4347/548B shall be recorded in the Master Register. The date to be entered in Column 2a shall be that determined according to the relevant provisions of Section III of the present Article.

SUP      4344.1 547.1  
Mar2

NOC      **4349 549A**  
             Mar2      (4) Any frequency assignment for reception by a coast radiotelephone station for which the finding is unfavourable with respect to No. 4346/548A shall be examined with respect to Nos. 4315/520 and 4316/521. The date to be entered in Column 2b shall be that determined according to the relevant provisions of Section III of this Article.

NOC      **4350 551**  
             Mar2      (5) Any assignment of a frequency for reception by a coast radiotelephone station which has received a favourable finding with respect to No. 4346/548A but unfavourable with respect to No. 4347/548B shall be recorded in the Master Register. The date to be entered in Column 2b shall be that determined according to the relevant provisions of Section III of the present Article.

NOC

**Sub-Section IIC. Procedure to be followed for Aeronautical  
Stations operating in the Bands allocated exclusively to the  
Aeronautical Mobile Services between [2 850 and 18 030] kHz**

NOC      **4351 552**      § 23. (1) *Examination of Notices concerning Frequency Assignments to Aeronautical Stations in the Aeronautical Mobile (R) Service in the Bands allocated exclusively to that Service between [2 850 and 17 970] kHz (see No. 4295/500).*

NOC      **4352 553**      (2) The Board shall examine each notice covered by No. 4351/552 to determine whether:

NOC      **4352A** 553A  
                 Aer2

a) the notice is in conformity with the provisions of No. 4296/501 ;

NOC      **4353** 554  
                 Aer

b) the frequency corresponds to one of the frequencies specified in Column 1 of the Allotment Plan for the aeronautical mobile (R) service contained in Part II, Section II, Article 2 of Appendix **[27 Aer2]** or the assignment is the result of a permissive change from one class of emission to another and the necessary bandwidth is within the channelling arrangement provided for in Appendix **[27 Aer2]**

NOC      **4354** 555

c) the limitations of use set forth in Column 3 of the Plan have been appropriately observed;

NOC      **4355** 556  
                 Aer

d) the notice is in conformity with the technical principles of the Plan set forth in Appendix **[27 Aer2]**

NOC      **4356** 557  
                 Aer2

e) the area of use is within the boundaries of the Areas as set forth in Column 2 of the Plan ;

NOC      **4356A** 557A  
                 Aer2

(3) A notice which is not in conformity with the provisions of No. 4352A/553A shall be examined with respect to Nos. 4315/520 and 4316/521. The date to be entered in Column 2b shall be determined in accordance with the relevant provisions of Section III of this Article.

- NOC      **4357   558**  
                 **Aer2**
- (4) In the case of a notice in conformity with the provisions of Nos. 4352A/553A to 4355/556, but not with those of No. 4356/557, the Board shall examine whether the protection specified in Appendix **[27 Aer2]** (Part I, Section IIA, paragraph 5) is afforded to the allotments in the Plan. In doing so, the Board shall assume that the frequency will be used in accordance with the "Sharing conditions between areas" specified in Appendix **[27 Aer2]** Part I, Section IIB, paragraph 4.
- NOC      **4358   560**  
                 **Aer**
- (5) All frequency assignments referred to in No. 4351/552 shall be recorded in the Master Register according to the findings reached by the Board. The date to be entered in Column 2a or 2b shall be that determined according to the relevant provisions of Section III of this Article.
- NOC      **4359   561**
- § 24. (1) Examination of Notices concerning Frequency Assignments to Aeronautical Stations in the Aeronautical Mobile (OR) Service in the Bands allocated exclusively to that Service between **[3 025 and 18 030]** kHz (see No. 4295/500).*
- NOC      **4360   562**
- (2) The Board shall examine each notice covered by No. 4359/561 to determine whether:
- NOC      **4361   563**
- a) the assignment is in conformity with the primary allotments in the Allotment Plan for the aeronautical mobile (OR) service and the conditions specified in Appendix **[26]** (Parts III and IV);

NOC 4362 564

- b) the assignment is in conformity with or satisfies the requirements for secondary allotments in the Allotment Plan for the aeronautical mobile (OR) service and the conditions specified in Appendix [26] (Part III, Section II, paragraph 4, sub-paragraph d), and Part IV). In applying these provisions, the Board shall assume that the frequency will be used on a day-time basis:

NOC 4363 565

- c) the assignment is the result of a permissive change from one class of emission to another, its occupied bandwidth is within the channelling arrangement provided for in Appendix [26] (Part III, Section II, paragraphs 1 and 2), and it meets all the conditions for a primary or secondary allotment in the Plan, except that the assigned frequency does not correspond numerically with one of the frequencies specified therein.

NOC 4364 566

- (3) The technical criteria to be employed by the Board in its examination of these notices shall be those in Appendix [26] (Part III).

NOC 4365 567

- (4) All frequency assignments referred to in No. 4359/561 shall be recorded in the Master Register according to the findings reached by the Board. The date to be entered in Column 2a or 2b shall be that determined according to the relevant provisions of Section III of this Article.



NOC

**Sub-Section IID. Procedure to be followed for  
Broadcasting Stations operating in the Bands allocated  
exclusively to the Broadcasting Service between [5 950 and 26 100] kHz**

MOD    **4366 568**    § 25. (1) Frequency Assignments to Broadcasting Stations in the Bands allocated exclusively to the Broadcasting Service between [ 5 950 and 26 100 ] kHz shall be dealt with in accordance with the provisions of Article N15/10 and shall be included only in the annual list referred to in No. 4892/655, which shall be considered as a supplement to the International Frequency List.

SUP    **4367 569**    (2)

SUP    **4368 570**    (3)

NOC

Spa2

**Sub-Section IIE. Procedure to be followed in cases where Terrestrial Stations are in the same frequency Band as, and within the co-ordination area of, an existing earth station or one for which co-ordination has been effected or initiated**

NOC

**4369 570AA**  
Spa

**§ 26. The Board shall examine each notice:**

MOD

**4370 570AB**  
Spa

- a) with respect to its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations with the exception of those relating to the co-ordination procedure and the probability of harmful interference which are the subject of the following sub-paragraphs;

provisions of Nos. 4371/570AC and 4372/570AD;

NOC

**4371 570AC**  
Spa

- b) with respect to its conformity with the provisions of No. 4160/492A relating to co-ordination of the use of the frequency assignment with the other administrations concerned;

NOC

**4372 570AD**  
Spa2

- c) where appropriate, with respect to the probability of harmful interference to the service rendered by an earth receiving station for which a frequency assignment already recorded in the Master Register is in conformity with the provisions of No. 4587/639BM and if the corresponding frequency assignment to the space transmitting station has not, in fact, caused harmful interference to any frequency assignment in conformity with Nos. 4296/501 or 4370/570AB, as appropriate, previously recorded in the Master Register.

MOD

4372/570AD

- c) with respect to the probability of harmful interference, when the coordination under No. 4160/492A has not been successfully effected; this examination shall take into account the frequency assignments for reception already recorded in the Master Register in application of Nos. 4606/639CD, 4607/639CG, 4611/639CK or 4615/639CO.

4604/639CD

NOC 4373 570AE § 27. Depending upon the findings of the Board subsequent to the examination  
Spa prescribed in Nos. 4370/570AB, 4371/570AC and 4372/570AD, further action shall be as follows:

NOC 4374 570AF § 28. (1) *Finding Unfavourable with Respect to No. 4370/570AB.*  
Spa

MOD 4375 570AG (2) Where the notice includes a specific reference to the fact that the station will be  
Spa2 operated in accordance with the provisions of No. 3279/115, and

the finding is favourable with respect to Nos. 4371/570AC or 4372/570AD, as appropriate, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the notice shall be entered in Column 2d.

subject to the provisions of  
No. 4443/611.

SUP 4376 570AGA (3)

notifying

MOD 4377 570AGB (4) If the finding is unfavourable with respect to Nos. 4371/570AC or  
Spa2 4372/570AD, as appropriate, the notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding. Should the administration insist upon reconsideration of the notice, the assignment shall be recorded in the Master Register with the understanding that the provisions of No. 4443/611 shall be applied. The date of receipt by the Board of the original notice shall be entered in Column 2d.

SUP            4378 570AGC            (5)  
                 Spa2

MOD           4379 570AH  
                 Spa2

(6) Where the notice does not include a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115, it shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this finding and with such suggestions as the Board ~~may be~~ able to offer with a view to the satisfactory solution of the problem.

together

is

SUP            4380 570AI            (7)  
                 Spa2

MOD           4381 570AJ  
                 Spa2

(8) If the notifying administration resubmits the notice with a specific reference to the fact that the station will be operated in accordance with the provisions of No. 3279/115, it shall be treated ~~in accordance with the provisions of Nos. 4375/570AG and 4376/570AGA or No. 4377/570AGB, as appropriate.~~

as a new notice

SUP      4382 570AK      (9)  
            Spa2

NOC      4383 570AL      § 29. (1) *Finding Favourable with Respect to No. 4370/570AB.*  
            Spa

NOC      4384 570AM      (2) Where the Board finds that the co-ordination procedure mentioned in  
            Spa      No. 4371/570AC has been successfully completed with all administrations whose earth  
                         stations may be affected, the assignment shall be recorded in the Master Register. The date  
                         of receipt by the Board of the notice shall be entered in Column 2d.

MOD      4385 570AN      (3) Where the Board finds that the coordination procedure  
            Spa      mentioned in No. 4371/570AC has not been applied and

ADD      4385A      a) if the notifying administration requests the Board to effect  
                         the required coordination, the Board shall take the appropriate  
                         action; if the Board's efforts toward securing agreement are  
                         successful it shall so inform the administrations concerned and  
                         shall treat the notice in accordance with No. 4384/570AM;

ADD      4385B      b) if the Board's efforts toward securing agreement in  
                         application of Nos. 4385A or 4170/492D are unsuccessful, or if, when  
                         notifying the assignment, the administration states that it has been  
                         unsuccessful and does not request the Board to effect the required  
                         coordination, the Board shall examine the notice with respect to  
                         the provisions of No. 4372/570AD. At the same time, the Board shall  
                         so inform the administrations concerned.

MOD 4386 570AO ~~(4)~~ c) if the notifying administration does not request the Board  
Spa to effect the required coordination, the notice shall be returned  
immediately by airmail to the notifying administration with the  
reasons of the Board for this action together with such suggestions  
as the Board is able to offer with a view to the satisfactory  
solution of the problem.

NOC 4387 570AP (5) Where the notifying administration resubmits the notice and the Board finds that  
Spa the co-ordination procedure mentioned in No. 4371/570AC has been successfully completed  
with all administrations whose earth stations may be affected, the assignment shall be  
recorded in the Master Register. The date of receipt by the Board of the original notice shall  
be entered in Column 2d. The date of receipt by the Board of the resubmitted notice shall be  
entered in the Remarks Column.

MOD 4388 570AQ (6) Where the notifying Administration resubmits the notice  
Spa with a request that the Board effect the required coordination, it  
shall be treated in accordance with the provisions of  
Nos. 4385/570AN, 4385A or 4385B. However, in any subsequent  
recording of the assignment, the date of receipt by the Board of  
the resubmitted notice shall be entered in the Remarks Column.

in the Master Register

SUP 4389 570AR (7)  
Spa

NOC 4390 570AS § 30. (1) *Finding Favourable with Respect to Nos. 4370/570AB and 4372/570AD.*  
Spa

NOC 4391 570AT (2) The assignment shall be recorded in the Master Register. The date of receipt by the  
Spa Board of the notice shall be entered in Column 2d.

NOC 4392 570AU § 31. (1) *Finding Favourable with Respect to No. 4370/570AB but Unfavourable with*  
Spa *Respect to No. 4372/570AD.*

MOD 4393 570AV (2) The notice shall be returned immediately by airmail to the notifying administration  
Spa with the reasons of the Board for this finding and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.

together

NOC 4394 570AW  
Spa (3) Should the notifying administration resubmit the notice with modifications which result, after re-examination, in a favourable finding by the Board with respect to No. 4372/570AD, the assignment shall be recorded in the Master Register. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the resubmitted notice shall be indicated in the Remarks Column.

MOD 4395 570AX  
Spa2 (4) Should the notifying administration resubmit the notice, either unchanged, or with modifications which decrease the probability of harmful interference, but not sufficiently to permit the provisions of No. 4394/570AW to be applied, and should that administration insist upon reconsideration of the notice, but should the Board's finding remain unchanged, the assignment shall be recorded in the Master Register. However, this entry shall be made only if the notifying administration informs the Board that the assignment has been in use for at least ~~one hundred and twenty days~~ without any complaint of harmful interference having been received. The date of receipt by the Board of the original notice shall be entered in Column 2d. The date of receipt by the Board of the advice that no complaint of harmful interference has been received shall be indicated in the Remarks Column. ~~The period of one hundred and twenty days shall count from the date indicated in No. 4378/570AGG.~~

4 months counting from the date  
when both are in service

NOC 4396 570AZ  
Spa § 32. (1) *Change in the Basic Characteristics of Assignments already recorded in the Master Register.*

MOD 4397 570BA  
Spa2 (2) A notice of a change in the basic characteristics of an assignment already recorded, as specified in Appendix 1 (except those entered in Columns 3 and 4a of the Master Register) shall be examined by the Board according to Nos. 4370/570AB and 4371/570AC and, where appropriate, No. 4372/570AD and the provisions of Nos. 4374/570AF to 4395/570AX inclusive applied. Where the change should be recorded, the original assignment shall be amended according to the notice.

sections A or B,

notified under  
No. 4283/489

or a notice under No. 4283/489  
concerning an assignment  
recorded under No. 4284/490  
(Appendix 1, Section C)

2c,



NOC 4398 570BB  
Spa

(3) However, in the case of a change in the basic characteristics of an assignment which is in conformity with No. 4370/570AB, should the Board reach a favourable finding with respect to No. 4371/570AC, and, where its provisions are applicable, with respect to No. 4372/570AD, or find that the change does not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date in Column 2d. In addition, the date of receipt by the Board of the notice relating to the change shall be entered in the Remarks Column.

ADD 4398A

(3A) The projected date of bringing into use of a frequency assignment may be delayed on request of the notifying administration by three months. In the case where the administration states that, due to exceptional circumstances, it needs a further extension of this period, such extension may be provided but it shall in no case exceed six months from the original projected date of bringing into use.

NOC 4399 570BC  
Spa2

§ 33. In applying the provisions of this Sub-Section, any resubmitted notice which is received by the Board more than two years after the date of its return by the Board, shall be considered as a new notice.

NOC 4400 570BD  
Spa

§ 34. (1) *Recording of Frequency Assignments notified before being brought into use.*

NOC 4401 570BE  
Spa

(2) If a frequency assignment notified in advance of bringing into use has received a favourable finding by the Board with respect to Nos. 4370/570AB and 4371/570AC and, where appropriate, with respect to No. 4372/570AD, it shall be entered provisionally in the Master Register with a special symbol in the Remarks Column indicating the provisional nature of that entry.

MOD 4402 570BF

(3) Within thirty days after the date of bringing into use, either as originally notified or as modified in application of No. 4398A, the notifying administration shall confirm that the frequency assignment has been brought into use. When the Board is informed that the assignment has been brought into use, the special symbol shall be deleted from the Remarks Column.

NOC 4403 570BG  
Spa2

(4) In the circumstances described in No. 4395/570AX, and as long as an assignment which received an unfavourable finding cannot be resubmitted as a consequence of the provisions of No. 4378/570AGC, the notifying administration may ask the Board to enter the assignment provisionally in the Master Register, in which event a special symbol to denote the provisional nature of the entry shall be entered in the Remarks Column. The Board shall delete this symbol when it receives from the notifying administration, at the end of the period specified in No. 4395/570AX, the information relating to the absence of complaint of harmful interference.

MOD 4404 570BH

(5) If the Board does not receive this confirmation within the period referred to in No. 4402/570BF the entry concerned shall be cancelled. The Board shall consult the Administration concerned before taking such action.

NOC

### Section III. Recording of Dates and Findings in the Master Register

MOD 4405 571

§ 35. In any case where a frequency assignment is recorded in the Master Register, the finding reached by the Board shall be indicated by a symbol in Column 13a. In addition, a ~~remark indicating~~ the reasons for any unfavourable finding shall be inserted in the Remarks Column.

reaching an

MOD 4406 572  
Spa

§ 36. The procedure for recording dates in the appropriate part of Column 2 of the Master Register which shall be applied according to the frequency bands and services concerned is described in the following Nos. 4407/573 to 4436/604 for frequency assignments referred to in Sub Sections IIA to ~~IID~~ 7.

NOC 4407 573  
Mar2

§ 37. (1) *Frequency Bands:*

10	-	2 850	kHz
3 155	-	3 400	kHz
3 500	-	3 900	kHz in Region 1
3 500	-	4 000	kHz in Region 2
3 500	-	3 950	kHz in Region 3
4 219.4	-	4 349.4	kHz
6 325.4	-	6 493.9	kHz
8 435.4	-	8 704.4	kHz
12 652.3	-	13 070.8	kHz
16 859.4	-	17 196.9	kHz
22 310.5	-	22 561	kHz

MOD 4408 574

(2) For any assignment to which the provisions of Nos. 4305/510, 4306/511 or 4309/514 apply, the relevant date shall be entered in Column 2a of the Master Register; however for class of operation B assignments to stations of the fixed service the relevant date shall be entered in Column 2b.

NOC 4409 575

(3) For any assignment to which the provisions of Nos. 4310/515, 4313/518, 4315/520, 4317/522, 4320/525, 4321/526, 4325/530 or 4326/531 apply, the relevant date shall be entered in Column 2b of the Master Register.

SUP 4410 576 (4)

MOD 4411 577  
Mar2 § 38. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Coast Radiotelephone Stations.\**

NOC 4412 578  
Mar2 (2) If the finding is favourable with respect to Nos. 4338/542A and 4339/542B, the date of 7 June 1974 shall be entered in Column 2a.

NOC 4413 580  
(3) For all other cases referred to in No. 4336/541, the relevant date shall be entered in Column 2b (see Nos. 4305/510, 4309/514, 4310/515, 4313/518, 4328/533 and 4329/534).

SUP 4411.1 577.1  
Mar2

- NOC 4414 581 (4) For assignments to stations other than radiotelephone coast stations, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).
- MOD 4415 582  
Mar2 § 39. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Ship Radiotelephone Stations.*
- NOC 4416 583  
Mar2 (2) If the finding is favourable with respect to Nos. 4346/548A and 4347/548B, the date of 7 June 1974 shall be entered in Column 2a.
- NOC 4417 585 (3) In all other cases covered by No. 4344/547, the date of receipt of the notice by the Board shall be entered in Column 2b.
- NOC 4418 586 (4) For assignments other than assignments of frequencies for reception by radiotelephone coast stations, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).
- SUP 4415.1 582.1  
Mar2

NOC 4419 587 § 40. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between*  
*[4 000 and 25 110] kHz for Radiotelegraph Ship Stations (see No. 4282/488).*

NOC 4420 588 (2) For assignments to stations other than radiotelegraph ship stations, the relevant  
date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

NOC 4421 589 § 41. (1) *Frequency Bands allocated exclusively to the Aeronautical Mobile (R) Service*  
*between [2 850 and 17 970] kHz.*

MOD 4422 590  
Aer (2) If the finding is favourable with respect to Nos. 4353/554 to 4356/557, the date of  
[ 5 March 1978 ] shall be entered in Column 2a.

MOD 4423 591  
Aer (3) If the finding is favourable with respect to No. 4357/558, the date of  
[ 5 March 1978 ] shall be entered in Column 2b.

MOD 4424 592

(4) In all other cases covered by No. 4351/552, the date of [ 6 March 1978 ] shall be entered in Column 2b by the Board.

NOC 4425 593

(5) For assignments to stations other than aeronautical stations in the aeronautical mobile (R) service, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

NOC 4426 594

§ 42. (1) *Frequency Bands allocated exclusively to the Aeronautical Mobile (OR) Service between [ 3 025 and 18 030 ] kHz.*

NOC 4427 595

(2) If the finding is favourable with respect to No. 4361/563, the date of 3 December 1951 shall be entered in Column 2a.

NOC 4428 596

(3) If the finding is favourable with respect to No. 4362/564, the date of 3 December 1951 shall be entered in Column 2b.

NOC 4429 597

(4) If the provisions of No. 4363/565 are found to be applicable, the date of 3 December 1951 shall be entered in Column 2a for a primary allotment, or in Column 2b for a secondary allotment.

NOC 4430 598

(5) In all other cases covered by No. 4359/561, the date of receipt of the notice by the Board shall be entered in Column 2b.

NOC 4431 599

(6) For assignments to stations other than aeronautical stations in the aeronautical mobile (OR) service, the relevant date shall be entered in Column 2b (see Nos. 4320/525, 4321/526, 4325/530 and 4326/531).

SUP 4432 600 543 (1)

SUP 4433 601 (2)

SUP 4434 602 (3)



NOC 4435 603

§ 44. (1) *Frequency Bands between ~~3 950 kHz~~ 4 000 kHz in Region 2) and 28 000 kHz other than those allocated exclusively to the Aeronautical Mobile Service, Maritime Mobile Service, Broadcasting Service or Amateur Service, and Frequency Bands above 28 000 kHz.*

NOC 4436 604

(2) For any frequency assignment which is to be recorded under the provisions of Section II of this Article, the relevant date shall be entered in Column 2d of the Master Register.

NOC 4437 605

§ 45. *Date to be entered in Column 2c.*

MOD 4438 606

The date to be entered in Column 2c shall be the date of putting into use notified by the administration concerned (see Nos. 4285/491 and 4286/492). However, ~~in cases covered by No. 4366/568, the date to be entered in this column shall be either the date of implementation of the schedule from which the assignment was extracted, or the notified date of putting into use, whichever is the later.~~

NOC

#### Section IV. Categories of Frequency Assignments

MOD 4439/607

§ 46 (1) Any frequency assignment which bears a date in Column 2a of the Master Register shall have the right to international protection from harmful interference; so shall class of operation A assignments to stations of the fixed service in the appropriate bands between 3 000 kHz and 27 500 kHz recorded as a result of a favourable finding with respect to Nos. 4296/501 and 4298/503, in particular those resulting from the application of No. 4280A.

with a date in Column 2d

NOC 4440 608

(2) Any frequency assignment which bears a date in Column 2b is recorded in the Master Register in order that administrations may take into account the fact that the frequency assignment concerned is in use. This recording shall not give the right to international protection to the frequency assignment concerned, except as provided for in No. 4297/502, sub-paragraph 2).

NOC 4441 609

(3) For frequency assignments having dates in two parts of Column 2, the date in Column 2c is given for information only.

NOC 4442 610

[ (4) The existence of a symbol in Column 2d for a particular frequency assignment and of a date in that column for another assignment is not in itself to be considered as having any significance. ]

or 4370/570AB

MOD 4443 611

(5) If harmful interference to the reception of any station whose assignment is in accordance with No. 4296/501 is actually caused by the use of a frequency assignment which is not in conformity with No. 4296/501, the station using the latter frequency assignment ~~must immediately cease operations~~ upon receipt of advice of this harmful interference.

shall

thereof,  
immediately eliminate  
this harmful interference

MOD 4444 611A  
Spa2

(6) If harmful interference to the reception of any station whose assignment is in accordance with No. 4587/639BM is actually caused by the use of a frequency assignment which is not in conformity with Nos. 4296/501 or 4370/570AB, the station using the latter frequency assignment ~~must~~, upon receipt of advice thereof, immediately eliminate this harmful interference.

shall

NOC

**Section V. Review of Findings**

NOC 4445 612.

**§ 47. (1) The review of a finding by the Board may be undertaken:**

- at the request of the notifying administration,
- at the request of any other administration interested in the question, but only on the grounds of actual harmful interference,
- on the initiative of the Board itself when it considers this is justified.

NOC 4446 613  
Spa

(2) The Board, in the light of all the data at its disposal, shall review the matter, taking into account Nos. 4296/501 or 4370/570AB and Nos. 4297/502, 4298/503, 4371/570AC or 4372/570AD, as appropriate, and shall render an appropriate finding, informing the notifying administration prior either to the promulgation of its finding or to any recording action.

NOC 4447 614

**§ 48.** If a review of an unfavourable finding has been requested by the notifying administration on the grounds of special assistance to meet an urgent and essential need in a case where harmful interference has been experienced, the Board shall consult immediately the administrations concerned and shall make such suggestions as will facilitate the operation of the assignment of the administration which asked for special assistance; such amendments as result from this consultation shall be made to the Master Register.

NOC 4448 615  
Spa

§ 49. (1) After actual use for a reasonable period of an assignment which has been entered in the Master Register on the insistence of the notifying administration, following an unfavourable finding with respect to Nos. 4297/502, 4298/503 or 4372/570AD, as appropriate, this administration may request the Board to review the finding. Thereupon the Board shall review the matter, first having consulted the administrations concerned.

NOC 4449 616

(2) If the finding of the Board is then favourable, it shall enter in the Master Register the changes that are required so that the entry shall appear in the future as if the original finding had been favourable.

NOC 4450 617

(3) If the finding with regard to the probability of harmful interference remains unfavourable, no change shall be made in the original entry.

SUP 4451 618 § 50.

ADD 4451A

In the event of a deletion or modification of any recorded frequency assignment which had been the cause of an unfavourable finding and had led a later assignment to be recorded under No. 4310/515, the Board shall review, and, where appropriate, modify that unfavourable finding with respect to Nos. 4297/502 or 4298/503.

ADD 4451B

To provide a basis for the review of an entry in the Master Register made in accordance with No. 4310/515, the Board shall, when examining the relevant notice, determine the date upon which the review is to be made. If by that date no complaint of harmful interference has been received by the Administration concerned, the Board shall automatically reverse the original unfavourable finding with respect to No. 4297/502 or No. 4298/503.

MOD

Section VI. Maintenance of the Master Register

ADD 4451C

**§ 50A ~~Modification, Cancellation and Review of Entries~~  
in the Master Register**

NOC 4452 619

**§ 51. In case of permanent discontinuance of the use of any recorded frequency assignment, the notifying administration shall inform the Board within three months of such discontinuance, whereupon the entry shall be removed from the Master Register.**

NOC      4453 620      § 52. Whenever it appears to the Board from the information available that a recorded assignment has not been brought into regular operation in accordance with the notified basic characteristics, or is not being used in accordance with those basic characteristics, the Board shall consult the notifying administration and, subject to its agreement, shall either cancel or suitably modify the entry.

NOC      4454 621      § 53. If, in connection with an enquiry by the Board under Nos. 4311/516 or 4453/620, the notifying administration has failed to supply the Board within ninety days with the necessary or pertinent information, the Board shall disregard the assignment concerned when acting upon any later notice, until such time as it has been informed that the assignment is being used as notified, or until it has received the information required. The Board shall make suitable entries in the Remarks Column of the Master Register to indicate the situation, and in particular the period when the assignment was not taken into account by the Board.

SUP      4455 622      § 54.

ADD      4454A      § 54A.(1) Periodic examination of the Master Register.

- ADD 4454B (2) The Board shall institute a long-term programme of periodic reviews of each section of the Master Register with the aim of improving and maintaining its accuracy.
- ADD 4454C (3) For the purpose of the reviews mentioned in No. 4454B the Board shall send to each Administration, for revision and return, a national extract of the Master Register relating to the particular section under review. The Board shall at the same time draw the attention of Administrations to any assignment to a station in the fixed service in frequency bands between 3 000 kHz and 27 500 kHz for which other means of telecommunications are believed to be available.
- ADD 4454D (4) Administrations shall, having regard to the need to improve and maintain the accuracy of the Master Register, cooperate in these periodic reviews by deleting any unused assignment and, where appropriate, by modifying the remaining entries.
- ADD 4454E (5) The Board shall include in its annual report to Administrations a section relating to the work done under this provision, the results achieved, and the programme for the following year.

NOC

**Section VII. Studies and Recommendations**

NOC      **4456 623**      **§ 55. (1) If it is requested by any administration, particularly by an administration of a country in need of special assistance, and if the circumstances appear to warrant, the Board, using such means at its disposal as are appropriate in the circumstances, shall conduct a study of the following problems of frequency utilization:**

NOC      **4457 624**      **a) in cases arising under No. 4307/512 as to a possible alternative frequency assignment to avoid probable harmful interference;**

NOC      **4458 625**      **b) in cases where a need arises for additional frequency assignments within a specified portion of the radio spectrum;**

NOC      **4459 626**      **c) in cases where, due to harmful interference, two or more frequencies of the same megacycle order are being used alternately to maintain communication on a circuit requiring only one frequency of that order; and**

NOC      **4460 627**      **d) in cases of alleged contravention or non-observance of these Regulations, or of harmful interference.**



NOC 4461 628

(2) The Board shall thereupon prepare and forward to the administrations concerned a report containing its finding and recommendations for the solution of the problem.

ADD 4461A

(2A) On receiving the Board's recommendations for the solution of the problem, an Administration shall promptly acknowledge the receipt by telegram and shall subsequently indicate the action it intends to take. In cases when the Board's suggestions or recommendations are unacceptable to the Administrations concerned, further efforts should be made by the Board to find an acceptable solution to the problem.

NOC 4462 629

§ 56. If the Board finds, in particular following a request from an administration of a country in need of special assistance, that a change in the basic characteristics, including a change of frequency within a specific frequency range, of one or more assignments in conformity with the provisions of No. 4296/501 will:

NOC 4463 630

a) accommodate a new assignment; or

NOC 4464 631

b) facilitate the solution of a problem of harmful interference; or

NOC 4465 632

c) otherwise facilitate the more effective use of a particular portion of the radio spectrum; and

NOC 4465 633 if such change is acceptable to the administration or administrations concerned, the change in basic characteristics shall be recorded in the Master Register without change in the original date or dates.

NOC 4467 634 § 57. In a case where, as a result of a study, the Board submits to one or more administrations suggestions or recommendations for the solution of a problem, and where no answer has been received from one or more of these administrations within a period of thirty days, the Board shall consider that the suggestions or recommendations concerned are unacceptable to the administrations which did not answer. If it was the requesting administration which failed to answer within this period, the Board shall close the study.

NOC

**Section VIII. Miscellaneous Provisions**

NOC 4468 635  
Mar2 § 58. The provisions of Sections V, VI (excepting No. 4452/619) and VII of this Article shall not be applied to frequency assignments in conformity with the Allotment Plans contained in Appendices 25 Mar2, 26 and 27 Aer2 to these Regulations.

MOD

4469 635A  
Spa2

§ 59. (1) If it is requested by any administration, particularly by an administration of a country in need of special assistance, and if the circumstances appear to warrant, the Board using such means at its disposal as are appropriate in the circumstances, shall render the following assistance:

- a) verification of the diagram showing the co-ordination area referred to in No. 4141/639AN;
- b) computation of the interference level, as referred to in No. 4167/492B;
- c) any other assistance of a technical nature for completion of the procedures in this Article.

- NOC      4470 635B  
            Spa2      (2) In making a request to the Board under No. 4469/635A, the administration shall furnish the Board with the necessary information.
- MOD      4471 636      § 60. The technical standards of the Board shall be based upon the relevant provisions of these Regulations and the Appendices thereto, the decisions of Administrative Conferences of the Union, as appropriate, the Recommendations of the CCIR, the state of the radio art and the development of new transmission techniques, account being taken of exceptional propagation conditions which may prevail in certain regions (for example, particularly pronounced ducting).
- MOD      4472 637      § 61. The Board shall inform all Administrations of its findings and the reasons therefor, together with all changes made to the Master Register, through its weekly circular. Such a publication shall be made within forty-five days of the date of publication of the complete notice in the weekly circular referred to in No. 4292/497. When the Board is not in a position to comply with the time-limit referred to above it shall, as soon as possible, so inform the Administration concerned giving the reasons therefor.
- ADD      4472A      The weekly circular of the IFRB shall be published in the working languages of the Union as defined in the Convention. In carrying out the various procedures stipulated in the Radio Regulations, the Board shall use the weekly circular as a means of communicating with Administrations to the maximum extent practicable.

NOC      4473 638      § 62.      The Board shall inform administrations, at appropriate intervals, of the cases of special assistance which were studied under Nos. 4447/614 and 4456/623 to 4467/634 inclusive of these Regulations.

MOD      4474 639      § 63.      In case a Member ~~or Associate Member~~ of the Union avails itself of the provisions of Article 50 of the Convention, the Board shall, upon request, make its records available for such proceedings as are prescribed in the Convention for the settlement of international disputes.

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**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 799-E

24 November 1979

Original : French

COMMITTEE 6

SUMMARY RECORD

OF THE

FIRST PART OF THE TENTH MEETING OF COMMITTEE 6  
(REGULATORY PROCEDURES)

Tuesday, 13 November 1979, at 0900 hrs

Chairman : Dr. M. JOACHIM (Czechoslovakia)

Subjects discussed :

Document No.

- |  |   |
|--|---|
| 1. Approval of the summary record of the eighth meeting of Committee 6 | 559                                     |
| 2. Note to the Chairman of Committee 4                                 | 579                                     |
| 3. Other documents before Committee 6                                  | 576, 594, 598,<br>600, 601, 615,<br>619 |
| 4. i) Progress of the work of <u>Working Group 6/ad hoc 2</u>          | -                                       |
| ii) Progress of the work of <u>Working Group 6A</u>                    |   |



1. Approval of the summary record of the eighth meeting of Committee 6 (Document No. 559)

The summary record of the eighth meeting of Committee 6 was approved.

2. Note to the Chairman of Committee 4 (Document No. 579)

2.1 The Chairman of Working Group 6A drew attention to Document No. 478, concerning the definitions of the different levels of interference given by Committee 4, to which Document No. 579 related.

2.2 The delegate of the USSR pointed out that since Committee 4 had finished its work, it would no longer be possible to send a note to its Chairman. Document No. 579 had already been considered by that Committee, and there was therefore no need for it to be approved by Committee 6.

The Committee agreed with that view and decided not to consider the document in question.

3. Other documents before Committee 6  
(Documents Nos. 576, 594, 598, 600, 601, 615, 619)

3.1 Documents Nos. 576 and 594

3.1.1 The Chairman of Working Group 6A said that the Working Group had not considered Document No. 576, which was a new text submitted by the Syrian Arab Republic.

3.1.2 The delegate of the Syrian Arab Republic briefly introduced the text in question, stressing the importance of the three points made in the operative part, by which the CCIR Recommendations in question would acquire the status of Resolutions.

3.1.3 The delegate of the United States, supported by the delegate of the United Kingdom, expressed the opinion that Document No. 576 did not fall within the terms of reference of Committee 6, given that it would apparently make certain CCIR Recommendations compulsory.

In view of the two opinions expressed above and the fact that Committee 4 had completed its work, it was decided, there being no objection, that Document No. 576 should be considered in the plenary meeting, if the delegation of the Syrian Arab Republic so wished, and that Document No. 594 did not call for any action on the part of Committee 6.

3.2 Document No. 598

At the suggestion of the Chairman, it was decided that the document should be considered by Working Group 6A.

3.3 Document No. 600

The Chairman considered that the document, which gave the results of consultations in Committee 4, should be considered together with the Appendices to the Radio Regulations.

It was accordingly decided to refer Document No. 600 to Working Group 6A.

3.4 Document No. 601

The Chairman stated that the document contained the replies furnished by Committee 4 in response to requests for information made by Committee 6 in Documents Nos. 370 and 371 and that it should be considered by Working Group 6A.

There being no objection, it was so decided.

3.5 Document No. 615

At the suggestion of the delegate of the United States, it was agreed to refer the document to Working Group 6A, which would report on the matter to Committee 6 when it resumed.

3.6 Document No. 619

The Chairman briefly introduced the document, which was the outcome of a discussion in Working Group 6A. The Group had concluded that the question considered in Document No. 619 should be referred to Committee 7, with a view to the possible inclusion of an appropriate preamble in the Radio Regulations.

It was accordingly decided to transmit Document No. 619 to the Chairman of Committee 7, who would decide whether that Committee could take a decision or whether the question should be submitted to the plenary meeting.

4. i) Progress of the work of Working Group 6/ad hoc 2ii) Progress of the work of Working Group 6Ai) Progress of the work of Working Group 6/ad hoc 2

4.1 The Vice-Chairman of Committee 6, speaking as Chairman of Working Group 6/ad hoc 2, reported that the Group had already held six meetings and that it still had to consider a draft resolution, which was in the process of being issued.

ii) Progress of the work of Working Group 6A

4.2 The Chairman of Working Group 6A said that the Working Group hoped to finish its work at the meeting scheduled for Friday, 16 November.

The meeting was adjourned at 0935 hours.

The Secretary :

R. PLUSS

The Chairman :

M. JOACHIM

# WORLD ADMINISTRATIVE RADIO CONFERENCE

(Geneva, 1979)

Corrigendum No. 2 to  
Document No. 800  
27 November 1979

E

Corr. No. 2 to  
R.1

## PLENARY MEETING

Page R.1-18

Replace the text of No. 6602/992 by the following:

(MOD) 6602      992  
Mar2

§ 9. Any aircraft required by national or international regulations to communicate for distress, urgency or safety purposes with stations of the maritime mobile service, shall be capable of transmitting preferably class A2A, or H2A and receiving preferably class A2A and H2A emissions on the carrier frequency 500 kHz or, on the carrier frequency 2 182 kHz, transmitting class A3E or H3E and receiving class A3E and H3E emissions, or on the frequency 156.8 MHz transmitting and receiving class G3E emissions.

P. BASSOLE  
Chairman of the  
Editorial Committee





INTERNATIONAL TELECOMMUNICATION UNION

# **WORLD ADMINISTRATIVE RADIO CONFERENCE**

(Geneva, 1979)

PINK PAGES

Corrigendum No. 1 to  
Document No. 800  
27 November 1979

**E**

Corr. No. 1 to  
R.1

PLENARY MEETING

(Concerns the French and Spanish texts only)

P. BASSOLE  
Chairman of the  
Editorial Committee



**WORLD ADMINISTRATIVE  
RADIO CONFERENCE**

(Geneva, 1979)

Document No. 800  
22 November 1979**E**

R.1

PLENARY MEETING**1st SERIES OF TEXTS SUBMITTED BY THE  
EDITORIAL COMMITTEE TO THE PLENARY MEETING**

The following texts are submitted to the Plenary Meeting for second reading:

<u>Source</u>	<u>Document No.</u>	<u>Title</u>
B.12	613	Article N2
B.8	523	Article N3
B.1	424	Article N9
B.12	613	Article N17
B.6	491	Article N19
B.7	511	Article N21, Article N22, Article N31
B.2	433	Article N34, Article N36
B.14	617	Article N39
B.3	443	Article N40, Article N42, Article N43, Article N44, Article N 45, Article N48
B.4	457	Article N51, Article N53, Article N54, Article N55
B.5	466	Article N58, Article N62A, Article N63, Article N64, Article N65, Article N66, Article N67, Article N68, Chapter NXIII, Additional Radio Regulations
B.1	424	Res. AA
B.5	466	Res. AB, Res. AC
B.6	491	Res. AD
B.7	511	Res. AE
B.11	569	Res. AH
B.12	613	Res. AJ
B.5	466	Rec. A, Rec. B, Rec. C
B.6	491	Rec. D
B.10	562	Rec. E, Rec. F, Rec. H, Rec. I
B.12	613	Rec. J, Rec. K
B.15	635	Rec. M

P. BASSOLE  
Chairman of the  
Editorial Committee



## ARTICLE N2

NOC

**Nomenclature of the Frequency and Wavelength Bands  
Used in Radiocommunication**

MOD 3183 112 § 1. The radio spectrum shall be subdivided  
Spa2 into nine frequency bands, which shall be designated by  
progressive whole numbers in accordance with the following  
table. As the unit of frequency is the hertz (Hz),  
frequencies shall be expressed:

- in kilohertz (kHz), up to and including 3 000 kHz,
- in megahertz (MHz), above 3 MHz, up to and including 3 000 MHz,
- in gigahertz (GHz), above 3 GHz, up to and including 3 000 GHz.

For bands above 3 000 GHz, i.e. centimillimetric waves, micrometric waves, decimicrometric waves, it would be appropriate to use "terahertz (THz)".

However, where adherence to these provisions would introduce serious difficulties, for example in connection with the notification and registration of frequencies, the lists of frequencies and related matters, reasonable departures may be made.

Band Number	Symbols	Frequency Range (lower limit exclusive, upper limit inclusive)	Corresponding Metric Subdivision	Metric Abbreviations
4	VLF	3 to 30 kHz	Myriametric waves	0.Mam
5	LF	30 to 300 kHz	Kilometric waves	0.km
6	MF	300 to 3 000 kHz	Hectometric waves	0.hm
7	HF	3 to 30 MHz	Decametric waves	0.dam
8	VHF	30 to 300 MHz	Metric waves	0.m
9	UHF	300 to 3 000 MHz	Decimetric waves	0.dm
10	SHF	3 to 30 GHz	Centimetric waves	0.cm
11	EHF	30 to 300 GHz	Millimetric waves	0.mm
12		300 to 3 000 GHz	Decimillimetric waves	

Note 1: "Band Number N" (N = band number) extends from  $0.3 \times 10^N$  Hz to  $3 \times 10^N$  Hz.

Note 2: Prefix : k = kilo ( $10^3$ ), M = mega ( $10^6$ ),  
G = giga ( $10^9$ ), T = tera ( $10^{12}$ ).

ADD 3183A

§ 1A. In communications between administrations and the ITU no names, symbols or abbreviations should be used for the various frequency bands other than those specified in 3183/112.

3184  
to  
3208

NOT allocated.

MOD

## ARTICLE N3

NOC

**Designation of Emissions**SUP **3209**  
to  
**3216**

inclusive together with associated section headings.

ADD **3209A**

§ 1. (1) Emissions shall be designated according to their necessary bandwidth and their classification.

ADD **3209B**

(2) Examples of emissions designated in accordance with this Article are given in Appendix 5, Part B. Further examples may appear in the latest CCIR Recommendations. These examples may also be published in the Preface to the International Frequency List.

ADD

**Section I. Necessary Bandwidth**ADD **3210A**

§ 2. The necessary bandwidth, as defined in No. 3140/91 and determined in accordance with Appendix 5, Part B, shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth. The first character shall be neither zero nor K, M or G.

Necessary bandwidths 1:

between .001 and 999 Hz shall be expressed in Hz (letter H);

between 1.00 and 999 kHz shall be expressed in kHz (letter K);

between 1.00 and 999 MHz shall be expressed in MHz (letter M);

between 1.00 and 999 GHz shall be expressed in GHz (letter G).

ADD **3210A.1**

1 Examples:

0.002 Hz = H002	6 kHz = 6K00	1.25 MHz = 1M25
0.1 Hz = H100	12.5 kHz = 12K5	2 MHz = 2M00
25.3 Hz = 25H3	180.4 kHz = 180K	10 MHz = 10M0
400 Hz = 400H	180.5 kHz = 181K	202 MHz = 202M
2.4 kHz = 2K40	180.7 kHz = 181K	5.65 GHz = 5G65

ADD

**Section II. Classification**ADD **3211A**

§ 3. The class of emission is a set of characteristics conforming to No. 3212A.

ADD 3212A

§ 4. Emissions shall be classified and symbolized according to their basic characteristics as given in No. 3213A and any optional additional characteristics as provided for in Appendix 5, Part A.

ADD 3213A

§ 5. The basic characteristics (see Nos. 3214A, 3215A, 3216A) are:

- (1) First symbol - type of modulation of the main carrier;
- (2) Second symbol - nature of signal(s) modulating the main carrier;
- (3) Third symbol - type of information to be transmitted.

Modulation used only for short periods and for incidental purposes (such as, in many cases, for identification or calling) may be ignored provided that the necessary bandwidth as indicated is not thereby increased.

ADD 3214A

§ 6. (1) First symbol - Type of modulation of the main carrier

- |         |  |   |
|---------|--|---|
| (1.1)   | Emission of an unmodulated carrier   | N |
| (1.2)   | Emission in which the main carrier is amplitude-modulated (including cases where sub-carriers are angle-modulated) |   |
| (1.2.1) | Double-sideband  | A |
| (1.2.2) | Single-sideband, full carrier  | H |
| (1.2.3) | Single-sideband, reduced or variable level carrier   | R |
| (1.2.4) | Single-sideband, suppressed carrier  | J |
| (1.2.5) | Independent sideband   | B |
| (1.2.6) | Vestigial sideband   | C |
| (1.3)   | Emission in which the main carrier is angle-modulated  |   |
| (1.3.1) | Frequency modulation   | F |
| (1.3.2) | Phase modulation   | G |

## R.1-5

- (1.4) Emission in which the main carrier is amplitude- and angle-modulated either simultaneously or in a pre-established sequence D
- (1.5) Emission of pulses 1
  - (1.5.1) Unmodulated sequence of pulses P
  - (1.5.2) A sequence of pulses
    - (1.5.2.1) modulated in amplitude K
    - (1.5.2.2) modulated in width/duration L
    - (1.5.2.3) modulated in position/phase M
    - (1.5.2.4) in which the carrier is angle-modulated during the period of the pulse Q
    - (1.5.2.5) which is a combination of the foregoing or is produced by other means V
- (1.6) Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse W
- (1.7) Cases not otherwise covered X

ADD 3214A.1

1 Emissions, where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation), should be designated under (1.2) or (1.3).

ADD 3215A

- (2) Second symbol - Nature of signal(s) modulating the main carrier
  - (2.1) No modulating signal 0
  - (2.2) A single channel containing quantized or digital information without the use of a modulating sub-carrier 2 1

## R.1-6

- (2.3) A single channel containing quantized or digital information with the use of a modulating sub-carrier 2 2
- (2.4) A single channel containing analogue information 3
- (2.5) Two or more channels containing quantized or digital information 7
- (2.6) Two or more channels containing analogue information 8
- (2.7) Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information 9
- (2.8) Cases not otherwise covered X

ADD 3215A.1

2 This excludes time-division multiplex.

ADD 3216A

(3) Third symbol - Type of information to be transmitted 3

- (3.1) No information transmitted N
- (3.2) Telegraphy - for aural reception A
- (3.3) Telegraphy - for automatic reception B
- (3.4) Facsimile C
- (3.5) Data transmission, telemetry, telecommand D
- (3.6) Telephony (including sound broadcasting) E
- (3.7) Television (video) F
- (3.8) Combination of the above W
- (3.9) Cases not otherwise covered X

ADD 3216A.1

3 In this context the word "information" does not include information of a constant, unvarying nature such as provided by standard frequency emissions, continuous wave and pulse radars, etc.

3217  
to  
3241

NOT allocated.



## CHAPTER NIV/III

NOC Co-ordination, Notification and Registration of Frequencies.

International Frequency Registration Board

ARTICLE N9/8

MOD International Frequency Registration Board

ADD Section I. Functions of the Board

- |     |       |     |      |   |
|-----|-------|-----|------|---|
| NOC | 3951  | 471 | § 1. | The constitution and the essential duties of the International Frequency Registration Board are defined in the Convention.  |
| NOC | 3952  | 472 | § 2. | The functions of the Board shall include:   |
| MOD | 3953  | 473 | a)   | the processing of frequency assignment notices, including information about any associated orbital locations of geostationary satellites, received from administrations for recording in the Master International Frequency Register;   |
| ADD | 3953A |     | aa)  | the processing of information received in application of the advance publication, coordination and other procedures of the Radio Regulations and the Final Acts of Administrative Radio Conferences; and the provision of assistance to administrations in these matters, at their request; |
| NOC | 3954  | 474 | b)   | the processing and co-ordination of seasonal schedules of high frequency broadcasting with a view to accommodating requirements of all administrations for that service;  |
| NOC | 3955  | 475 | c)   | the compilation, for publication in suitable form and at appropriate intervals by the Secretary-General, of frequency lists reflecting the data recorded in the Master International Frequency Register, as well as other material relating to the assignment and use of frequencies;       |

- |     |         |             |            |   |
|-----|---------|-------------|------------|---|
| NOC | 3956    | 476         | <u>d)</u>  | the review of entries in the Master International Frequency Register with a view to amending or eliminating, as appropriate, those which do not reflect actual frequency usage, in agreement with the administrations which notified the assignments concerned;   |
| NOC | 3957    | 477<br>Spa2 | <u>e)</u>  | the study, on a long-term basis, of the usage of the radio spectrum, with a view to making recommendations for its more effective use;  |
| NOC | 3958    | 478         | <u>f)</u>  | the investigation, at the request of one or more of the interested administrations, of harmful interference and the formulation of recommendations with respect thereto;  |
| NOC | 3959    | 479         | <u>g)</u>  | the provision of assistance to administrations in the field of radio spectrum utilization, in particular to those administrations in need of special assistance, and the recommendation to administrations, where appropriate, of adjustments in their frequency assignments in order to obtain a better use of the radio spectrum; |
| NOC | 3960    | 480         | <u>h)</u>  | the collection of such results of monitoring observations as administrations and organizations may be able to supply and the making of arrangements, through the Secretary-General, for their publication in suitable form;   |
| ADD | 3960A   |             | <u>ha)</u> | the development of Technical Standards 1 in accordance with 4471/636 and 4648/639DV and of Rules of Procedure 1 for internal use by the Board in the exercise of its functions.   |
| ADD | 3960A.1 |             |            | 1 The Technical Standards and the Rules of Procedure of the IFRB shall be distributed to all Members of the Union and shall be open to comment from any administration. In the event of there being a disagreement which remains unresolved, the procedure to be followed is given in Resolution AA.                                |
| NOC | 3961    | 481         | <u>i)</u>  | the formulation and reference to the CCIR of all general technical questions arising from the Board's examination of frequency assignments;   |

MOD	3962	482	j)	the technical preparation for radio conferences in consultation, as appropriate, with the other permanent organs of the Union, and with due regard for the pertinent directives of the Administrative Council in accordance with the Convention;
NOC	3963	483	k)	the participation in an advisory capacity, upon invitation by the organizations or countries concerned, in conferences and meetings where questions relating to the assignment and utilization of frequencies are discussed;
ADD	3963A		ka)	the provision of assistance to administrations, at their request, in the training of senior staff in the fields of spectrum management and utilization, particularly for those countries in special need;
ADD	3963B		kb)	the discharge of such other functions as are specified in the Radio Regulations and in the Final Acts of Administrative Radio Conferences.
SUP	3964	484	§ 3.	
MOD	3965	485	§ 4.	The Specialized Secretariat of the IFRB shall work under the immediate direction of the Board to enable it to discharge its prescribed duties and functions.
	3966 to 3990		NOT allocated.	
SUP			ARTICLE N10/11	
ADD			Section II. Methods of work of the Board	
NOC	3991	659	§ 1.	The Board shall meet as frequently as necessary to deal expeditiously with its work and, normally, at least once a week.
MOD	3992	660	§ 2. (1)	In accordance with the Convention, the members of the Board shall elect from among their number a Chairman and a Vice-Chairman, each to hold office for a term of one year. Thereafter, the Vice-Chairman shall succeed annually to the Chairmanship and a new Vice-Chairman shall be elected.
NOC	3993	661	(2)	In the unavoidable absence of the Chairman and Vice-Chairman, the Board shall elect a temporary Chairman for the occasion from among its members.

NOC	3994	662	§ 3. (1) Each member of the Board, including the Chairman, shall have one vote. Voting by proxy or by correspondence is not allowed.
NOC	3995	663	(2) The minutes shall indicate whether a decision was unanimous or by a majority.
NOC	3996	664	(3) A quorum of the Board shall be one-half of the number of members of the Board. If, however, the verdict of such a quorum on a question coming before it is not unanimous, the question shall be referred for decision at a later meeting at which at least two-thirds of the total number of members of the Board are present. If these calculations result in a fraction, the fraction shall be rounded up to a whole number.
NOC	3997	665	(4) The Board shall endeavour to reach its decisions by unanimous agreement. If the Board fails in that endeavour, it shall thereafter decide the problem on the basis of a two-thirds majority vote of the members present and voting for or against.
ADD	3997A		§ 3A. For its own guidance and for the efficient performance of its functions the Board may make such internal arrangements as it may consider necessary in accordance with the Convention and the Radio Regulations.
NOC	3998	666	§ 4. The documents of the Board, which shall comprise a complete record of its official actions and minutes of its meetings, shall be maintained by the Board in the working languages of the Union as defined in the Convention; for this purpose, as well as for the meetings of the Board, the necessary linguistic personnel, and such other facilities as may be required, shall be provided by the Secretary-General. A copy of all documents of the Board shall be available for public inspection at the offices of the Board.
	3999 to 4098		NOT allocated.

## ARTICLE N17

NOC

## Tests

NOC 5029 700

§ 1. (1) Before authorizing tests and experiments in any station, each administration, in order to avoid harmful interference, shall prescribe the taking of all possible precautions such as the choice of frequency and of time and the reduction or, in all cases where this is possible, the suppression of radiation. Any harmful interference resulting from tests and experiments shall be eliminated with the least possible delay.

D 5030 701

(2) For the identification of transmissions made during tests, adjustments or experiments, see Article N23/19.

ADD 5030A

(2A) In the aeronautical radionavigation service, it is undesirable, for safety reasons, to transmit the normal identification during emissions conducted to check or adjust equipment already in service. Unidentified emissions should however be restricted to a minimum.

NOC 5031 702

(3) Signals for testing and adjustment shall be chosen in such a manner that no confusion will arise with a signal, abbreviation, etc., having a special meaning defined by these Regulations or by the International Code of Signals.

NOC 5032 703

(4) For testing stations in the mobile service see Nos. 7523/1061, 7524/1062 and 8814/1293 to 8816/1295.

5033  
to  
5057

NOT allocated.

## ARTICLE N19/16

NOC

**Reports of Infringements**

NOC	5098	719	§ 1. Infringements of the Convention or Radio Regulations shall be reported to their respective administrations by the control organization, stations or inspectors detecting them. For this purpose they shall use forms similar to the specimen given in Appendix 7.
NOC	5099	720	§ 2. Representations relating to any serious infringement committed by a station shall be made to the administration of the country having jurisdiction over the station, by the administrations which detect it.
(MOD)	5100	721	§ 3. If an administration has information of an infringement of the Convention or Radio Regulations, committed by a station over which it may exercise authority, it shall ascertain the facts, fix the responsibility and take the necessary action.
	5101 to 5125		NOT allocated.

## CHAPTER XVI

NOC

## Administrative Provisions for Stations

## ARTICLE N21/17

NOC

## Secrecy

NOC 5193 722

In the application of the appropriate provisions of the Convention, administrations bind themselves to take the necessary measures to prohibit and prevent:

NOC 5194 723

a) the unauthorized interception of radiocommunications not intended for the general use of the public;

NOC 5195 724

b) the divulgence of the contents, simple disclosure of the existence, publication or any use whatever, without authorization of information of any nature whatever obtained by the interception of the radiocommunications mentioned in No. 5194/723.

5196  
to  
5220

NOT allocated.

## ARTICLE N22/18

NOC

## Licences

MOD 5221 725

§ 1. (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by the government of the country to which the station in question is subject. (However, see Nos. 5222/726, 5228/732 and 5230A).

MOD 5222 726

(2) However, the government of a country may conclude with the government of one or more neighbouring countries a special agreement concerning one or several stations of its broadcasting service or of its land mobile services, operating on frequencies above 41 MHz, situated in the territory of a neighbouring country and intended to improve national coverage. This agreement, which shall be compatible with the provisions of the present Regulations as well as of those regional agreements to which the countries concerned are signatories, may allow exceptions to the provisions of No. 5221/725 and shall be communicated to the Secretary-General in order that it may be brought to the notice of administrations for their information.

NOC 5223 727

(3) Mobile stations which are registered in a territory or group of territories which does not have full responsibility for its international relations may be considered, in so far as the issue of licences is concerned, as subject to the authority of that territory or group of territories.

MOD 5224 728

§ 2. The holder of a licence is required to preserve the secrecy of telecommunications, as provided in the relevant provisions of the Convention. Moreover, the licence shall mention, specifically or by reference, that if the station includes a receiver, the interception of radiocommunication correspondence, other than that which the station is authorized to receive, is forbidden, and that in the case where such correspondence is involuntarily received, it shall not be reproduced, nor communicated to third parties, nor used for any purpose, and even its existence shall not be disclosed.

MOD 5225 729

§ 3. To facilitate the verification of licences issued to mobile stations, there shall be added, when necessary, to the text written in the national language, a translation of the text in one of the working languages of the Union.



- MOD 5226 730 § 4. (1) The government which issues a licence to a mobile station shall mention therein in clear form the particulars of the station, including its name, call sign and, where appropriate, the public correspondence category, as well as the general characteristics of the installation.
- MOD 5227 731 (2) For land mobile stations, including stations consisting only of one or more receivers, a clause shall be included in the licence, specifically or by reference, under which the operation of these stations shall be forbidden in countries other than the country in which the licence is issued, except as may be provided by special agreement between the governments of the countries concerned.
- NOC 5228 732 § 5. (1) In the case of a new registration of a ship or aircraft in circumstances where delay is likely to occur in the issue of a licence by the country in which it will be registered, the administration of the country from which the mobile station wishes to make its voyage or flight may, at the request of the operating company, issue a certificate to the effect that the station complies with these Regulations. This certificate, drawn up in a form determined by the issuing administration, shall give the particulars mentioned in No. 5226/730 and shall be valid only for the voyage or flight to the country in which the registration of the ship or aircraft will be effected, or for a period of three months, whichever is the lesser.
- ADD 5228A  
(became 5230A)
- NOC 5229 733 (2) The administration issuing the certificate shall inform the administration responsible for issuing the licence of the action taken.
- NOC 5230 734 (3) The holder of the certificate shall comply with the provisions of these Regulations applicable to licence holders.
- ADD 5230A (3A) In the case of hire, lease or interchange of aircraft, the administration having authority over the aircraft operator receiving an aircraft under such an arrangement may, by agreement with the administration of the country in which the aircraft is registered, issue a licence in conformity with that specified in No. 5226/730 as a temporary substitute for the original licence.
- 5231  
to  
5330 NOT allocated.

## ARTICLE N31

MOD                    **Standard Frequency and Time Signal Service**

MOD	<b>6389</b>	1623	§ 1. (1) To facilitate more efficient use of the radio frequency spectrum and to assist other technical and scientific activities, administrations providing or intending to provide a standard frequency and time signal service shall co-ordinate, in accordance with the provisions in this Article, the establishment and operation of such a service on a worldwide basis. Attention should be given to the extension of this service to those areas of the world not adequately served.
NOC	<b>6390</b>	1624	(2) To this end, each administration shall take steps to coordinate, with the assistance of the International Frequency Registration Board, any new standard frequency or time signal transmission or any change in existing transmissions in the standard frequency bands. For this purpose, administrations shall exchange between themselves, and furnish to the Board, all relevant information. On this matter the Board shall consult the Director of the CCIR who shall also continue to seek the advice and co-operation of the International Time Bureau (BIH), the International Scientific Radio Union (URSI) and other international organizations having a direct and substantial interest in the subject.
NOC	<b>6391</b>	1625	(3) In so far as is practicable, a new frequency assignment in the standard frequency bands should not be made or notified to the Board until appropriate co-ordination has been completed.
NOC	<b>6392</b>	1626	§ 2. Administrations shall co-operate in reducing interference in the standard frequency bands in accordance with the Recommendations of the CCIR.
NOC	<b>6393</b>	1627	§ 3. Administrations which provide this service shall co-operate through the CCIR in the collation and distribution of the results of the measurements of standard frequencies and time signals, as well as details concerning adjustments to the frequencies and time signals.
NOC	<b>6394</b>	1628	§ 4. In selecting the technical characteristics of standard frequency and time signal transmissions, administrations shall be guided by the relevant CCIR Recommendations.
	<b>6395</b> to <b>6419</b>		NOT allocated.

## CHAPTER NIX

NOC

## Distress and Safety Communications

## ARTICLE N34

NOC

## General Provisions

- |       |      |               |  |
|-------|------|---------------|--|
| MOD   | 6589 | 1380          | § 1. The procedure specified in this Chapter is obligatory in the maritime mobile service and for communications between aircraft stations and stations of the maritime mobile service. The provisions of this Chapter are also applicable to the aeronautical mobile service except in the case of special arrangements between the governments concerned.  |
| MOD   | 6590 | 1380A<br>Mar2 | § 2. The procedure specified in this Chapter is obligatory in the maritime mobile-satellite service and for communications between stations on board aircraft and stations of the maritime mobile-satellite service, where this service or stations of this service are specifically mentioned. Nos. 6767/1394, 6771/1391, 6776/1397, 6777/1398, 6778/1399, 6779/1400, 6877/1481, 6880/1483 and 6888/1490 are also applicable. |
| NOC   | 6591 | 1381<br>Mar2  | § 3. (1) No provision of these Regulations prevents the use by a mobile station or ship earth station in distress of any means at its disposal to attract attention, make known its position, and obtain help.   |
| NOC   | 6592 | 1381A<br>Mar2 | (2) No provision of these Regulations prevents the use by stations on board aircraft or ships engaged in search and rescue operations, in exceptional circumstances, of any means at their disposal to assist a mobile station in distress.  |
| (MOD) | 6593 | 1382          | (3) No provision of these Regulations prevents the use by a land station, in exceptional circumstances, of any means at its disposal to assist a mobile station in distress (see also No. 3920/416).   |
| NOC   | 6594 | 1384          | § 4. In cases of distress, urgency or safety, transmissions:   |

NOC	6595	1385	a) by radiotelegraphy, shall not in general exceed a speed of sixteen words a minute;
NOC	6596	1386	b) by radiotelephony, shall be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.
NOC	6597	1386A Mar	§ 5. The abbreviations and signals of Appendix 13A and the Phonetic Alphabet and Figure Code in Appendix 16 should be used where applicable and, where language difficulties exist, the use of the International Code of Signals also is recommended.
NOC	6598	965	§ 6. (1) The International Convention for the Safety of Life at Sea prescribes which ships and which of their survival craft shall be fitted with radio equipment and which ships shall carry portable radio equipment for use in survival craft. It also prescribes the requirements which shall be complied with by such installations.
NOC	6599	966(2)	The Annexes to the Convention on International Civil Aviation state which aircraft should be fitted with radio equipment and which aircraft should carry portable radio equipment for use in survival craft. They state also the requirements which should be complied with by such installations.
NOC	6600	967	§ 7. The applicable provisions of the present Regulations shall, however, be observed in the use of all such installations.
NOC	6601	968	§ 8. Mobile stations of the maritime mobile service may communicate, for safety purposes, with stations of the aeronautical mobile service.
NOC	6602	992 Mar2	§ 9. Any aircraft required by national or international regulations to communicate for distress, urgency or safety purposes with stations of the maritime mobile service, shall be capable of transmitting preferably class A2A, A2B or H2B and receiving preferably class A2A, A2B and H2B emissions on the carrier frequency 500 kHz or, on the carrier frequency 2 182 kHz, transmitting class A3E or H3E and receiving class A3E and H3E emissions, or on the frequency 156.8 MHz transmitting and receiving class F3E emissions.
	6603 to 6628		NOT allocated.

NOC

## ARTICLE N36/36

NOC

**Distress Communications**

NOC

**Section I. General**

NOC    **6767**    1394    § 1.        The distress call shall have absolute priority over all other transmissions. All stations which hear it shall immediately cease any transmission capable of interfering with the distress traffic and shall continue to listen on the frequency used for the emission of the distress call. This call shall not be addressed to a particular station and acknowledgement of receipt shall not be given before the distress message which follows it is sent.

NOC    **6768**    1383    § 2.        The distress call and message shall be  
             Mar2        sent only on the authority of the master or person responsible for the ship, aircraft or other vehicle carrying the mobile station or ship earth station.

NOC

**Section II. Distress Signal**

NOC    **6769**    1389    § 3. (1) The radiotelegraph distress signal consists of the group . . . — — — . . . , symbolized herein by SOS, transmitted as a single signal in which the dashes are emphasized so as to be distinguished clearly from the dots.

NOC    **6770**    1390        (2) The radiotelephone distress signal consists of the word MAYDAY pronounced as the French expression "m'aider".

NOC    **6771**    1391        (3) These distress signals indicate that a ship, aircraft or other vehicle is threatened by grave and imminent danger and requests immediate assistance.

NOC

**Section III. Distress Call**

NOC    **6772**    1392    § 4. (1) The distress call sent by radiotelegraphy consists of:

- the distress signal SOS, sent three times;
- the word DE;
- the call sign of the mobile station in distress, sent three times.

NOC 6773 1393  
Mar

(2) The distress call sent by radiotelephony consists of:

- the distress signal MAYDAY, spoken three times;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the mobile station in distress, spoken three times.

NOC

#### Section IV. Distress Messages

NOC 6774 1395

§ 5. (1) The radiotelegraph distress message consists of:

- the distress signal SOS;
- the name, or other identification, of the mobile station in distress;
- particulars of its position;
- the nature of the distress and the kind of assistance desired;
- any other information which might facilitate the rescue.

NOC 6775 1396

(2) The radiotelephone distress message consists of:

- the distress signal MAYDAY;
- the name, or other identification, of the mobile station in distress;
- particulars of its position;
- the nature of the distress and the kind of assistance desired;
- any other information which might facilitate the rescue.

NOC 6776 1397  
Mar2

§ 6. (1) As a general rule, a ship shall signal its position in latitude and longitude (Greenwich), using figures for the degrees and minutes, together with one of the words NORTH or SOUTH and one of the words EAST or WEST. In radiotelegraphy, the signal . - . - . shall be used to separate the degrees from

the minutes; however this shall not necessarily apply to the maritime mobile-satellite service. When practicable, the true bearing and distance in nautical miles from a known geographical position may be given.

NOC 6777 1398

(2) As a general rule, and if time permits, an aircraft shall transmit in its distress message the following information:

- estimated position and time of the estimate;
- heading in degrees (state whether magnetic or true);
- indicated air speed;
- altitude;
- type of aircraft;
- nature of distress and type of assistance desired;
- any other information which might facilitate the rescue (including the intention of the person in command, such as forced alighting on the sea or crash landing).

NOC 6778 1399

(3) As a general rule, an aircraft in flight shall signal its position either in radiotelephony or radiotelegraphy:

- by latitude and longitude (Greenwich) using figures for the degrees and minutes, together with one of the words NORTH or SOUTH and one of the words EAST or WEST; or
- by the name of the nearest place, and its approximate distance in relation thereto, together with one of the words NORTH, SOUTH, EAST or WEST, as the case may be, or when practicable, by words indicating intermediate directions.

NOC 6779 1400

(4) However, in radiotelegraphy, the words NORTH or SOUTH and EAST or WEST, indicated in Nos. 6776/1397 and 6778/1399, may be replaced by the letters N or S and E or W.

NOC

**Section V. Procedures**

NOC 6780

**A. Radiotelegraphy**

NOC 6781 1401

§ 7. (1) The radiotelegraph distress procedure shall consist of:

6782 1402

— the alarm signal; followed in order by;

6783 1403

— the distress call and an interval of two minutes;

6784 1404

— the distress call;

6785 1405

— the distress message;

6786 1406

— two dashes of ten to fifteen seconds duration each;

6787 1407

— the call sign of the station in distress.

NOC 6788 1408  
Mar

(2) However, when time is vital, the second step of this procedure (No. 6783/1403) or even the first and second steps (Nos. 6782/1402 and 6783/1403), may be omitted or shortened. These two steps of the distress procedure may also be omitted in circumstances where transmission of the alarm signal is considered unnecessary.

NOC 6789 1409

§ 8. (1) The distress message, preceded by the distress call, shall be repeated at intervals, especially during the periods of silence prescribed in No. 6696/1130 for radiotelegraphy, until an answer is received.

NOC 6790 1410

(2) The intervals shall, however, be sufficiently long to allow time for stations preparing to reply to start their sending apparatus.

NOC 6791 1411

(3) The alarm signal may also be repeated, if necessary.

NOC 6792 1412

§ 9. The transmissions under Nos. 6786/1406 and 6787/1407, which are to permit direction-finding stations to determine the position of the station in distress, may be repeated at frequent intervals if necessary.

NOC 6793 1413

§ 10. When the mobile station in distress receives no answer to a distress message sent on the distress frequency, the message may be repeated on any other available frequency on which attention might be attracted.



NOC	6794	1414	§ 11. Immediately before a crash landing or a forced landing (on land or sea) of an aircraft, as well as before total abandonment of a ship or an aircraft, the radio apparatus should be set for continuous emission, if considered necessary and circumstances permit.
NOC	6795		<u>B. Radiotelephony</u>
NOC	6796	1415	§ 12. The radiotelephone distress procedure shall consist of:
NOC	6797	1416	— the alarm signal (whenever possible) followed by:
NOC	6798	1417	— the distress call;
NOC	6799	1418	— the distress message.
NOC	6800	1419	§ 13. After the transmission by radiotelephony of its distress message, the mobile station may be requested to transmit suitable signals followed by its call sign or other identification, to permit direction-finding stations to determine its position. This request may be repeated at frequent intervals if necessary.
NOC	6801	1420 Mar*	§ 14. (1) The distress message, preceded by the distress call, shall be repeated at intervals, especially during the periods of silence prescribed in No. 6708/1335A for radiotelephony, until an answer is received.
NOC	6802	1421	(2) The intervals shall, however, be sufficiently long to allow time for stations preparing to reply to start their sending apparatus.
NOC	6803	1422	(3) This repetition shall be preceded by the alarm signal whenever possible.
NOC	6804	1423	§ 15. When the mobile station in distress receives no answer to a distress message sent on the distress frequency, the message may be repeated on any other available frequency on which attention might be attracted.
NOC	6805	1424	§ 16. Immediately before a crash landing or a forced landing (on land or sea) of an aircraft, as well as before total abandonment of a ship or an aircraft, the radio apparatus should be set for continuous emission, if considered necessary and circumstances permit.

NOC            **Section VI. Acknowledgement of Receipt of a Distress Message**

- NOC    **6806**    1425    § 17. (1) Stations of the mobile service which receive a distress message from a mobile station which is, beyond any possible doubt, in their vicinity, shall immediately acknowledge receipt.
- NOC    **6807**    1426  
Mar            (2) However, in areas where reliable communications with one or more coast stations are practicable, ship stations should defer this acknowledgement for a short interval so that a coast station may acknowledge receipt.
- NOC    **6808**    1427            (3) Stations of the mobile service which receive a distress message from a mobile station which, beyond any possible doubt, is not in their vicinity, shall allow a short interval of time to elapse before acknowledging receipt of the message, in order to permit stations nearer to the mobile station in distress to acknowledge receipt without interference.
- NOC    **6809**    1427A  
Mar            (4) However, stations in the maritime mobile service which receive a distress message from a mobile station which, beyond any possible doubt, is a long distance away, need not acknowledge receipt of messages except as specified in No. 6839/1455.
- NOC    **6810**    1428    § 18.        The acknowledgement of receipt of a distress message shall be given in the following form:
- NOC    **6811**    1429  
Mar2            a) Radiotelegraphy:
- the distress signal SOS;
  - the call sign of the station sending the distress message, sent three times;
  - the word DE;
  - the call sign of the station acknowledging receipt, sent three times;
  - the group RRR;
  - the distress signal SOS.
- NOC    **6812**    1430  
Mar2            b) Radiotelephony:
- the distress signal MAYDAY;
  - the call sign or other identification of the station sending the distress message, spoken three times;

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- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the station acknowledging receipt, spoken three times;
- the word RECEIVED (or RRR spoken as ROMEO ROMEO ROMEO in case of language difficulties);
- the distress signal MAYDAY.

NOC    **6813**    1431  
                  Mar

§ 19. (1) Every mobile station which acknowledges receipt of a distress message shall, on the order of the master or person responsible for the ship, aircraft or other vehicle, transmit, as soon as possible, the following information in the order shown:

- its name;
- its position in the form prescribed in Nos. 6776/1397, 6778/1399 and 6779/1400;
- the speed at which it is proceeding towards, and the approximate time it will take to reach, the mobile station in distress;
- additionally, if the position of the ship in distress appears doubtful, ship stations should also transmit, when available, the true bearing of the ship in distress preceded by the abbreviation QTE (for classification of bearings, see Appendix 23).

NOC    **6814**    1432  
                  Mar

(2) Before transmitting the message specified in No. 6813/1431, the station shall ensure that it will not interfere with the emissions of other stations better situated to render immediate assistance to the station in distress.

NOC

## Section VII. Distress Traffic

NOC    **6815**    1433

§ 20. Distress traffic consists of all messages relating to the immediate assistance required by the mobile station in distress.

NOC    **6816**    1434

§ 21. In distress traffic, the distress signal shall be sent before the call and at the beginning of the preamble of any radiotelegram.

MOD	6817	1435	§ 22. The control of distress traffic is the responsibility of the mobile station in distress or of the station which, by the application of the provisions of Section VIII of the present Article, has sent the distress message. These stations may, however, delegate the control of the distress traffic to another station.
NOC	6818	1436 Mar	§ 23. The station in distress or the station in control of distress traffic may impose silence either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions "to all stations" (CQ) or to one station only, according to circumstances. In either case, it shall use:
NOC	6819	1437	- in radiotelegraphy, the abbreviation QRT, followed by the distress signal SOS;
NOC	6820	1438	- in radiotelephony, the signal SEELONCE MAYDAY, pronounced as the French expression "silence, m'aider".
NOC	6821	1439	§ 24. If it is believed to be essential, any station of the mobile service near the ship, aircraft or other vehicle in distress, may also impose silence. It shall use for this purpose:
NOC	6822	1440	a) in radiotelegraphy, the abbreviation QRT, followed by the word DISTRESS and its own call sign;
NOC	6823	1441	b) in radiotelephony, the word SEELONCE, pronounced as the French word "silence", followed by the word DISTRESS and its own call sign.
NOC	6824	1442	§ 25. (1) In radiotelegraphy, the use of the signal QRT SOS shall be reserved for the mobile station in distress and for the station controlling distress traffic.
NOC	6825	1443	(2) In radiotelephony, the use of the signal SEELONCE MAYDAY shall be reserved for the mobile station in distress and for the station controlling distress traffic.
NOC	6826	1444	§ 26. (1) Any station of the mobile service which has knowledge of distress traffic and which cannot itself assist the station in distress shall nevertheless follow such traffic until it is evident that assistance is being provided.
NOC	6827	1445	(2) Until they receive the message indicating that normal working may be resumed (see No. 6831/1449), all stations which are aware of the distress traffic, and which are not taking part in it, are forbidden to transmit on the frequencies on which the distress traffic is taking place.

NOC	<b>6828</b>	1446	§ 27. A station of the mobile service which, while following distress traffic, is able to continue its normal service, may do so when the distress traffic is well established and on condition that it observes the provisions of No. 6827/1445 and does not interfere with the distress traffic.
NOC	<b>6829</b>	1447	§ 28. In cases of exceptional importance and provided that no interference or delay is caused to the handling of distress traffic, urgency and safety messages may be announced during a lull in the distress traffic, preferably by coast stations, on the distress frequencies. This announcement shall include an indication of the working frequency on which the urgency or safety message will be transmitted. In this case, the signals provided for in Nos. 6873/1477, 6874/1478, 6886/1488 and 6887/1489 should only be sent once (e.g. XXX DE ABC QSW . . .).
NOC	<b>6830</b>	1448 Mar2	§ 29. A land station or an earth station in the maritime mobile-satellite service at a specified fixed point receiving a distress message shall, without delay, take the necessary action to advise the appropriate authorities responsible for providing for the operation of rescue facilities.
NOC	<b>6831</b>	1449 Mar2	§ 30. (1) When distress traffic has ceased on a frequency which has been used for distress traffic, the station which has controlled this traffic shall transmit on that frequency a message addressed "to all stations" (CQ) indicating that normal working may be resumed.
NOC	<b>6832</b>	1449A Mar2	(2) When complete silence is no longer necessary on a frequency which is being used for distress traffic, the station controlling the traffic shall transmit on that frequency a message addressed "to all stations" (CQ) indicating that restricted working may be resumed.
NOC	<b>6833</b>	1450 Mar2	(3) <u>a)</u> In radiotelegraphy, the message referred to in No. 6831/1449 consists of: <ul style="list-style-type: none"> <li>— the distress signal <u>SOS</u>;</li> <li>— the call "to all stations" (CQ) sent three times;</li> <li>— the word DE;</li> <li>— the call sign of the station sending the message;</li> </ul>

R.1-28

- the time of handing in of the message;
- the name and call sign of the mobile station which was in distress;
- the service abbreviation QUM.

b) In radiotelegraphy, the message referred to in No. 6832/1449A consists of:

- the distress signal SOS;
- the call "to all stations" (CQ) sent three times;
- the word DE;
- the call sign of the station sending the message;
- the time of handing in of the message;
- the name and call sign of the mobile station which is in distress;
- the service abbreviation QUZ.

NOC 6834 1451  
Mar2

(4) a) In radiotelephony, the message referred to in No. 6831/1449 consists of:

- the distress signal MAYDAY;
- the call "Hello all stations" or CQ (spoken as CHARLIE QUEBEC) spoken three times;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the station sending the message;
- the time of handing in of the message;
- the name and call sign of the mobile station which was in distress;
- the words SEELONCE FEENEE pronounced as the French words "silence fini".

b) In radiotelephony, the message referred to in No. **6832/1449A** consists of:

- the distress signal MAYDAY;
- the call "Hello all stations" or CQ (spoken as CHARLIE QUEBEC) spoken three times;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the station sending the message;
- the time of handing in of the message;
- the name and call sign of the mobile station which is in distress;
- the words PRU-DONCE pronounced as the French word "prudence".

NOC    **6835**    1451A    § 31.    When a station in distress has  
                  Mar                   delegated control of distress working to another station, the person in charge of the station in distress should, when he considers silence no longer justified, immediately inform the controlling station, which will act in accordance with the provisions of No. **6831/1449**.

NOC                                    **Section VIII. Transmission of a Distress Message  
    by a Station Not Itself in Distress**

NOC    **6836**    1452    § 32.    A mobile station or a land station which learns that a mobile station is in distress shall transmit a distress message in any of the following cases:

NOC    **6837**    1453                    a) when the station in distress is not itself in a position to transmit the distress message;

NOC    **6838**    1454                    b) when the master or person responsible for the ship, aircraft or other vehicle not in distress, or the person responsible for the land station, considers that further help is necessary;

NOC    **6839**    1455                    c) when, although not in a position to render assistance, it has heard a distress message which has not been acknowledged.

NOC	<b>6840</b>	1456 Mar2	§ 33. (1) The transmission of a distress message under the conditions prescribed in Nos. <b>6837/1453</b> to <b>6839/1455</b> shall be made on one or more of the international distress frequencies (500 kHz, 2 182 kHz, 156.8 MHz) or on any other frequency which may be used in case of distress (see Nos. <b>6630/1107</b> , <b>6631/1108</b> , <b>6633/1323</b> , <b>6635/1324</b> , <b>6656/1359</b> , <b>6657/1359AA</b> , <b>6661/1208</b> and <b>6662/1321</b> ).
NOC	<b>6841</b>	1457	(2) This transmission of the distress message shall always be preceded by the call indicated below, which shall itself be preceded whenever possible by the radiotelegraph or radiotelephone alarm signal.
NOC	<b>6842</b>	1458	(3) This call consists of:
NOC	<b>6843</b>	1459	a) Radiotelegraphy: <ul style="list-style-type: none"> <li>- <u>the</u> signal <u>DDD SOS SOS SOS</u> DDD;</li> <li>- the word DE;</li> <li>- the call sign of the transmitting station, sent three times.</li> </ul>
	<b>6844</b>	1460 Mar	b) Radiotelephony: <ul style="list-style-type: none"> <li>- the signal MAYDAY RELAY pronounced as the French expression "m'aider relais", spoken three times;</li> <li>- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);</li> <li>- the call sign or other identification of the transmitting station, spoken three times.</li> </ul>
NOC	<b>6845</b>	1461	§ 34. When the radiotelegraph alarm signal is used an interval of two minutes shall be allowed, whenever this is considered necessary, before the transmission of the call mentioned in No. <b>6843/1459</b> .
NOC	<b>6846</b>	1462	§ 35. When a station of the mobile service transmits a distress message under the conditions mentioned in No. <b>6839/1455</b> , it shall take all necessary steps to notify the authorities who may be able to render assistance.
NOC	<b>6847</b>	1462A Mar	§ 36. A ship station should not acknowledge receipt of a distress message transmitted by a coast station under the conditions mentioned in Nos. <b>6836/1452</b> to <b>6839/1455</b> until the master or person responsible has confirmed that the ship station concerned is in a position to render assistance.
	<b>6848</b> to <b>6872</b>		NOT allocated.



## ARTICLE N39

NOC                      **Special Services relating to Safety**NOC                      **Section I. Meteorological Messages**

- NOC    **6981**    1596       § 1. (1) Meteorological messages comprise:
- NOC    **6982**    1597                      a)    messages addressed to meteorological services officially entrusted with weather forecasts, more specifically for the protection of maritime and air navigation;
- NOC    **6983**    1598                      b)    messages from these meteorological services intended specially for:
- NOC    **6984**    1599                                      - ship stations;
- NOC    **6985**    1600                                      - protection of aircraft;
- NOC    **6986**    1601                                      - the public.
- NOC    **6987**    1602                      (2) The information contained in these messages may be:
- NOC    **6988**    1603                      a)    observations taken at fixed times;
- NOC    **6989**    1604                      b)    warnings of dangerous phenomena;
- NOC    **6990**    1605                      c)    forecasts and warnings;
- NOC    **6991**    1606                      d)    statements of the general meteorological situation.
- NOC    **6992**    1607       § 2. (1) The various national meteorological services mutually agree to prepare common transmission programmes so as to use the transmitters best situated to serve the regions concerned.
- MOD    **6993**    1608                      (2) The meteorological observations contained in the classes mentioned in Nos. **6982/1597** to **6985/1600** should be drawn up in an international meteorological code, whether they are transmitted by or intended for mobile stations.
- MOD    **6994**    1609       § 3.       For observation messages intended for an official meteorological service, use shall be made of the frequencies made available for meteorological purposes, in conformity with regional agreements made by the services concerned for the use of these frequencies.

- NOC    **6995**    1610    § 4. (1) Meteorological messages specially intended for all ship stations shall in principle be sent in accordance with a definite timetable, and, as far as possible, at times when they can be received by ship stations with only one operator. In radiotelegraphy the transmission speed shall not exceed sixteen words a minute.
- NOC    **6996**    1611    (2) During the transmission "to all stations" of meteorological messages intended for stations of the maritime mobile service, all stations of this service whose transmission might interfere with the reception of these messages, shall keep silent in order to permit all stations which desire to do so to receive these messages.
- MOD    **6997**    1612  
Mar2    (3) Meteorological warning messages for the maritime mobile service shall be transmitted without delay. They shall be repeated at the end of the first silence period which follows their receipt (see Nos. **6696**/1130 and **6708**/1335A) as well as during the next appropriate broadcast as indicated in the List of Radiodetermination and Special Service Stations. They shall be preceded by the safety signal and sent on the appropriate frequencies (see No. **6889**/1491).
- NOC    **6998**    1613    (4) In addition to the regular information services contemplated in the preceding sub-paragraphs, administrations shall take the necessary steps to ensure that certain stations shall, upon request, communicate meteorological messages to stations in the maritime mobile service.
- NOC    **6999**    1614    (5) The provisions of Nos. **6995**/1610 to **6998**/1613 are applicable to the aeronautical mobile service, in so far as they are not contrary to more detailed special agreements which ensure at least equal protection to air navigation.
- NOC    **7000**    1615    § 5. (1) Messages originating in mobile stations and containing information concerning the presence of cyclones shall be transmitted, with the least possible delay, to other mobile stations in the vicinity and to the appropriate authorities at the first point of the coast with which contact can be established. Their transmission shall be preceded by the safety signal.
- NOC    **7001**    1616    (2) Any mobile station may, for its own use, listen to messages containing meteorological observations sent out by other mobile stations, even those which are addressed to a national meteorological service.
- NOC    **7002**    1617    (3) Stations of the mobile services which transmit meteorological observations addressed to a national meteorological service are not required to repeat them

to other stations. However, the exchange between mobile stations, on request, of information relating to the state of the weather is authorized.

NOC

**Section II. Notices to Mariners**NOC    **7003**    1618

§ 6.            The provisions of Nos. **6995/1610** to **6999/1614** shall apply to notices to mariners.

NOC    **7004**    1619

§ 7.            Messages containing information concerning the presence of dangerous ice, dangerous wrecks, or any other imminent danger to marine navigation, shall be transmitted as soon as possible to other ship stations in the vicinity, and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions shall be preceded by the safety signal.

NOC    **7005**    1620

§ 8.            When thought desirable, and provided the sender agrees, administrations may authorize their land stations to communicate information concerning maritime damage or casualties or information of general interest to navigation, to the marine information agencies approved by them and subject to the conditions fixed by them.

NOC

**Section III. Medical Advice**NOC    **7006**    1621

§ 9.            Mobile stations requiring medical advice may obtain it through any of the land stations shown as providing this service in the List of Radiodetermination and Special Service Stations.

NOC    **7007**    1622

§ 10.          Radiotelegrams and radiotelephone calls concerning medical advice may be preceded by the appropriate urgency signal (see Nos. **6875/1479** to **6885/1487**).

**7008**  
to  
**7107**

NOT allocated.

**CHAPTER NX**

NOC

**Aeronautical Mobile Service****ARTICLE N40/22**

MOD

**Authority of the Person Responsible  
for the Mobile Stations in the  
Aeronautical Mobile Service**

MOD	7108	845	§ 1. The service of a mobile station is placed under the supreme authority of the person responsible for the aircraft or other vehicle carrying the mobile station.
NOC	7109	846	§ 2. The person holding this authority shall require that each operator comply with these Regulations and that the mobile station for which the operator is responsible is used, at all times, in accordance with these Regulations.
MOD	7110	847	§ 3. The person responsible, as well as all the persons who may have knowledge of the text or even of the existence of a radiotelegram, or of any information whatever obtained by means of the radiocommunication service, are placed under the obligation of observing and ensuring the secrecy of correspondence.
	7111 to 7135		NOT allocated.

## ARTICLE N42

MOD **Personnel of Aeronautical Stations**SUP **Section I.**

MOD 7225 948 § 1. Administrations shall ensure that the staff on duty in aeronautical stations shall be adequately qualified to operate the stations efficiently.

SUP **Section II.**

SUP 7226 912 § 2.  
Mar2

SUP 7227 913 § 3.  
Mar2

SUP 7228 919 a)

SUP 7229 920 b)

SUP 7229.1 920.1

7230  
to  
7254 NOT allocated.

## ARTICLE N43/21

MOD

**Inspection of Aircraft Stations**

MOD 7255

838  
Mar2

§ 1. (1) The governments or appropriate administrations of countries which an aircraft station visits, may require the production of the licence for examination. The operator of the station, or the person responsible for the station, shall facilitate this examination. The licence shall be kept in such a way that it can be produced upon request. As far as possible, the licence, or a copy certified by the authority which has issued it, should be permanently exhibited in the station.

MOD 7256

839  
Mar2

2) The inspectors shall have in their possession an identity card or badge, issued by the competent authority, which they shall show on request of the person responsible for the aircraft.

NOC 7257

840

(3) When the licence cannot be produced or when manifest irregularities are observed, governments or administrations may inspect the radio installations in order to satisfy themselves that these conform to the conditions imposed by these Regulations.

NOC 7258

841

(4) In addition, inspectors have the right to require the production of the operators' certificates, but proof of professional knowledge may not be demanded.

MOD 7259

842  
Mar2

§ 2. (1) When a government or an administration has found it necessary to adopt the course indicated in No. 7257/840, or when the operators' certificates cannot be produced, the government or administration to which the aircraft station is subject shall be so informed without delay. In addition, the procedure specified in Article N19/16 is followed when necessary.

MOD 7260

843  
Mar2

(2) Before leaving, the inspector shall report the result of his inspection to the person responsible for the aircraft. If any breach of the conditions imposed by these Regulations is observed, the inspector shall make this report in writing.

MOD 7261

844  
Mar2

§ 3. The Members of the Union undertake not to impose upon foreign aircraft stations which are temporarily within their territorial limits, or which make a temporary stay in their territory, technical and operating conditions more severe than those contemplated in these Regulations. This undertaking in no way affects arrangements which are made under international agreements relating to air navigation, and which are therefore not covered by these Regulations.

7262  
to  
7286

NOT allocated.

## ARTICLE N44

NOC

**Working Hours of Stations  
in the Aeronautical Mobile Service**

NOC

**Section I. Preamble**

MOD 7287 921

§ 1. In order to permit the application of the following rules on the subject of hours of watch, every station of the aeronautical mobile service shall have an accurate clock correctly regulated to Coordinated Universal Time (UTC).

NOC

**Section II. Aeronautical Stations**

NOC 7288 928

§ 2. The service of an aeronautical station shall be continuous throughout the period during which it bears responsibility for the radiocommunication service to aircraft in flight.

NOC

**Section III. Aircraft Stations**

NOC 7289 947

§ 3. For the international public correspondence service, aircraft stations constitute a single category. The duration of the service of such stations is not fixed by these Regulations.

7290  
to  
7314

NOT allocated.

R.1-38

## ARTICLE N45

NOC                      **Working Conditions**  
                         **in the Aeronautical Mobile Service**

NOC                      **Section I. General**

(MOD) 7315      949      § 1.           Except as otherwise provided in these Regulations, the aeronautical mobile service may be regulated by special agreements between governments concerned under the provision for special arrangements in Article 31 of the Convention.

MOD      7316      950      § 2.           In the absence of special agreements, the provisions of these Regulations concerning the exchanging of and accounting for public correspondence shall be applicable to stations in the aeronautical mobile service. (See also No. 7379/432.)

NOC      **Section II. Communication with Stations in the Maritime Mobile Service and in the Maritime Mobile-Satellite Service**

MOD      7317      951      § 3.           Stations on board aircraft may communicate with stations of the maritime mobile or maritime mobile-satellite services. They shall conform to those provisions of these Regulations which relate to these services. (See Chapter NXI, especially Article N56, Section III.)  
                 Spa2

7318  
to  
7342

NOT allocated.



## ARTICLE N48/37

NOC

**Order of Priority of Communications  
in the Aeronautical Mobile Service**

MOD 7408 1496

The order of priority for communications 1 in the aeronautical mobile service shall be as follows, except where impracticable in a fully automated system in which, nevertheless, category 1 shall receive priority:

1. Distress calls, distress messages, and distress traffic.
2. Communications preceded by the urgency signal.
3. Communications preceded by the safety signal.
4. Communications relating to radio direction-finding.
5. Communications relating to the navigation and safe movement of aircraft engaged in search and rescue operations.
6. Communications relating to the navigation, movements, and needs of ships, and weather observation messages destined for an official meteorological service.
7. ETATPRIORITENATIONS — Radiotelegrams relating to the application of the United Nation Charter.
8. ETATPRIORITE — Government radiotelegrams with priority and Government calls for which priority has been expressly requested.
9. Service communications relating to the working of the telecommunication service or to communications previously exchanged.
10. Government communications other than those shown in 8 above, ordinary private communications, RCT 2 radiotelegrams and press radiotelegrams.

ADD 7408.1 1496.1 1 The term communications as used in this Article includes radiotelegrams, radiotelephone calls and radiotelex calls.

ADD 7408.2 1496.2 2 RCT (Red Cross Telegrams): Telegrams concerning persons protected in time of war by the Geneva Conventions of 12 August 1949.

7409  
to  
7433

NOT allocated.

## CHAPTER NXI

NOC

**Maritime Mobile Service and Maritime  
Mobile-Satellite Service**

## ARTICLE N51

NOC

**Authority of the Master**

- |     |                    |              |  |
|-----|--------------------|--------------|--|
| MOD | 7663               | 845          | § 1. The service of a ship station is placed under the supreme authority of the master or of the person responsible for the ship or other vessel carrying the station.   |
| MOD | 7664               | 846          | § 2. The person holding this authority shall require that each operator comply with these Regulations and that the ship station for which the operator is responsible is used, at all times, in accordance with these Regulations.   |
| NOC | 7665               | 847          | § 3. The master or the person responsible, as well as all persons who may have knowledge of the text or even of the existence of a radiotelegram, or of any information whatever obtained by means of the radiocommunication service, are placed under the obligation of observing and ensuring the secrecy of correspondence. |
| MOD | 7666               | 847A<br>Mar2 | § 4. The provisions of Nos. 7663/845, 7664/846 and 7665/847 shall also apply to personnel of ship earth stations.  |
|     | 7667<br>to<br>7691 |              | NOT allocated.   |

## ARTICLE N53

NOC **Personnel of Stations in the  
Maritime Mobile Service**

NOC **Section I. Personnel of Coast Stations**

MOD 7803 948 § 1. Administrations shall ensure that the staff on duty in coast stations shall be adequately qualified to operate the stations efficiently.

NOC **Section II. Class and Minimum Number  
of Operators for Stations on Board Ships**

MOD 7804 912 § 2. In the public correspondence service,  
Mar2 each government shall take the necessary steps to ensure that stations on board ships of its own nationality have personnel adequate to perform efficient service.

MOD 7805 913 § 3. The personnel of ship stations in the public  
Mar2 correspondence service shall, having regard to the provisions of Article N52/23, include at least:

NOC 7806 914 a) ship stations of the first category,  
Mar2 except in the case provided for in No. 7810/918: a chief operator holding a radiocommunication operator's general certificate or a first-class radiotelegraph operator's certificate;

NOC 7807 915 b) ship stations of the second and  
Mar2 third categories, except in the case provided for in No. 7810/918: a chief operator holding a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate;

R.1-43

NOC 7808 916  
Mar2

c) ship stations of the fourth category, except in the cases provided for in Nos. 7809/917 and 7810/918: one operator holding a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate;

NOC 7809 917  
Mar2

d) ship stations in which a radiotelegraph installation is provided but not prescribed by international agreements: one operator holding a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate, or a radiotelegraph operator's special certificate;

(MOD) 7810 918  
Mar

e) ship stations equipped with a radiotelephone installation only: one operator holding either a radiotelephone operator's certificate or a radiotelegraph operator's certificate.

7811  
to  
7835

NOT allocated.

## ARTICLE N54/21

MOD                    **Inspection of Ship Stations and Ship Earth Stations**

- MOD    7836    838    § 1. (1) The governments or appropriate  
Mar2           administrations of countries which a ship  
                 station or ship earth station visits, may require the  
                 production of the licence for examination. The operator  
                 of the station, or the person responsible for the station,  
                 shall facilitate this examination. The licence shall be kept  
                 in such a way that it can be produced upon request. As far as  
                 possible, the licence, or a copy certified by the authority  
                 which has issued it, should be permanently exhibited  
                 in the station.
- MOD    7837    839    (2) The inspectors shall have in their  
Mar2           possession an identity card or badge, issued by the  
                 competent authority, which they shall show on request of  
                 the master or person responsible for the ship or other  
                 vessel carrying the ship station or the ship earth station.
- NOC    7838    840    (3) When the licence cannot be produced or when  
                 manifest irregularities are observed, governments or  
                 administrations may inspect the radio installations in  
                 order to satisfy themselves that these conform to the  
                 conditions imposed by these Regulations.
- NOC    7839    841    (4) In addition, inspectors have the right to  
                 require the production of the operators' certificates,  
                 but proof of professional knowledge may not be  
                 demanded.
- MOD    7840    842    § 2. (1) When a government or an  
Mar2           administration has found it necessary to adopt the course  
                 indicated in No. 7838/840, or when the operators'  
                 certificates cannot be produced, the government or  
                 administration to which the ship station or ship  
                 earth station is subject shall be so informed without  
                 delay. In addition, the procedure specified in  
                 Article N19/16 is followed when necessary.
- MOD    7841    843    (2) Before leaving, the inspector shall report  
Mar2           the result of his inspection to the master, or the person  
                 responsible for the ship or other vessel carrying the  
                 ship station or ship earth station. If any breach of  
                 the conditions imposed by these Regulations is observed,  
                 the inspector shall make this report in writing.

## ARTICLE N54/21

MOD                    **Inspection of Ship Stations and Ship Earth Stations**

- MOD    7836    838    § 1. (1) The governments or appropriate  
Mar2           administrations of countries which a ship  
station or ship earth station visits, may require the  
production of the licence for examination. The operator  
of the station, or the person responsible for the station,  
shall facilitate this examination. The licence shall be kept  
in such a way that it can be produced upon request. As far as  
possible, the licence, or a copy certified by the authority  
which has issued it, should be permanently exhibited  
in the station.
- MOD    7837    839           (2) The inspectors shall have in their  
Mar2           possession an identity card or badge, issued by the  
competent authority, which they shall show on request of  
the master or person responsible for the ship or other  
vessel carrying the ship station or the ship earth station.
- NOC    7838    840           (3) When the licence cannot be produced or when  
manifest irregularities are observed, governments or  
administrations may inspect the radio installations in  
order to satisfy themselves that these conform to the  
conditions imposed by these Regulations.
- NOC    7839    841           (4) In addition, inspectors have the right to  
require the production of the operators' certificates,  
but proof of professional knowledge may not be  
demanded.
- MOD    7840    842    § 2. (1) When a government or an  
Mar2           administration has found it necessary to adopt the course  
indicated in No. 7838/840, or when the operators'  
certificates cannot be produced, the government or  
administration to which the ship station or ship  
earth station is subject shall be so informed without  
delay. In addition, the procedure specified in  
Article N19/16 is followed when necessary.
- MOD    7841    843           (2) Before leaving, the inspector shall report  
Mar2           the result of his inspection to the master, or the person  
responsible for the ship or other vessel carrying the  
ship station or ship earth station. If any breach of  
the conditions imposed by these Regulations is observed,  
the inspector shall make this report in writing.

MOD 7842 844  
Mar2

§ 3. The Members of the Union undertake not to impose upon foreign ship stations or upon foreign ship earth stations which are temporarily within their territorial waters or which make a temporary stay in their territory, technical and operating conditions more severe than those contemplated in these Regulations. This undertaking in no way affects arrangements which are made under international agreements relating to maritime navigation, and which are therefore not covered by these Regulations.

7843  
to  
7865

NOT allocated.



## ARTICLE N55

NOC                      **Working Hours of Stations in the  
Maritime Mobile Service**NOC                      **Section I. Preamble**

(MOD) 7866      921      § 1.            In order to permit the application of the following rules on the subject of hours of watch, every station of the maritime mobile service shall have an accurate clock correctly regulated to Coordinated Universal Time (UTC).

(MOD) 7867      922      § 2.            Coordinated Universal Time (UTC), reckoned from 0000 to 2400 hours beginning at midnight, shall be used for all entries in the radiocommunication service log and in all similar documents of ships compulsorily equipped with radiocommunication apparatus in compliance with an international agreement; this same provision will apply, as far as possible, to other ships.

NOC                      **Section II. Coast Stations**

NOC      7868      923      § 3. (1) The service of coast stations is, as far as possible, continuous (day and night). Certain coast stations, however, may have a service of limited duration. Each administration or recognized private operating agency duly authorized to that effect fixes the hours of service for coast stations under its jurisdiction.

NOC      7869      924              (2) These hours of service shall be notified to the Secretary-General who shall publish them in the List of Coast Stations.

NOC      7870      925      § 4.            Coast stations whose service is not continuous shall not close before:

NOC      7871      926              a) finishing all operations resulting from a distress call, urgency or safety signal;

MOD      7872      927              b) exchanging all traffic originating in or destined for ship stations which are situated within their service area and have indicated their presence before the actual cessation of work;

NOC 7873 927A  
Mar2 c) making a general call to all stations announcing the closing down of the service and advising the time of reopening, if other than their normal hours of service.

NOC Section III. Ship Stations

NOC 7874 929  
Mar § 5. (1) For the international public correspondence service, ship stations are divided into four categories:

- NOC 7875 930 - stations of the first category: these stations maintain a continuous service;
- NOC 7876 931  
Mar - stations of the second category: these stations maintain a service for 16 hours a day;
- NOC 7877 931A  
Mar - stations of the third category: these stations maintain a service for 8 hours a day;
- NOC 7878 932  
Mar - stations of the fourth category: these stations maintain a service the duration of which is either shorter than that of stations of the third category, or is not fixed by these Regulations.

NOC 7879 933  
Mar (2) Each administration shall itself determine the rules under which ship stations subject to it are to be placed in one of the above four categories.

NOC 7880 934  
Mar2 § 6. (1) Ship stations of the second category shall maintain the following hours of service:

0000 - 0400	Ship's time or zone time
0800 - 1200	
1600 - 1800	
2000 - 2200	

and, additionally, four hours of service at times to be decided by the administration, master or responsible person, to meet the essential communication needs of the ship, having regard to propagation conditions and traffic requirements.

NOC	7881	934A Mar	(2) Ship stations of the third category shall maintain the following hours of service:  0800 - 1200 Ship's time or zone time,  two continuous hours of service between 1800 - 2200 hours, ship's time or zone time, at times decided by the administration, master or responsible person and, additionally, two hours of service at times decided by the administration, master or responsible person, to meet the essential communication needs of the ship, having regard to propagation conditions and traffic requirements.
NOC	7882	934B Mar2	(3) Each administration will determine whether ship's time observed by its ships is to be zone time as shown in Appendix 12 (see Nos. 7880/934 and 7881/934A).
NOC	7883	935	(4) In case of short voyages, these stations shall provide service during the hours fixed by the administrations to which they are subject.
NOC	7884	935A Mar2	§ 7. Ship stations of the fourth category are encouraged to provide service from 0830 to 0930 hours, ship's time or zone time.
NOC	7885	939	§ 8. (1) Ship stations whose service is not continuous shall not close before:
NOC	7886	940	<u>a)</u> finishing all operations resulting from a distress call, urgency or safety signal;
MOD	7887	941	<u>b)</u> exchanging, so far as practicable, all traffic originating in or destined for coast stations situated within their service area and for ship stations which, being within their service area, have indicated their presence before the actual cessation of work.
NOC	7888	942	(2) Any ship station not having fixed working hours shall inform the coast stations with which it is in communication of the time of closing and the time of reopening its service.

MOD	7889	943	§ 9. (1) Any ship station arriving in port, and whose service is therefore about to close, shall:
NOC	7890	944	a) notify accordingly the nearest coast station and, if appropriate, the other coast stations with which it generally communicates;
NOC	7891	945	b) not close until after the disposal of traffic on hand, unless this conflicts with the regulations in force in the country of the port of call.
NOC	7892	946	(2) Upon departure from port the ship station shall notify the coast station or stations concerned that its service is reopening as soon as such reopening is permitted by the regulations in force in the country of the port of departure. However, a ship station not having hours of service fixed by these Regulations may defer such notification until the station first reopens its service after departure from port.
	7893 to 7917		NOT allocated.

## ARTICLE N58/37A

NOC      **Order of Priority of Communications in the Maritime Mobile Service  
and in the Maritime Mobile-Satellite Service**

MOD    8361    1496A  
              Mar2

The order of priority for communications 1 in the maritime mobile service and the maritime mobile-satellite service shall be as follows, except where impracticable in a fully automated system in which, nevertheless, category 1 shall receive priority:

1. Distress calls, distress messages, and distress traffic.
2. Communications preceded by the urgency signal.
3. Communications preceded by the safety signal.
4. Communications relating to radio direction-finding.
5. Communications relating to the navigation and safe movement of aircraft engaged in search and rescue operations.
6. Communications relating to the navigation, movements and needs of ships, and weather observation messages destined for an official meteorological service.
7. ETATPRIORITENATIONS – Radiotelegrams relating to the application of the United Nations Charter.
8. ETATPRIORITE – Government radiotelegrams with priority and Government calls for which priority has been expressly requested.
9. Service communications relating to the working of the telecommunication service or to communications previously exchanged.
10. Government communications other than those shown in 8 above, ordinary private communications, RCT 2 radiotelegrams and press radiotelegrams.

ADD 8361.1 1496A.1 1 The term communications as used in this Article includes radiotelegrams, radiotelephone calls and radiotelex calls.

ADD 8361.2 1496A.2 2 RCT (Red Cross Telegrams): Telegrams concerning persons protected in time of war by the Geneva Conventions of 12 August 1949.

8362

to

8386

NOT allocated.

ADD

## ARTICLE N62A

**Public Correspondence in the Maritime Mobile Service  
and the Maritime Mobile-Satellite Service <sup>1</sup>****Section I. General**

- 8900 § 1. The provisions of the Telegraph Regulations and the Telephone Regulations, taking into account CCITT Recommendations, shall apply to radiocommunications in so far as the relevant provisions of the Radio Regulations do not provide otherwise.

**Section II. Accounting Authority**

- 8901 § 2. Charges for radiocommunications from ship-to-shore shall in principle, and subject to national law and practice, be collected from the maritime mobile station licensee:
- 8902 (1) by the administration that has issued the licence; or
- 8903 (2) by a recognized private operating agency; or
- 8904 (3) by any other entity or entities designated for this purpose by the administration referred to in (1).
- 8905 § 3. The administration or the recognized private operating agency or the designated entity (or entities) is referred to in this Article as the "accounting authority".
- 8906 § 4. The name(s) and address(es) of the accounting authority(ies) shall be notified to the Secretary-General of the ITU for inclusion in the List of Ship Stations; the number of such names and addresses shall be limited as far as possible, taking into account CCITT Recommendations.

**Section III. Accounting**

- 8907 § 5. The exchange and verification of accounts shall be carried out in accordance with the Telegraph Regulations and the Telephone Regulations, taking into account CCITT Recommendations.

- 8908            § 6.            The accounts shall be sent as promptly as possible but in any case before the end of the third month following that to which they relate.
- 8909            § 7.            In principle, an account shall be considered as accepted without the need for specific notification of acceptance to the administration (or recognized private operating agency) that sent it.
- 8910            § 8.            However, any accounting authority shall have the right to question the contents of in account for a period of six months after despatch of the account.
- 8911            § 9.            All maritime accounts shall be paid by the accounting authority without delay and in any case within six months after despatch of the account.
- 8912            § 10.           If international maritime accounts remain unpaid after six months, the administration that has licensed the mobile station shall, on request, take all possible steps, within the limits of applicable national law, to ensure settlement of the accounts from the licensee.
- 8913            § 11.           In the case referred to in No. 8910 above, if the account is seriously delayed in transit, the receiving accounting authority should at once notify the originating administration (or recognized private operating agency) that queries and payment may be delayed. The delay shall, however, not exceed three months from the date of receipt of the account.
- 8914            § 12.           The debtor accounting authority may refuse the settlement and adjustment of accounts presented more than eighteen months after the date of handing in of the radiotelegrams, or the date of establishment of the radiotelephone calls or radiotelex calls to which the accounts relate.

#### Section IV. Payment of Balances

- 8915            § 13.           Payment of balances shall be carried out in accordance with the Telegraph Regulations and the Telephone Regulations, taking into account any relevant CCITT Recommendations.



**Section V. Archives****8916**

§ 14. The originals of radiotelegrams and documents relating to radiotelegrams, radiotelephone calls and radiotelex calls shall be held by the administrations (or recognized private operating agencies) with all necessary precautions from the point of view of secrecy, until the settlement of the relative account and, in any case, for at least six months counting from the month in which the accounts were sent. Administrations (or recognized private operating agencies) may preserve the information by any other means, e.g. magnetic or electronic records.

**8917**

§ 15. However, should an administration (or recognized private operating agency) deem it desirable to destroy the originals of radiotelegrams or any other documents or records mentioned in No. 8916 before the above-mentioned period, and hence not be in a position to carry out an inquiry in respect of the services for which it is responsible, such administration (or recognized private operating agency) shall bear all the consequences both as regards refund of charges and any difference in the accounts in question that might otherwise have been observed.

## CHAPTER NXII

NOC

**Land Mobile Service**

SUP

**ARTICLE N63****Authority of the Master or Person Responsible  
for the Mobile Stations in the Land Mobile Service**

SUP	<b>8918</b>	<b>845</b>	<b>§ 1.</b>
	to		
	<b>8920</b>	<b>847</b>	<b>§ 3.</b>
	<b>8921</b>		
	to		
	<b>8945</b>		<b>NOT allocated.</b>

SUP

ARTICLE N64/21

**Inspection of Mobile Stations in the Land Mobile Service**

SUP    **8946**    838    § 1.  
         to    Mar2

**8952**    844    § 3.  
         Mar2

**8953**  
to            NOT allocated.  
**8977**

## ARTICLE N65

NOC

**Conditions to be Observed by Mobile Stations  
in the Land Mobile Service**

MOD	8978	955 Mar	§ 1. Land mobile stations shall be established in such a way as to conform to the provisions of Chapter NIII/II as regards frequencies and classes of emission.
MOD	8979	957	§ 2. The frequencies of emission of land mobile stations shall be checked as often as possible by the inspection service to which these stations are subject.
NOC	8980	958	§ 3. The energy radiated by receiving apparatus shall be reduced to the lowest possible value and shall not cause harmful interference to other stations.
MOD	8981	959	§ 4. Administrations shall take all practicable steps necessary to ensure that the operation of any electrical or electronic apparatus installed in land mobile stations does not cause harmful interference to the essential radio services of stations which are operating in accordance with the provisions of these Regulations.
MOD	8982	960	§ 5. (1) Changes of frequency in the sending and receiving apparatus of any land mobile station shall be capable of being made as rapidly as possible.
MOD	8983	961	(2) Installations of any land mobile station shall be capable, once communication is established, of changing from transmission to reception and vice versa in as short as a time as possible.
	8984 to 9008		NOT allocated.

ARTICLE N66/37

SUP                      **Order of Priority of Communications  
in the Land Mobile Service**

SUP    **9009**    1496

**9010  
to  
9034**

NOT allocated.

SUP

ARTICLE N67

**General Radiotelegraph Procedure  
in the Land Mobile Service - Calls**

SUP	<b>9035</b>	1065	§ 1.
	to	to	to
	<b>9052</b>	1094	§ 10.

<b>9053</b>		
to		NOT allocated.
<b>9077</b>		

R.1-60

## ARTICLE N68

NOC

**General Radiotelephone Procedure  
in the Land Mobile Service - Calls**

MOD	9078	1298	§ 1. (1) A land mobile station may call the land station only when it comes within the service area of the latter, that is to say, that area within which, by using an appropriate frequency, the land mobile station can be heard by the land station.
MOD	9079	1099	(2) A land station having traffic for a land mobile station may call this station if it has reason to believe that the land mobile station is keeping watch and is within the service area of the land station.
SUP	9080	1307 Mar2*	§ 2.
SUP	9081	1308	§ 3. (1)
SUP	9082	1310	(2)
SUP	9083	1311	(3)
MOD	9084	1312	§ 4. Land mobile stations shall not radiate a carrier wave between calls.
SUP	9085	1313	§ 5.
SUP	9086	1314 Mar	§ 6. (1)
SUP	9087	1315	<u>a)</u>
SUP	9088	1316	<u>b)</u>
SUP	9089	1317 Mar	(2)
	9090 to 9139		NOT allocated.

SUP

**CHAPTER NXIII (Art. 69 to Art. 72)**

**Radiotelegrams, Radiotelephone Calls and Radiotelex Calls**

SUP (in its entirety)

**ADDITIONAL RADIO REGULATIONS**

SUP (in its entirety)



## RESOLUTION AA

**Relating to a Procedure for Resolving a Disagreement  
over the Technical Standards or Rules of Procedure of  
the International Frequency Registration Board**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that, in accordance with No. 3960A.1, the Technical Standards and Rules of Procedure of the IFRB shall be distributed to all Members of the Union and shall be open to comment from administrations;
- b) that an administration may disagree with the substantive contents of these documents;
- c) that, in the event of such a disagreement remaining unresolved, there should be a procedure for the resolution of that disagreement;

recognizing

- a) that, with respect to the Technical Standards, the CCIR could provide the best source of professional advice;
- b) that, with respect to the Rules of Procedure, a World Administrative Radio Conference could provide the best source of interpretation of the Radio Regulations;

resolves

1. that, in the event of an unresolved disagreement over the substantive contents of the Technical Standards of the IFRB, the Board, in agreement with the administration concerned, shall refer the question to the CCIR for international study and the development of a Recommendation thereon by the next Plenary Assembly of the CCIR;
2. that, in the event of the CCIR not having formulated a Recommendation thereon, or in the event of an unresolved disagreement over the substantive contents of the Rules of Procedure of the IFRB, in either case the matter may be referred to the Administrative Council for inclusion in the agenda of the next World Administrative Radio Conference;
3. that, pending resolution of the matter, the Board shall continue to use the particular Technical Standard or Rule of Procedure in dispute but that, following resolution of the matter by a CCIR Recommendation or by a decision of a World Administrative Radio Conference, the Board shall promptly take the consequential action including a review of all relevant findings.

## RESOLUTION AB

**Relating to Operational Provisions, Charging and Accounting  
for Public Correspondence in the Mobile Services**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the CCITT, in accordance with a request by the World Maritime Administrative Radio Conference, Geneva, 1974, has prepared two Recommendations relating to the operational provisions for the maritime mobile service, and charging, accounting, and refunds in the maritime mobile service;
- b) that this Conference has accepted the overall conclusions and most of the detailed conclusions of the report of the CCITT studies carried out in accordance with the pertinent Resolutions of the World Maritime Administrative Radio Conference, Geneva, 1974, which have now been abrogated;
- c) that as a consequence, the Additional Radio Regulations and certain provisions of the Radio Regulations relating to the operation of, and charging and accounting for, public correspondence in the mobile services have been replaced by provisions governing the general application of the CCITT Recommendations;
- d) that a number of the provisions which have been replaced referred to mobile services other than the maritime mobile service and the maritime mobile-satellite service;
- e) that the provisions contained in the two above-mentioned CCITT Recommendations relating to public correspondence apply at present only to the maritime mobile service and the maritime mobile-satellite service;
- f) further, that in any revision of the relevant CCITT Recommendations full account needs also to be taken of maritime interests, ensuring adequate time for administrations to consult these interests;

recognizing

- a) that there is at present no specific provision for international public correspondence in any mobile service other than the maritime mobile service and the maritime mobile-satellite service;
- b) that international public correspondence might nevertheless be extended in the future to mobile services other than the maritime mobile service and the maritime mobile-satellite service;

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invites the CCITT

to undertake, if the need arises, studies on the operational provisions, charging and accounting for international public correspondence in the mobile services other than the maritime mobile service and the maritime mobile-satellite service, seeking to harmonize to the maximum extent possible all such provisions for the mobile services in question;

further invites

the CCITT in continuance of its work relating to the maritime mobile service and the maritime mobile-satellite service to take particular account of maritime interests therein;

resolves

that in the case of a new international public correspondence service being established in a mobile service other than the maritime mobile service or the maritime mobile-satellite service, the new service should conform as far as practicable in its operational provisions charging and accounting with the existing provisions of the Telephone Regulations, the Telegraph Regulations and the Radio Regulations and with the relevant CCITT Recommendations, until such time as any necessary revision could be made.

## RESOLUTION AC

**Relating to the Eventual Abolition of Mobile Station Charges  
for Public Correspondence in the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the VIth Plenary Assembly of the CCITT, Geneva, 1976, adopted a draft Recommendation relating to charging, accounting and refunds in the maritime mobile service with the exception of the points relating, inter alia, to mobile station charges for public correspondence in the maritime mobile service;
- b) that the above draft Recommendation was subsequently amended, in the light of the decision of the VIth Plenary Assembly of the CCITT, Geneva, 1976, regarding mobile station charges and that this draft Recommendation has been approved by letter ballot;
- c) that the amended Recommendation includes the following provisions \*):

"Mobile station charges may be applied in the radiotelegram, radiotelephone, and radiotelex services, in the MF and HF bands. They shall not be applied in any of the VHF services, nor in any of the mobile-satellite services, nor in any service with automatic operation; however, mobile station charges may also be applied for radiotelegrams transmitted via VHF.",

"Mobile station charges shall be abolished for traffic exchanged after 2359 hours GMT 31 December, 1987.";

resolves

to adopt this recommended date for the abolition of mobile station charges for public correspondence in the maritime mobile service.

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\*) See CCITT Recommendation D.90/F.111 (paragraphs B12 and B13).

## RESOLUTION AD

**Relating to the Development of  
National Radio Frequency Management**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Radio Regulations contain, inter alia, procedures for the coordination, notification and registration of frequencies which specify the rights and obligations of Member countries;
- b) that the application of the above-mentioned procedures necessitates an appropriate radio frequency management unit in each Member country;
- c) that the existence of such a unit helps Member countries to safeguard their rights and to discharge their obligations under the Radio Regulations;
- d) that the application of the Radio Regulations through the agency of such units is in the interest of the international community as a whole;

noting

that such a unit requires an adequate number of suitably qualified staff;

noting further

that the administrations of many developing countries need to create or to strengthen such a unit, appropriate to their administrative structure, with responsibility for the application of the Radio Regulations at the national and international levels;

recommends

that the administrations of such countries take appropriate action;

resolves

1. that meetings shall be organized between representatives of the IFRB, the CCIR and the personnel involved in frequency management matters from administrations of developing and developed countries;
2. that such meetings shall be aimed at designing standard structures suitable for administrations of developing countries and include discussions concerning the establishment and operation of radio frequency management units;

3. that such meetings should also identify the particular needs of developing countries in establishing such units, and the means required to meet those needs;

recommends

that developing countries when planning the use of funds, particularly those received from international sources, make provision for participation in these meetings as well as for the introduction and development of such units;

invites the Administrative Council

to take the necessary measures for the organization of such meetings;

instructs the Secretary-General

a) to circulate this Resolution to all Members of the Union, drawing their attention to its importance;

b) to circulate the results of such meetings, particularly to the developing countries;

c) to inform the developing countries of the types of assistance the ITU can provide in setting up the desired structure;

draws the attention of the next Plenipotentiary Conference to

a) the particular problems identified in this Resolution;

b) the need for prompt and effective action to resolve them;

c) the need to take all practicable measures to ensure that resources are made available for this purpose.

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## RESOLUTION AE

**Relating to the Division of the World into Regions for the  
Purposes of Allocating Frequency Bands**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the present division of the world into Regions 1, 2 and 3 for the purposes of allocating frequency bands was made in 1947 and the technical bases for this division were not clearly defined;
- b) that since 1947 considerable advances in radiocommunication techniques have been made and many new countries have emerged;

being aware

that this division of the world into three Regions as presently constituted, may not be appropriate to meet the requirements of all countries on an equitable basis;

recognizing

that it is not possible to carry out the required revision of the existing Regional division during this Conference;

resolves

that this division should be reviewed in the light of the major developments in radio technology and increase in the membership of the Union with countries at different stages of development;

requests

the CCIR to undertake a study of the technical and operational bases for the possible revision of the division of the world for the purposes of allocating the frequency bands, based on all relevant factors such as radio propagation, climatic conditions, natural geographical configuration of the world, state of economic and technical development, which would permit improvement in the efficient utilization of the radio frequency spectrum by all Member countries of the Union;

urges

all Members of the Union to participate actively in the above study by contributing to its work;

further requests

the CCIR to complete and submit this study if possible to the next Plenary Assembly of the CCIR, and in any case to prepare a report for consideration by the next Plenary Assembly;

invites

the Administrative Council to follow the conduct of the study and to furnish advice to the Plenipotentiary Conference with a view to this matter being suitably resolved at one of the future World Administrative Radio Conferences of the Union.



## RESOLUTION AH

**Relating to the Circulation of Current Information on  
CCIR Recommendations Referred to in the  
Radio Regulations**

The World Administrative Radio Conference, Geneva, 1979,

noting

- a) that reference is made in the Radio Regulations to specific CCIR Recommendations as well as to "relevant CCIR Recommendations";
- b) that Resolution No. **Spa2** - 6 provides for consultation on the applicability of those CCIR Recommendations relating to the technical criteria for sharing frequency bands between space radiocommunication and terrestrial radiocommunication services or between space radiocommunication services;
- c) that the CCIR Recommendations may be revised by CCIR Plenary Assemblies, with consequent changes of reference numbers;

considering

- a) that a correct application of the Radio Regulations requires the identification by administrations of the relevant CCIR Recommendations to be taken into account;
- b) that information on the up-dating of these Recommendations is of the utmost importance;

invites the CCIR

1. to identify and list those provisions of the Radio Regulations containing a reference to a specific CCIR Recommendation or to a "relevant CCIR Recommendation" together with the reference numbers and titles of those Recommendations;
2. to instruct the Director of the CCIR to provide the Secretary-General with the information required to up-date the list;

requests the Secretary-General

to communicate to all administrations the list of those Recommendations as well as any subsequent up-dating thereof.

## RESOLUTION AJ

**Relating to Information on the Propagation of Radio waves  
Used in the Determination of the Coordination Area  
(see Appendix 28)**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that Appendix 28 to the Radio Regulations provides a method for the determination of the coordination area which incorporates certain material concerned with radio wave propagation;
- b) that the propagation information contained in Appendix 28 is based directly or indirectly on propagation data given in the texts of the CCIR;
- c) that CCIR studies of radio wave propagation are continuing, and therefore the conclusions of these studies are subject to change and may in future show the need to revise those sections of Appendix 28 which incorporate the propagation information;
- d) that no radio wave propagation measurements have been carried out in some parts of the world;

recognizing

- a) that a period of several years is generally required to accumulate sufficient data to form reliable conclusions concerning radio wave propagation;
- b) that for administrative reasons it is desirable that the propagation information used for the determination of the coordination area should not be revised too frequently and, in any case, should be revised only if the effect of such revision on the size of the coordination area is significant;
- c) that in Appendix 28 the coordination area is determined without the need for detailed knowledge of the propagation characteristics of individual paths, and it is desirable that this approach be maintained;

invites the CCIR

to continue to study propagation data concerned with the determination of the coordination area, and to maintain the relevant CCIR texts in a format which would permit direct insertion into Appendix 28 in place of the existing Sections 3, 4, 6 or Annex II;

resolves

- 1. that each Plenary Assembly of the CCIR should come to a conclusion as to whether, according to the propagation information given in the most recent CCIR Recommendations, any revision of Sections 3, 4, 6 or Annex II of Appendix 28 to the Radio Regulations is warranted;

2. that when a Plenary Assembly of the CCIR has come to the conclusion that a revision of Sections 3, 4, 6 or Annex II of Appendix 28 is warranted, the Director of the CCIR shall so inform the Secretary-General of the ITU and send him the proposed amendments to Appendix 28;

requests

1. that the Administrative Council then place, as an extraordinary item, on the agenda of the next World Administrative Radio Conference, the consideration of the conclusion of the CCIR;

2. that, if the said World Administrative Radio Conference decides that the propagation information used in Appendix 28 is to be revised, the Secretary-General, in consultation with the IFRB, incorporate the amendments agreed at the said Conference in a document which contains the new text of Sections 3, 4, 6 or Annex II of Appendix 28 in a form suitable for direct substitution in the version of Appendix 28 then in force, and send this document to all administrations; and

decides

that from a date established by the said Conference, the revised text shall form the basis of all subsequent determinations of the coordination area using Appendix 28.

## RECOMMENDATION A

[SUP - Letter not used]

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## RECOMMENDATION B

**Relating to the Marginal Numbering of the Radio Regulations**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Radio Regulations have a logical paragraph and sub-paragraph numbering system within each article and that consecutive marginal numbering is added to each provision mainly for ease of reference;
- b) that this marginal numbering is extensively used by administrations and the permanent organs of the Union;
- c) that blocks of spare marginal numbers have been made available at the end of each article of the revised Radio Regulations, Geneva, 1979, to facilitate the addition by World Administrative Radio Conferences of new provisions and in particular of new articles;

recognizing

- a) that familiarization with new marginal numbers requires considerable effort and that, therefore, possible changes of marginal numbers by a World Administrative Radio Conference undertaking a partial revision of the Radio Regulations could cause difficulties;
- b) the fact that revision of the marginal numbering system should only be necessary at a future World Administrative Radio Conference convened to undertake a general revision of the Radio Regulations;

recommends

1. that a future World Administrative Radio Conference undertaking a partial revision of the Radio Regulations should use the spare marginal numbers only when it is appropriate to insert additional provisions at the end of articles;
2. that where it is necessary to insert one or more additional provisions within an article, supplementary alpha references should be used as a suffix to existing marginal numbers;
3. that when an existing provision is suppressed, the marginal number should not be re-used.

## RECOMMENDATION C

**Relating to the Application of Chapters NX, NXI and NXII  
of the Re-arranged Radio Regulations**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the Radio Regulations provide the basic regulatory framework for all the mobile services and that the provisions of the Radio Regulations should correspond as closely as possible with the needs and operational realities of these services;
- b) that this Conference has adopted the Re-Arrangement of the Radio Regulations as proposed by the Group of Experts, taking into account proposals made by a number of administrations for further refinement of the Re-Arrangement;
- c) that the separation of the previous mobile service provisions into specific chapters dealing with individual mobile services has highlighted certain anomalies in relation to each of the mobile services, and particularly in their applicability to the aeronautical mobile service and the land mobile service;
- d) that certain of these anomalies raise substantive operational issues with which this Conference is not competent to deal;
- e) that the aeronautical mobile service is concerned with the communications to ensure safe and regular operation of aircraft;
- f) that towards this objective the International Civil Aviation Organisation has agreed upon Standards and Recommended Practices adapted to the needs of aircraft operation which have been proven in practice and are well established in current use;

recommends

that the next competent World Administrative Radio Conference revises Chapters NX, NXI and NXII to bring them into accord with the current needs and practices of the services concerned;

instructs the Secretary-General

to communicate the text of this Recommendation to ICAO and IMCO and to request the attention of these organizations to a study of the material contained in Chapters NX and NXI, respectively, with a view to assisting administrations in their preparations for that Conference.

## RECOMMENDATION D 1

to the CCIR and to Administrations Relating to  
International Monitoring

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the desirability of achieving a more effective use of the radio spectrum in order to assist administrations to satisfy their frequency requirements, and, to that end, the desirability of taking steps to make the International Frequency List reflect more accurately the actual use being made of the radio spectrum;
- b) the provisions of the Radio Regulations, Geneva, 1979, under which the International Frequency Registration Board shall review the entries in the Master International Frequency Register with a view to bringing them into conformity, to the maximum extent practicable, with the actual use being made of the radio spectrum;
- c) that monitoring information should assist the Board in discharging that function;

recognizing

- a) that an international monitoring system cannot be fully effective unless it covers all areas of the world;
- b) that, at present, in certain areas of the world, monitoring facilities are either non-existent or insufficient to provide effective coverage;

invites the CCIR

in collaboration with the Board, to study and make technical Recommendations concerning the additional facilities required to provide adequate coverage of the world with a view to implementing the Radio Regulations, more especially Articles N9, N11, N12, N13, N13A and N18; and

invites administrations

1. to make every effort to develop monitoring facilities as envisaged in Article N18 of the Radio Regulations bearing in mind the means which may be made available through the appropriate technical assistance organs of the United Nations;
2. to inform the Board of the extent to which they are prepared to co-operate in such monitoring programmes as may be requested by the Board.

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1 Replaces Recommendation No. 5 of the Administrative Radio Conference, Geneva, 1959.

## RECOMMENDATION E 1

**To Administrations and the CCIR  
Relating to Studies and Prediction of Radio  
Propagation and Radio Noise**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the efficient utilization of radio frequencies depends upon the use of the most reliable technical data and standards, especially in those parts of the radio frequency spectrum which are most congested;
- b) that the satisfaction of new frequency requirements and the development of radiocommunication services can be facilitated by improvements, where these are necessary, in the technical standards at present used by the IFRB;
- c) that former Appendix A of the Radio Regulations, 1968 edition, entitled "Studies and Prediction of Radio Propagation and Radio Noise", recognized the importance of radio propagation and radio noise data as vital for the maximum utilization of radio frequencies and efficient planning of radiocommunication services;
- d) that a principal objective of that Appendix had been the establishment and operation of worldwide systems of observation stations to obtain data on radio noise and on ionospheric, tropospheric and other phenomena affecting radio propagation;
- e) that administrations provide, by the best means possible, for the study, coordination and rapid dissemination of such data and of the predictions relating to these data; and endeavour as well to promote further studies on radio propagation and radio noise through the medium of the CCIR;
- f) that the CCIR has adopted programmes of studies covering many of these problems;
- g) that no radio propagation or radio noise measurements have been carried out in some parts of the world;

requests the CCIR

- 1. to encourage and assist in initiating the study of radio propagation and radio noise in those areas where an adequate system of observation stations has not yet been established;
- 2. to continue the studies of radio propagation and radio noise and to take measures for the coordination of the results of these studies carried out in different countries;
- 3. to give particular attention to those studies which will assist in the further refinement of the technical standards used by the IFRB;
- 4. to report regularly on these matters, even if the studies have not been completed;

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1 Replaces Recommendation No. 4 of the Administrative Radio Conference, Geneva, 1959.

5. to continue regular consultation with other organizations undertaking studies of propagation and radio noise, such as the International Scientific Radio Union, in order to attain the maximum possible degree of coordination;

recommends that administrations

1. initiate the study of radio propagation and radio noise in those areas where an adequate system of observation stations has not yet been established, and communicate the results of their studies to the CCIR;
2. continue to establish and to operate a worldwide system of observation stations to obtain data on radio noise and on ionospheric, tropospheric and other phenomena affecting radio propagation;
3. continue to provide, by the best means possible, for the study, coordination and rapid dissemination of such data and of the predictions relating to them;
4. take note, in formulating and carrying out their radio propagation and radio noise work, of the relevant CCIR Recommendations, Reports, Questions and Study Programmes, particularly regarding the conclusions so far reached, the planning of future studies and the recommended forms of presentation contained in these documents.



## RECOMMENDATION F

**Relating to the Improvement of Protection of Distress and Safety  
Frequencies, and those Related to Distress and Safety,  
against Harmful Interference**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) the importance of minimizing the danger of harmful interference to frequencies used for the safeguarding of human life;
- b) the unanimous agreement by this Conference in its consideration of Article U16 concerning interference, that improved protection against harmful interference should be given to distress and safety frequencies and those related to distress and safety;
- c) that such improved protection could be achieved, inter alia, by including provisions in the Radio Regulations ensuring that all tests on these frequencies should be carried out on artificial antennae or with reduced power, wherever practicable;
- d) that these provisions pertain to Article U35 concerning frequencies for distress and safety;

noting, however,

that this Conference is not competent to revise Article U35;

invites administrations

to study this matter and to submit proposals for consideration by the next competent World Administrative Radio Conference.

## RECOMMENDATION H

**Relating to the Preparation of the Technical Information  
Necessary for the World Administrative Radio Conference  
on HF Broadcasting**

The World Administrative Radio Conference, Geneva, 1979,

considering

that a considerable amount of technical information relating to HF broadcasting is already available in CCIR texts, nevertheless there are some subjects needing further studies and, in some cases, adaptation to make them suitable for use in planning;

noting in particular

- a) that the CCIR has recommended a method of estimating field strength and transmission loss in band 7 (HF) based on the best information available, and is developing a new computerized method which incorporates the special elements considered necessary for improving the accuracy of these estimations at medium and long distances and in equatorial and high latitude regions;
- b) that there is insufficient information relating to propagation predictions in many equatorial areas;
- c) that the use of directional antennae is essential for efficient use of the spectrum in band 7 (HF) and that radiation in directions other than the desired direction may cause interference;

requests the CCIR

1. to complete its work in respect of the improved computerized prediction method (Recommendation No. 533) paying special attention to medium and long distance transequatorial paths and to high latitude regions;
2. to adapt the present method of propagation predictions in order to make it more suitable for use in planning broadcasting and to recommend suitable values of solar indices;
3. to make Recommendations where these do not already exist concerning appropriate protection ratios to be adopted, including cases where the unwanted signals are of a different type, and the appropriate values of channel spacing; and the minimum signal-to-noise ratio required for satisfactory reception;
4. to ensure that the CCIR Book of Antenna Diagrams includes all principal types of antennae in common use;

5. to prepare and present data on the practical performance of directional antennæ in a form suitable for planning purposes;

invites administrations

to participate actively in these studies and to provide the CCIR with available data on the questions listed above and especially on field strength observations in band 7 (HF) for comparison with predicted values.

## RECOMMENDATION I

**Relating to Studies for the Introduction of Single-Sideband (SSB)  
Techniques in the HF Bands Allocated to the Broadcasting  
Service, in Preparation for the World Administrative  
Radio Conference on HF Broadcasting**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the use of SSB leads to a more efficient utilization of the spectrum;
- b) that the introduction of these techniques for broadcasting in the HF bands creates both technical and economic problems;

requests the CCIR

to accelerate the appropriate studies regarding the introduction of SSB techniques for broadcasting in the HF bands and the specification of a suitable SSB system, paying particular attention to the economic problems associated with transmitters and receivers;

invites administrations

to provide the CCIR with information on this subject.

## RECOMMENDATION J

**Relating to the Use of the Term "Channel" in the Radio Regulations**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that the term "channel" has been used extensively in the Radio Regulations in the frequency allotment plans of Appendices 15A, 15B, 15C, 17, 18, 25, 26 and 27;
- b) that the term "channel" has a different meaning in other provisions of the Radio Regulations and for the various radiocommunication services;
- c) that there should not be any ambiguity in the meaning of the term "channel" in its usage throughout the Radio Regulations;

invites

the CCIR to define the term "channel" so that it may be used consistently and without confusion in the Radio Regulations in all working languages of the ITU.

## RECOMMENDATION K 1

**Supplementing the Additional Characteristics for  
Classifying Emissions and Providing Additional Examples  
for the Full Designation of Emissions,  
Both as Given in Appendix 5**

The World Administrative Radio Conference, Geneva, 1979

considering

- a) that this Conference has adopted in Article N3 a new method for designating emissions based on CCIR Recommendation No. 507, Kyoto, 1978;
- b) that an essential part of this new method is the classification of emissions;
- c) that the new method of classifying emissions distinguishes between basic characteristics (first, second and third symbol) the use of which is mandatory, and additional characteristics (fourth and fifth symbol) the use of which is optional;
- d) that the full classification of emissions consists of all of these five symbols;
- e) that the list of the additional characteristics given in Appendix 5, Part A, may not be sufficiently complete to take account of future new technologies and may require relatively frequent supplementing;
- f) that a CCIR Recommendation would provide a suitable means for such supplementing;

considering further

- a) that a list of examples for the full designation of emissions is given in Appendix 5, Part B;
- b) that this list, however, is not exhaustive and that for this reason No. 3209/104 of these Regulations stipulates that further examples may appear in the latest CCIR Recommendations and that these examples may also be published in the Preface to the International Frequency List;

invites the CCIR

1. to continue its studies on the classification of emissions with a view to supplementing the list of additional characteristics in order to cater for new technologies without, however, changing those additional characteristics which have already been agreed upon and which are contained in Appendix 5, Part A.

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<sup>1</sup> Replaces Recommendation No. 8 of the Administrative Radio Conference, Geneva, 1959.

2. to provide examples for the full designation of emissions which are not contained in Appendix 5, Part B, also taking account of the supplementing mentioned in 1. above;

requests the International Frequency Registration Board

to publish the supplementary additional characteristics and the additional examples mentioned in invites 1. and 2. above, in the Preface to the International Frequency List as soon as they are available in relevant CCIR Recommendations;

and recommends

that administrations use the additional characteristics referred to in invites 1. above where appropriate.

## RECOMMENDATION M

**To the CCIR Relating to the Provision of  
Formulae and Examples for the Calculation of  
Necessary Bandwidths**

The World Administrative Radio Conference, Geneva, 1979,

considering

- a) that Article N3 of the Radio Regulations requires that the necessary bandwidth be part of the full designation of emissions;
- b) that Appendix 5, Part B, gives a partial list of examples and formulae for the calculation of the necessary bandwidth of some typical emissions;
- c) that sufficient information is not available for the determination of the K-factors used throughout the table of examples of the necessary bandwidth in Appendix 5;
- d) that, especially with regard to the efficient utilization of the radio frequency spectrum, monitoring and the notification of emissions, it is required that necessary bandwidths for the individual classes of emission be known;
- e) that for reasons of simplification and international uniformity it is desirable that measurements for determining the necessary bandwidth be made as seldom as possible;

recommends that the CCIR

1. provides, from time to time, additional formulae for the determination of necessary bandwidth for common classes of emission, as well as examples to supplement those given in Appendix 5, Part B;
2. study and provide values of supplementary K-factors required for the calculation of the necessary bandwidth for common classes of emission.

invites the IFRB

to publish examples of such calculations in the Preface to the International Frequency List.