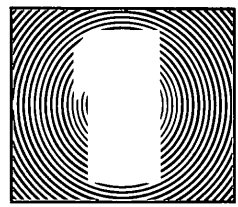
Edition of 1976

RADIO REGULATIONS



Radio Regulations.
Additional Radio Regulations.

Published by the General Secretariat
of the International Telecommunication Union
Geneva, 1976

ISBN 92-61-00181-5

Printed in Switzerland

PREFACE

FOREWORD

1. This revised edition of the Radio Regulations is published under the authority of the Secretary-General of the International Telecommunication Union. It is a consolidated document which incorporates the provisions of the 1959 (Geneva) Radio Regulations and the partial revisions of those Regulations by:

a) the Extraordinary Administrative Radio Conference to allocate frequency bands for space radiocommunication purposes, Geneva, 1963 (referred to hereafter as "the 1963 Space Conference");

b) the Extraordinary Administrative Radio Conference for the preparation of a revised allotment plan for the Aeronautical Mobile (R) Service, Geneva, 1966 (referred to hereafter as "the 1966 Aeronautical Conference");

c) the World Administrative Radio Conference to deal with matters relating to the Maritime Mobile Service, Geneva, 1967 (referred to hereafter as "the 1967 Maritime Conference");

d) the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971 (referred to hereafter as "the 1971 Space Conference");

e) the World Maritime Administrative Radio Conference, Geneva, 1974 (referred to hereafter as "the 1974 Maritime Conference").

1.1 The final signature clauses (Nos. 1632 and 2165) and the signatures themselves which follow the Radio Regulations (Geneva, 1959) and the text of the Additional Protocol to those Regulations, have not been reproduced; nor have the signatures and the texts of the Additional Protocols contained in the Final Acts of the 1963 Space Conference and the 1966 Aeronautical

Conference; nor have the signatures and the texts of the Final Protocols contained in the Final Acts of the 1967 Maritime Conference, the 1971 Space Conference and the 1974 Maritime Conference. For these details reference should be made direct to the volume containing the 1959 Radio Regulations and to the Final Acts of the afore-mentioned Conferences.

2. Wherever one of the under-mentioned symbols appears it indicates an addition, substitution or amendment made by a Conference as follows:

Spa – 1963 Space Conference
Aer – 1966 Aeronautical Conference
Mar – 1967 Maritime Conference
Spa2 – 1971 Space Conference
Mar2 – 1974 Maritime Conference

2.1 In the case of a provision, if more than one of the above-mentioned Conferences has been concerned in a variation of it, the symbol shown under the number indicates the last Conference to make a change.

2.2 In the Table of Frequency Allocations from 10 kHz to 275 GHz [Article 5 of the Radio Regulations] the appropriate symbol appears at the top of the page under the indication of the frequency range if one of the above-mentioned Conferences has amended the allocation or conditions of use of any band in the frequency range.

2.3 A symbol which appears under the number of an appendix, and which is underlined, signifies that the appendix has been added or completely substituted by the Conference represented by that symbol: a symbol which is not underlined indicates that the appendix has been amended.

It was not practicable to include symbols in the texts of the appendices to indicate all the changes made by the above-mentioned Conferences. Therefore symbols have not been inserted in these texts.

3. In a few cases the General Secretariat has updated a provision to bring it into conformity with a change made by a Conference. In these cases, the symbol associated with the provision is shown with an asterisk.

3.1 References to provisions of the Convention have been brought into line with those of the International Telecommunication Convention (Malaga-Torremolinos, 1973).

4. No change has been made to the numbering of the Resolutions and Recommendations of the Administrative Radio Conference, Geneva, 1959, but the following numbering has been used for the Resolutions and Recommendations of the subsequent Conferences:

a) 1963 Space Conference: No. Spa 1, No. Spa 2, No. Spa 3, etc.*

b) 1966 Aeronautical Conference: No. Aer 1, No. Aer 2, No. Aer 3, etc.

c) 1967 Maritime Conference: No. Mar 1, No. Mar 2, No. Mar 3, etc.

d) 1971 Space Conference: No. Spa2-1, No. Spa2-2, No. Spa2-3, etc.

e) 1974 Maritime Conference: No. Mar2-1, No. Mar2-2, No. Mar2-3, etc.

The Resolutions and Recommendations of the subsequent Conferences are listed after those of the 1959 Conference and in the order shown above.

5. Pages are separately numbered by article, appendix, resolution and recommendation. The following symbols have been adopted for this numbering, which appears at the top of the pages:

RR = Radio Regulations
AR = Additional Radio Regulations
AP = Appendix
RES = Resolution
REC = Recommendation

---

* The numbering adopted by the 1963 Space Conference was: No. 1A, No. 2A, No. 3A, etc.

For example:

RR5-14	= Article 5 of the Radio Regulations, page 14
AP13A-20	= Appendix 13A, page 20
RES Mar 12-4	= Resolution No. Mar 12, page 4

5.1 In the Table of Contents there is a summary of the total number of pages for each category of information.

For example:

RR1-1/22	shows that Article 1 has 22 pages
RR17-1	shows that Article 17 has only one page
RR19-1/15 RR19-6a/6b	shows that in Article 19, in addition to pages 1 to 15, there are two extra pages 6a and 6b

6. The under-mentioned notes are included in this edition:

a) in Article 19 of the Radio Regulations, a note giving the international series of call signs allocated on a provisional basis from 1959 up to 15 September 1975 by the Secretary-General under the terms of No. 749 of the Regulations;

b) in Article 45 of the Radio Regulations, notes concerning the entry into force of the Radio Regulations (1959) and, subsequently, of provisions of them which were revised by the Conferences mentioned in point 1 above;

c) in Article 14 of the Additional Radio Regulations, notes concerning the entry into force of the Additional Radio Regulations (1959) and of those provisions of them which were revised by the 1967 and 1974 Maritime Conferences.

7. Those provisions applicable to the Maritime Mobile Service in Article 40 of the Radio Regulations and in Articles 1, 4, 5, 6, 7 and 10 of the Additional Radio Regulations were revised by the 1974 Maritime Conference and entered in the new Articles RR40A, AR1A, AR4A, AR5A, AR6A, AR7A and AR10A, respectively.

The titles of Article 40 of the Radio Regulations and of Articles 1, 4, 5, 6, 7 and 10 of the Additional Radio Regulations were amended by the said Conference so as to exclude from them the Maritime Mobile Service, but no amendments were made to the texts of these Articles. Any provisions relating to the Maritime Mobile Service in these texts [with the exception of those in AR4 which are mentioned in AR4A] should now be disregarded, as should the references to the Telegraph Regulations, which take no account of the new structure of these Regulations or of the fact that the provisions of many of them have been transferred to the Instructions which form part of C.C.I.T.T. Recommendations.

8. Although the Final Acts of the 1974 Maritime Conference come into force on 1 January 1976, some of the revised provisions adopted by the Conference are to be implemented at later dates. This applies in particular to the new calling procedures for HF A1 Morse telegraphy and to the new arrangement of HF radiotelegraph bands allocated to the Maritime Mobile Service concerning which, in Annexes 1 and 2 of Resolution Mar2-2, there is a time schedule for an orderly transfer of existing services from the old to the new assignments and for the introduction of new services. In this connection, to assist readers of this edition of the Radio Regulations, the General Secretariat has included in Articles 7, 29, 32 and 33 certain of the old provisions together with the new provisions, with explanatory notes giving the date limits for their cessation or entry into force, the old provisions being enclosed in a frame in order to identify them clearly. Similar notes have been included in Appendix 15 Mar and in the new Appendices 15 Mar2, 15A, 15B, 15C and 15D which were added by the 1974 Maritime Conference.

INDEX

TABLE OF CONTENTS

TABLE OF CONTENTS

Radio Regulations

Additional Radio Regulations

Appendices to the Radio Regulations

* Published separately.

Resolutions *)

---

*) *Note by the Secretariat:*
The Resolutions are arranged in the chronological order of the Conferences at which they were adopted, i.e.:
- Administrative Radio Conference (Geneva, 1959) (RES 1, etc.)
- Space Conference (Geneva, 1963) (RES Spa 1, etc.)
- Aeronautical Conference (Geneva, 1966) (RES Aer 1, etc.)
- Maritime Conference (Geneva, 1967) (RES Mar 1, etc.)
- Space Conference (Geneva, 1971) (RES Spa2–1, etc.)
- Maritime Conference (Geneva, 1974) (RES Mar2–1, etc.)

* Abrogated.

* Abrogated.

* Abrogated.

* Abrogated.

* Abrogated.

Recommendations *)

---

*) *Note by the Secretariat:*

The Recommendations are arranged in the chronological order of the Conferences at which they were adopted, i.e.:

- Administrative Radio Conference (Geneva, 1959) (REC 1, etc.)
- Space Conference (Geneva, 1963) (REC Spa 1, etc.)
- Aeronautical Conference (Geneva, 1966) (REC Aer 1, etc.)
- Maritime Conference (Geneva, 1967) (REC Mar 1, etc.)
- Space Conference (Geneva, 1971) (REC Spa2–1, etc.)
- Maritime Conference (Geneva, 1974) (REC Mar2–1, etc.)

* Abrogated.

* Abrogated.

* Abrogated.

* Abrogated.

RADIO REGULATIONS

RADIO REGULATIONS

CHAPTER I

Terminology

ARTICLE 1

Terms and Definitions

Preamble

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

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

3 Mar2 *General Network of Telecommunication Channels:* The whole of the existing telecommunication channels open to public correspondence, with the exception of the telecommunication channels of the mobile service, of the maritime mobile-satellite service and of the fixed-satellite service when used for connection between one or more earth stations and a satellite used for the maritime mobile-satellite service.

4 *Simplex Operation:* Operating method in which transmission is made possible alternately in each direction, for example, by means of manual control.[1]

5 *Duplex Operation:* Operating method in which transmission is possible simultaneously in both directions.[1]

6 *Semi-duplex Operation:* Operating method which is simplex at one end of the circuit and duplex at the other.[1]

4.1
5.1
6.1 [1] In general, duplex and semi-duplex operation require two frequencies in radiocommunication; simplex may use either one or two.

7 *Radio Waves (or Hertzian Waves):* Electromagnetic waves of frequencies lower than 3 000 GHz, propagated in space without artificial guide.

8 *Radio:* A general term applied to the use of radio waves.

9 *Radiocommunication:* Telecommunication by means of radio waves.

10 *Telegraphy:* A system 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. 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 ".

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.

12 *Four-Frequency Diplex Telegraphy:* Frequency-shift telegraphy in which each of the four possible signal combinations corresponding to two telegraph channels is represented by a separate frequency.

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

14 *Radiotelegram:* A telegram, originating in or intended for a
Mar2 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.

14A *Radiotelex Call:* A telex call, originating in or intended for
Mar2 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.

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

16 *Radiotelemetering :* Telemetering by means of radio waves.

17 *Telephony :* A system of telecommunication set up for the transmission of speech or, in some cases, other sounds.

18 *Radiotelephone Call:* A telephone call, originating in or in-
Mar2 tended 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.

19 *Television :* A system of telecommunication for the transmission of transient images of fixed or moving objects.

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

Section II. Radio Systems, Services and Stations

21 *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.

21A *Space Station*
Spa2

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.

21B *Earth Station*
Spa2

A station located either on the Earth's surface or within the major portion of the Earth's atmosphere 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 passive satellites or other objects in space.

21C *Space Radiocommunication*
Spa2

Any radiocommunication involving the use of one or more space stations or the use of one or more passive satellites or other objects in space.

21D *Terrestrial Radiocommunication* [1]
Spa2

Any radiocommunication other than space radiocommunication or radio astronomy.

21E *Terrestrial Station* [2]
Spa2

A station effecting terrestrial radiocommunication.

22 *Fixed Service:* A service of radiocommunication between specified fixed points.

23 *Fixed Station:* A station in the fixed service.

24 *Aeronautical Fixed Service:* A fixed service intended for the transmission of information relating to air navigation, preparation for and safety of flight.

25 *Aeronautical Fixed Station:* A station in the aeronautical fixed service.

21D.1 **Spa2** [1] In these Regulations, unless otherwise stated, any radiocommunication service relates to terrestrial radiocommunication.

21E.1 **Spa2** [2] In these Regulations, unless otherwise stated, any station is a terrestrial station.

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

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

28 *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 transmissions.

29 *Broadcasting Station:* A station in the broadcasting service.

30 *Mobile Service:* A service of radiocommunication between mobile and land stations, or between mobile stations.

31 *Land Station:* A station in the mobile service not intended to be used while in motion.

32 *Mobile Station:* A station in the mobile service intended to be used while in motion or during halts at unspecified points.

33 *Aeronautical Mobile Service:* A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may also participate.

34 *Aeronautical Station:* A land station in the aeronautical mo-
Spa bile service. In certain instances, an aeronautical station may be placed on board a ship or an earth satellite.

35 *Aircraft Station:* A mobile station in the aeronautical mobile
Spa service on board an aircraft or an air-space vehicle.

36 *Maritime Mobile Service:* A mobile service between coast
Mar2 stations and ship stations, or between ship stations, or between associated on-board communication stations (see No. **39A**); survival craft stations may also participate in this service.

37 *Port Operations Service:* A maritime mobile service in or
Mar2 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. Messages which are of a public correspondence nature shall be excluded from this service.

37A *Ship Movement Service:* A maritime mobile safety service,
Mar2 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. Messages which are of a public correspondence nature shall be excluded from this service.

38 *Coast Station :* A land station in the maritime mobile service.

38A *Port Station:* A coast station in the port operations service.
Mar

39 *Ship Station :* A mobile station in the maritime mobile service located on board a vessel, other than a survival craft, which is not permanently moored.

39A *On-Board Communication Station:* A low-powered mobile
Mar2 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.

40 *Ship's Emergency Transmitter :* A ship's transmitter to be used exclusively on a distress frequency for distress, urgency or safety purposes.

41 *Survival Craft Station:* A mobile station in the maritime or aeronautical mobile service intended solely for survival purposes and located on any lifeboat, life-raft or other survival equipment.

42 *Land Mobile Service :* A mobile service between base stations and land mobile stations, or between land mobile stations.

43 *Base Station :* A land station in the land mobile service carrying on a service with land mobile stations.

44 *Land Mobile Station :* A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent.

45 *Radiodetermination :* The determination of position, or the obtaining of information relating to position, by means of the propagation properties of radio waves.

46 *Radiodetermination Service :* A service involving the use of radiodetermination.

47 *Radiodetermination Station :* A station in the radiodetermination service.

48 *Radionavigation :* Radiodetermination used for the purposes of navigation, including obstruction warning.

49 *Radionavigation Service :* A radiodetermination service involving the use of radionavigation.

50 *Radionavigation Land Station :* A station in the radionavigation service not intended to be used while in motion.

51 *Radionavigation Mobile Station :* A station in the radionavigation service intended to be used while in motion or during halts at unspecified points.

52 *Aeronautical Radionavigation Service :* A radionavigation service intended for the benefit of aircraft.

53 *Maritime Radionavigation Service :* A radionavigation service intended for the benefit of ships.

54 *Radiolocation :* Radiodetermination used for purposes other than those of radionavigation.

55 *Radiolocation Service :* A radiodetermination service involving the use of radiolocation.

56 *Radiolocation Land Station:* A station in the radiolocation service not intended to be used while in motion.

57 *Radiolocation Mobile Station:* A station in the radiolocation service intended to be used while in motion or during halts at unspecified points.

58 *Radar:* A radiodetermination system based on the comparison of reference signals with radio signals reflected, or re-transmitted, from the position to be determined.

59 *Primary Radar:* A radiodetermination system based on the comparison of reference signals with radio signals reflected from the position to be determined.

60 *Secondary Radar:* A radiodetermination system based on the comparison of reference signals with radio signals re-transmitted from the position to be determined.

60A *Radar beacon* (racon): In the maritime radionavigation ser-
Mar2 vice, a receiver-transmitter device which, when triggered by a surface search radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information.

61 *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.

62 *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.

63 *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.

64 *Marker Beacon:* A transmitter in the aeronautical radionavigation service which radiates vertically a distinctive pattern for providing position information to aircraft.

65 *Radio Altimeter:* A radionavigation equipment, on board an aircraft, which makes use of the reflection of radio waves from the ground to determine the height of the aircraft above the ground.

66 *Radio Direction-Finding:* Radiodetermination using the reception of radio waves for the purpose of determining the direction of a station or object.

67 *Radio Direction-Finding Station:* A radiodetermination station using radio direction-finding.

68 *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.

68A *Emergency Position-Indicating Radiobeacon Station:* A station
Mar in the mobile service the emissions of which are intended to facilitate search and rescue operations.

69 *Safety Service*
Spa2

A radiocommunication service used permanently or temporarily for the safeguarding of human life and property on the Earth's surface, in the air or in space.

70 – 73 SUP (Spa)

74 *Radio Astronomy:* Astronomy based on the reception of radio waves of cosmic origin.

75 *Radio Astronomy Service:* A service involving the use of radio astronomy.

75A *Radio Astronomy Station*
Spa

A station in the radio astronomy service.

76 *Meteorological Aids Service:* A radiocommunication service used for meteorological, including hydrological, observations and exploration.

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.

78 *Amateur Service :* A service of self-training, intercommunication and technical investigations carried on by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

79 *Amateur Station :* A station in the amateur service.

80 *Standard Frequency Service :* A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies of stated high precision, intended for general reception.

81 *Standard Frequency Station :* A station in the standard frequency service.

82 *Time Signal Service :* A radiocommunication service for the transmission of time signals of stated high precision, intended for general reception.

83 *Experimental Station :* A station utilizing radio waves in experiments with a view to the development of science or technique. This definition does not include amateur stations.

84 *Special Service :* A radiocommunication service, not otherwise defined in this Article, carried on exclusively for specific needs of general utility, and not open to public correspondence.

84AA 84AB SUP (Spa2)

Section IIA. Space Systems, Services and Stations

84AC — 84AE SUP (Spa2)

84AF *Space System*
Spa2

Any group of co-operating earth and/or space stations employing space radiocommunication for specific purposes.

84AFA *Satellite System*
Spa2

A space system using one or more artificial earth satellites.

84AFB *Satellite Network*
Spa2

A satellite system or a part of a satellite system, consisting of only one satellite and the co-operating earth stations.

84AFC *Satellite Link*
Spa2

A radio link between a transmitting earth station and a receiving earth station through one satellite.

A satellite link comprises one up-path and one down-path.

84AFD *Multi-Satellite Link*
Spa2

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-path, one or more satellite-to-satellite paths and one down-path.

84AG *Fixed-Satellite Service*
Spa2

A radiocommunication service:

— between earth stations at specified fixed points 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;

— for connection between one or more earth stations at specified fixed points and satellites used for a service other than the fixed-satellite service (for example, the mobile-satellite service, broadcasting-satellite service, etc.).

84AGA *Mobile-Satellite Service*
Spa2

A radiocommunication service:

— between mobile earth stations and one or more space stations; or between space stations used by this service;

— or between mobile earth stations by means of one or more space stations;

— and if the system so requires, for connection between these space stations and one or more earth stations at specified fixed points.

84AGB *Aeronautical Mobile-Satellite Service*
Spa2

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.

84AGC *Maritime Mobile-Satellite Service*
Spa2

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.

84AGCA *Ship Earth Station:* A mobile earth station in the maritime
Mar2 mobile-satellite service located on board ship.

84AGD *Land Mobile-Satellite Service*
Spa2

A mobile-satellite service in which mobile earth stations are located on land.

84AH – 84AO **SUP** **(Spa2)**

84AP *Broadcasting-Satellite Service*
Spa2

A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception [1] by the general public.

84APA *Individual reception* (in the broadcasting-satellite service)
Spa2

The reception of emissions from a space station in the broadcasting-satellite service by simple domestic installations and in particular those possessing small antennae.

84APB *Community reception* (in the broadcasting-satellite service)
Spa2

The reception of emissions from a space station in the broadcasting-satellite service by receiving equipment, which in some cases may be complex and have antennae larger than those used for individual reception, and intended for use:

— by a group of the general public at one location; or

— through a distribution system covering a limited area.

84APC *Radiodetermination-Satellite Service*
Spa2

A radiocommunication service involving the use of radiodetermination and the use of one or more space stations.

84AP.1 [1] In the broadcasting-satellite service, the term "direct reception" shall
Spa2 encompass both individual reception and community reception.

84AQ *Radionavigation-Satellite Service*
Spa2

A radiodetermination-satellite service used for the same purposes as the radionavigation service; in certain cases this service includes transmission or retransmission of supplementary information necessary for the operation of radionavigation systems.

84AQA *Aeronautical Radionavigation-Satellite Service*
Spa2

A radionavigation-satellite service in which mobile earth stations are located on board aircraft.

84AQB *Maritime Radionavigation-Satellite Service*
Spa2

A radionavigation-satellite service in which mobile earth stations are located on board ships.

84AR **84AS** **SUP** **(Spa2)**

84ASA *Earth Exploration-Satellite Service*
Spa2

A radiocommunication service between earth stations and one or more space stations in which:

— information relating to the characteristics of the Earth and its natural phenomena is obtained from instruments on earth satellites;

— similar information is collected from air-borne or earth-based platforms;

— such information may be distributed to earth stations within the system concerned;

— platform interrogation may be included.

84AT *Meteorological-Satellite Service*
Spa2

An earth exploration-satellite service for meteorological purposes.

84ATA *Amateur-Satellite Service*
Spa2

A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.

84ATB *Standard Frequency-Satellite Service*
Spa2

A radiocommunication service using space stations on earth satellites for the same purposes as those of the standard frequency service.

84ATC *Time Signal-Satellite Service*
Spa2

A radiocommunication service using space stations on earth satellites for the same purposes as those of the time signal service.

84ATD *Space Research Service*
Spa2

A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.

84ATE *Space Operation Service*
Spa2

A radiocommunication service concerned exclusively with the operation of spacecraft, in particular tracking, telemetry and telecommand.

These functions will normally be provided within the service in which the space station is operating.

84ATF *Inter-Satellite Service*
Spa2

A radiocommunication service providing links between artificial earth satellites.

84AU **84AV** **SUP** **(Spa2)**

84AW *Space Telemetering*

Spa

The use of telemetering for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft.

84AX *Maintenance Space Telemetering*

Spa

Space telemetering relating exclusively to the electrical and mechanical condition of a spacecraft and its equipment together with the condition of the environment of the spacecraft.

84AY *Space Telecommand*

Spa

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.

84AZ *Space Tracking*

Spa

Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination, excluding primary radar, for the purpose of following the movement of the object.

Section IIB. Space, Orbits and Types of Objects in Space

84BA *Deep Space*

Spa2

Space at distances from the Earth approximately equal to, or greater than, the distance between the Earth and the Moon.

84BAA *Spacecraft*

Spa2

A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere.

84BAB *Satellite*
Spa2

A body[1] 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.

84BAC *Active Satellite*
Spa2

An earth satellite carrying a station intended to transmit or retransmit radiocommunication signals.

84BAD *Passive Satellite*
Spa2

An earth satellite intended to transmit radiocommunication signals by reflection.

84BB *Orbit*
Spa2

1. The path, relative to a specified frame of reference, described by the centre of mass of a satellite or other object in space, subjected solely to natural forces, mainly the force of gravity.

2. By extension, the path described by the centre of mass of an object in space subjected to natural forces and occasional low-energy corrective forces exerted by a propulsive device in order to achieve and maintain a desired path.

84BC *Inclination of an Orbit* (of an earth satellite)
Spa2

The angle determined by the plane containing an orbit and the plane of the Earth's equator.

84BD *Period* (of a satellite)
Spa2

The time elapsing between two consecutive passages of a satellite or planet through a characteristic point on its orbit.

84BAB.1 [1] A body so defined which revolves around the Sun is called a planet or
Spa2 planetoid.

84BE *Altitude of the Apogee (Perigee)*
Spa2

The altitude of the apogee (perigee) above a specified reference surface serving to represent the surface of the Earth.

84BF **SUP (Spa2)**

84BFA *Geosynchronous Satellite*
Spa2

An earth satellite whose period of revolution is equal to the period of rotation of the Earth about its axis.

84BG *Geostationary Satellite*
Spa2

A satellite, the circular orbit of which lies in the plane of the Earth's equator and which turns about the polar axis of the Earth in the same direction and with the same period as those of the Earth's rotation.

The orbit on which a satellite should be placed to be a geostationary satellite is called the "geostationary satellite orbit".

84BH **SUP (Spa2)**

Section III. Technical Characteristics

85 *Assigned Frequency:* The centre of the frequency band assigned to a station.

86 *Characteristic Frequency:* A frequency which can be easily identified and measured in a given emission.

87 *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.

88 *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 10^6 or in cycles per second.

89 *Assigned Frequency Band:* The frequency band the centre of which coincides with the frequency assigned to the station and the width of which equals the necessary bandwidth plus twice the absolute value of the frequency tolerance.

90 *Occupied Bandwidth:* The frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0·5 % of the total mean power radiated by a given emission. In some cases, for example multi-channel frequency-division systems, the percentage of 0·5 % may lead to certain difficulties in the practical application of the definitions of occupied and necessary bandwidth; in such cases a different percentage may prove useful.

91 *Necessary Bandwidth:* For a given class of emission, the minimum value of the occupied bandwidth sufficient to ensure the transmission of information at the rate and with the quality required for the system employed, under specified conditions. Emissions useful for the good functioning of the receiving equipment as, for example, the emission corresponding to the carrier of reduced carrier systems, shall be included in the necessary bandwidth.

92 *Spurious Emission:* Emission on a frequency or frequencies which are outside the necessary band, and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions and intermodulation products, but exclude emissions in the immediate vicinity of the necessary band, which are a result of the modulation process for the transmission of information.

93 *Harmful Interference:* Any emission, radiation or induction 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.

94 *Power:* Whenever the power of a radio transmitter, etc., is referred to, it shall be expressed in one of the following forms:

— peak envelope power (P_p);

— mean power (P_m);

— carrier power (P_c).

For different classes of emissions, the relationships between peak envelope power, mean power and carrier power, under the conditions of normal operation and of no modulation, are contained in Recommendations of the C.C.I.R., which may be used as a guide.

95 *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 highest crest of the modulation envelope, taken under conditions of normal operation.

96 *Mean Power of a Radio Transmitter:* The power supplied to the antenna transmission line by a transmitter during normal operation, averaged over a time sufficiently long compared with the period of the lowest frequency encountered in the modulation. A time of 1/10 second during which the mean power is greatest will be selected normally.

97 *Carrier Power of a Radio Transmitter:* The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle under conditions of no modulation. This definition does not apply to pulse modulated emissions.

98 *Effective Radiated Power:* The power supplied to the antenna multiplied by the relative gain of the antenna in a given direction.

98A *Equivalent Isotropically Radiated Power (e.i.r.p.)*
Spa2

The product of the power of an emission as supplied to an antenna and the antenna gain in a given direction relative to an isotropic antenna.

99 *Gain of an Antenna:* The ratio of the power required at the input of a reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field at the same distance. When not specified otherwise, the figure expressing the gain of an antenna refers to the gain in the direction of the radiation main lobe. In services using scattering modes of propagation the full gain of an antenna may not be realizable in practice and the apparent gain may vary with time.

100 *Isotropic or Absolute Gain of an Antenna:* The gain (G_{is}) of an antenna in a given direction when the reference antenna is an isotropic antenna isolated in space.

101 *Relative Gain of an Antenna:* The gain (G_d) of an antenna in a given direction when the reference antenna is a half-wave loss free dipole isolated in space and the equatorial plane of which contains the given direction.

102 *Gain Referred to a Short Vertical Antenna:* The gain (G_v) of an antenna in a given direction when the reference antenna is a perfect vertical antenna, much shorter than one quarter of the wavelength, placed on the surface of a perfectly conducting plane earth.

103 *Antenna Directivity Diagram:* A curve representing, in polar or cartesian co-ordinates, a quantity proportional to the gain of an antenna in the various directions in a particular plane or cone.

103A *Equivalent Satellite Link Noise Temperature*
Spa2

The noise temperature at the input of the earth station receiver 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.

103B *Co-ordination Distance*
Spa2

Distance from an earth station in a given azimuth within which a terrestrial station sharing the same frequency band may cause or be subject to more than a permissible level of interference.

103C *Co-ordination Contour*
Spa2

The line joining the points which are on all azimuths around an earth station at a distance from this station equal to the co-ordination distance corresponding to each azimuth.

103D *Co-ordination Area*
Spa2

Area around an earth station enclosed by the co-ordination contour.

ARTICLE 2

Designation of Emissions

104 § 1. Emissions are designated according to their classification and their necessary bandwidth.

Section I. Classification

105 § 2. Emissions are classified and symbolized according to the following characteristics [1] :

(1) Type of modulation of main carrier
(2) Type of transmission
(3) Supplementary characteristics

106 § 3. (1) *Types of modulation of main carrier :* *Symbol*

a) Amplitude A
b) Frequency (or Phase) F
c) Pulse P

107 (2) *Types of transmission :*

a) Absence of any modulation intended to carry information 0
b) Telegraphy without the use of a modulating audio frequency 1
c) Telegraphy by the on-off keying of a modulating audio frequency or audio frequencies, or by the on-off keying of the

---

105.1 [1] As an exception to the provisions of Nos. **106** to **108**, damped waves are designated by B.

	Symbol
modulated emission (special case : an unkeyed modulated emission)	2
d) Telephony (including sound broadcasting)	3
e) Facsimile (with modulation of main carrier either directly or by a frequency modulated sub-carrier)	4
f) Television (vision only)	5
g) Four-frequency diplex telegraphy	6
h) Multichannel voice-frequency telegraphy	7
i) Cases not covered by the above	9

108 (3) *Supplementary characteristics :*

a) Double sideband	(none)
b) Single sideband :	
— reduced carrier	A
— full carrier	H
— suppressed carrier	J
c) Two independent sidebands	B
d) Vestigial sideband	C
e) Pulse :	
— amplitude modulated	D
— width (or duration) modulated	E
— phase (or position) modulated	F
— code modulated	G

109 § 4. The classification of typical emissions is tabulated as follows:

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Amplitude Modulation	With no modulation	—	A0
	Telegraphy without the use of a modulating audio frequency (by on-off keying)	—	A1
	Telegraphy by the on-off keying of an amplitude-modulating audio frequency or audio frequencies, or by the on-off keying of the modulated emission (special case: an unkeyed emission amplitude modulated)	—	A2
	Telephony	Double sideband	A3
		Single sideband, reduced carrier	A3A
		Single sideband, suppressed carrier	A3J
		Two independent sidebands	A3B
	Facsimile (with modulation of main carrier either directly or by a frequency modulated sub-carrier)	—	A4
		Single sideband, reduced carrier	A4A
	Television	Vestigial sideband	A5C
	Multichannel voice-frequency telegraphy	Single sideband, reduced carrier	A7A
	Cases not covered by the above, e.g. a combination of telephony and telegraphy	Two independent sidebands	A9B

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Frequency (or Phase) Modulation	Telegraphy by frequency shift keying without the use of a modulating audio frequency: one of two frequencies being emitted at any instant	—	F1
	Telegraphy by the on-off keying of a frequency modulating audio frequency or by the on-off keying of a frequency modulated emission (special case: an unkeyed emission, frequency modulated)	—	F2
	Telephony	—	F3
	Facsimile by direct frequency modulation of the carrier	—	F4
	Television	—	F5
	Four-frequency diplex telegraphy	—	F6
	Cases not covered by the above, in which the main carrier is frequency modulated	—	F9

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Pulse Modulation	A pulsed carrier without any modulation intended to carry information (e.g. radar)	—	P0
	Telegraphy by the on-off keying of a pulsed carrier without the use of a modulating audio frequency	—	P1D
	Telegraphy by the on-off keying of a modulating audio frequency or audio frequencies, or by the on-off keying of a modulated pulsed carrier (special case: an unkeyed modulated pulsed carrier)	Audio frequency or audio frequencies modulating the amplitude of the pulses	P2D
		Audio frequency or audio frequencies modulating the width (or duration) of the pulses	P2E
		Audio frequency or audio frequencies modulating the phase (or position) of the pulses	P2F

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Pulse Modulation	Telephony	Amplitude modulated pulses	P3D
		Width (or duration) modulated pulses	P3E
		Phase (or position) modulated pulses	P3F
		Code modulated pulses (after sampling and quantization)	P3G
	Cases not covered by the above in which the main carrier is pulse modulated	—	P9

Section II. Bandwidths

110 § 5. Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by a number indicating in kilohertz the necessary bandwidth of the emission. Bandwidths shall generally be expressed to a maximum of three significant figures, the third figure being almost always a nought or a five.

111 § 6. The necessary bandwidths of various classes of emissions and examples of the designation of emissions are given in Appendix 5.

Section III. Nomenclature of the Frequency and Wavelength Bands used in Radiocommunication

112 **Spa2** § 7. The radio spectrum shall be subdivided into nine frequency bands, which shall be designated by progressive whole numbers in accordance with the following table. Frequencies shall be expressed:

— in kilohertz (kHz) up to and including 3000 kHz

— in megahertz (MHz) thereafter up to and including 3000 MHz

— in gigahertz (GHz) thereafter up to and including 3000 GHz.

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	Frequency Range (lower limit exclusive, upper limit inclusive)	Corresponding Metric Subdivision
4	3 to 30 kHz	Myriametric waves
5	30 to 300 kHz	Kilometric waves
6	300 to 3000 kHz	Hectometric waves
7	3 to 30 MHz	Decametric waves
8	30 to 300 MHz	Metric waves
9	300 to 3000 MHz	Decimetric waves
10	3 to 30 GHz	Centimetric waves
11	30 to 300 GHz	Millimetric waves
12	300 to 3000 GHz or 3 THz	Decimillimetric waves

Note 1: "Band Number N" extends from $0{\cdot}3 \times 10^N$ to 3×10^N Hz.

Note 2: Symbols and prefixes:
Hz = hertz
k = kilo (10^3), M = mega (10^6), G = giga (10^9), T = tera (10^{12}).

Note 3: Abbreviations for adjectival band designations:

Band 4 = VLF	Band 8 = VHF
Band 5 = LF	Band 9 = UHF
Band 6 = MF	Band 10 = SHF
Band 7 = HF	Band 11 = EHF

CHAPTER II

Frequencies

ARTICLE 3

General Rules for the Assignment and Use of Frequencies

113 § 1. The Members and Associate Members of the Union agree 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.

114 § 2. Any new assignment or any change of frequency or other
Spa 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.

115 § 3. Administrations of the Members and Associate Members of the Union 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.

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.

116A § 4A. For the purpose of resolving cases of harmful interference,
Spa 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.

117 § 5. Where, in adjacent Regions or sub-Regions, a band of frequencies is allocated to different services of the same category (see Section II of Article 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.

ARTICLE 4

Special Agreements

118 § 1. Two or more Members or Associate Members of the Union may, in accordance with Article 31 of the Convention, conclude special agreements regarding the sub-allocation of bands of frequencies to the appropriate services of the participating countries.

119 § 2. Two or more Members or Associate Members of the Union may, in accordance with Article 31 of the Convention, conclude special agreements, as a result of a Conference to which all those Members and Associate Members of the Union affected 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 5, either below 5 060 kHz or above 27 500 kHz, but not between those limits.

120 § 3. The Members and Associate Members of the Union may, in accordance with Article 31 of the Convention, conclude, on a world-wide basis, and as a result of a Conference to which all Members and Associate 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 5.

121 § 4. Special agreements concluded in accordance with the provisions of Nos. **118** to **120** shall not be in conflict with any of the provisions of these Regulations.

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 and Associate Members of the Union of the existence of such agreements.

123 § 6. In accordance with the provisions of Article 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.

124 § 7. If, besides the action they may take in accordance with No. **119,** two or more Members or Associate Members of the Union co-ordinate the use of individual frequencies in any of the frequency bands covered by Article 5 before notifying the frequency assignments concerned, they shall in all appropriate cases inform the Board of such co-ordination.

ARTICLE 5

Spa2

Frequency Allocations [1]
10 kHz to 275 GHz

Section I. Regions and Areas

125 § 1. For the allocation of frequencies the world has been
Spa2 subdivided into three Regions [2] (see Appendix 24).

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.

127 *Region 2 :*

Region 2 includes the area limited on the East by line B and on the West by line C.

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.

129 The lines A, B, and C are defined as follows :

Spa2 [1] See Resolution No. 6.

125.1 Spa2 [2] 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.

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.

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.

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.

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. and the territories bordering the Mediterranean, with the exception of the parts of Arabia and Saudi Arabia included in this sector. In addition, Iraq is included in the European Broadcasting Area.

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.

135 The " Tropical Zone " (see Appendix 24) 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.

136 In Region 2, the Tropical Zone may be extended to parallel 33° North, subject to appropriate special agreements between the countries concerned in that Region.

Section II. Categories of Services and Allocations

Primary Services, Permitted Services and Secondary Services

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 world-wide or Regional basis, such services are listed in the following order :

a) services, the names of which are printed in " small capitals " (example: FIXED) ; these services are called " primary " services ;

b) services, the names of which are printed in " grotesque light " (example: Radiolocation) ; these are " permitted " services (see No. **138**) ;

c) services, the names of which are printed in " italics " (example : *Mobile*) ; these are " secondary " services (see No. **139**).

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.

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 ;

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.

140 Where a band is indicated in a footnote to 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. **139**).

141 Where a band is indicated in a footnote to 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. **138**).

Additional services

142 Where a band is indicated in a footnote to the Table as " also allocated " to a service in an area smaller than a Region, or in a particular country, this is an " additional " service, i.e. a service which is added in this area or in this country to the service or services which are indicated in the Table (see No. **143**).

143 If the footnote does not include any restriction on an additional service apart from the restriction to operate only in a particular area or country, stations of this service shall have equality of right to operate with stations of the other service or services, the names of which are printed in " small capitals " in the Table.

144 If restrictions are imposed on an additional service in addition to the restriction to operate only in a particular area or country, this is indicated in the footnote to the Table.

Alternative allocations

145 Where a band is indicated in a footnote to 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. **146**).

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 shall

have an equality of right to operate with stations of the service or services, the names of which are printed in " small capitals " in the Table, and to which the band is allocated in other areas or countries.

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.

Miscellaneous Provisions

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 II of these Regulations.

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.

Section III. Description of the Table of Frequency Allocations

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. **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.

151 The frequency band referred to in each allocation is indicated in bold type in the left hand top corner of the part of the Table concerned.

152 Within each of the categories specified in No. **137**, services are listed in alphabetical order according to the French language. The order of listing does not indicate relative priority within each category.

153 The footnote references which appear in the Table below the allocated service or services apply to the whole of the allocation concerned.

154 The footnote references which appear to the right of the name of a service are applicable only to that particular service.

155 In certain cases, the names of countries appearing in the footnotes have been simplified in order to shorten the text.

Spa2 **Section IV. Table of Frequency Allocations – 10 kHz to 275 GHz**

156 This Table is shown on pages RR5-8 to RR5-117 following.

Allocation to Services		
Region 1	Region 2	Region 3
Below 10	(Not allocated) 157	
10 — 14	**RADIONAVIGATION** *Radiolocation*	
14 — 19·95	FIXED MARITIME MOBILE 158 159	
19·95 — 20·05	STANDARD FREQUENCY 160 159	
20·05 — 70	FIXED MARITIME MOBILE 158 159 161	

157 Administrations authorizing the use of frequencies below 10 kHz for special national purposes shall ensure that no harmful interference is caused thereby to the services to which the bands above 10 kHz are allocated (see also Article 14, No. **699**).

158 **Mar** Limited to coast radiotelegraph stations (A1 and F1 only). Exceptionally, the use of class A7J emissions is permissible subject to the necessary bandwidth not exceeding that normally used for class A1 or F1 emissions in the bands concerned.

159 The stations of services to which the bands between 14 and 70 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.

160 The standard frequency is 20 kHz.

161 In the U.S.S.R., frequencies in the band 60-80 kHz may be used for industrial, scientific and medical purposes subject to the condition that interference is not caused to stations of services to which this band is allocated.

Allocation to Services		
Region 1	Region 2	Region 3
70 — 72 RADIONAVIGATION 162 161	**70 — 90** FIXED MARITIME MOBILE 158 MARITIME RADIONAVIGATION 162 *Radiolocation*	**70 — 90** FIXED MARITIME MOBILE 158 RADIONAVIGATION 162
72 — 84 FIXED MARITIME MOBILE 158 RADIONAVIGATION 162 161 163		
84 — 86 RADIONAVIGATION 162 163		
86 — 90 FIXED MARITIME MOBILE 158 RADIONAVIGATION 162 163	164	165

162 Limited to continuous wave systems.

163 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 80-150 kHz is allocated on a secondary basis to the aeronautical and land mobile services while within and between these countries these services shall have equal right to operate.

164 The establishment and operation of maritime radionavigation stations shall be subject to arrangements between administrations whose services, operating in accordance with the Table, may be affected. However, the fixed, maritime mobile and radiolocation services shall not cause harmful interference to maritime radionavigation stations established under such arrangements.

165 In the bands 70-72 kHz and 84-86 kHz, the radionavigation service is the primary service and the fixed and maritime mobile services are secondary services, except in Japan and Pakistan.

Allocation to Services		
Region 1	Region 2	Region 3
90—110	**90—110**	**90—110**
FIXED	RADIONAVIGATION	FIXED
MARITIME MOBILE 158	*Fixed*	MARITIME MOBILE 158
RADIONAVIGATION	*Maritime mobile* 158	RADIONAVIGATION
163 166 167	166 167	166 167

166 The development and operation of long distance radionavigation systems are authorized in this band, which will become exclusively allocated, wholly or in part, to the radionavigation service for the use of any one such system as soon as it is internationally adopted. Other considerations being equal, preference should be given to the system requiring the minimum bandwidth for world-wide service and causing the least harmful interference to other services. If a pulse radionavigation system is employed, the pulse emissions shall nevertheless be confined within the band 90-110 kHz and shall not cause harmful interference outside the band to stations operating in accordance with the Regulations. In Regions 1 and 3, during the period prior to the international adoption of any long distance radionavigation system, the operation of specific radionavigation stations shall be subject to agreements between administrations whose services, operating in accordance with the Table, may be affected. Once established under such agreements, radionavigation stations shall be protected from harmful interference.

167 **Mar2** Only classes A1 or F1, A4 or F4 emissions are authorized in the band 90-160 kHz for stations of the fixed service and in the band 110-160 kHz for stations of the maritime mobile service. Exceptionally, class A7J emissions are also authorized in the band 110-160 kHz for stations of the maritime mobile service.

Allocation to Services		
Region 1	Region 2	Region 3
110—112 FIXED MARITIME MOBILE RADIONAVIGATION 162 163 167 168	**110—130** FIXED MARITIME MOBILE MARITIME RADIONAVIGATION 162 *Radiolocation* 164 167 168	**110—130** FIXED MARITIME MOBILE RADIONAVIGATION 162 167 168 170
112—115 RADIONAVIGATION 162 163		
115—126 FIXED MARITIME MOBILE RADIONAVIGATION 162 163 167 168 169		
126—129 RADIONAVIGATION 162 163		
129—130 FIXED MARITIME MOBILE RADIONAVIGATION 162 163 167 168		

168 Aeronautical stations may use frequencies in the bands 110-112 kHz, 115-126 kHz and 129-130 kHz on a permitted basis for high-speed communications to aircraft.

169 In the band 115-117·6 kHz the radionavigation service is the primary service and the fixed and maritime mobile services are secondary services. In the same band, in France and the F. R. of Germany the fixed and maritime mobile services are primary services and the radionavigation service is a secondary service.

170 In the bands 112-117·6 kHz and 126-129 kHz, the radionavigation service is the primary service and the fixed and maritime mobile services are secondary services, except in Japan and Pakistan.

kHz
130—160

Allocation to Services		
Region 1	Region 2	Region 3
130 — 150 MARITIME MOBILE 172 Fixed 163 167 173	**130 — 150** FIXED MARITIME MOBILE 167	
150 — 160 MARITIME MOBILE 167 174 BROADCASTING 175	**150 — 160** FIXED MARITIME MOBILE 167	

171 SUP (Mar)

172 Mar Limited to ship stations. However, the bands between 140 and 146 kHz may also be used for coast stations on a permitted basis.

173 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 130-150 kHz is allocated on a secondary basis to the radionavigation service while within and between these countries this service shall have equal right to operate.

174 The maritime mobile service shall not cause harmful interference to the reception of broadcasting stations within the boundaries of the national territories in which the broadcasting stations are situated.

175 By special agreement.

Allocation to Services		
Region 1	Region 2	Region 3
160 — 255 BROADCASTING 176	**160 — 200** FIXED 179	**160 — 200** FIXED *Aeronautical radionavigation*
255 — 285 MARITIME MOBILE 174 BROADCASTING AERONAUTICAL RADIONAVIGATION 176 177 178	**200 — 285** AERONAUTICAL RADIONAVIGATION *Aeronautical mobile*	

176 In the Belgian Congo and Ruanda Urundi, Ethiopia, the Portuguese Oversea Provinces in Region 1 south of the equator, Rhodesia and Nyasaland, and the Union of South Africa and the Territory of South-West Africa, the band 160-200 kHz is allocated to the fixed service; the band 200-285 kHz is allocated to aeronautical mobile and aeronautical radionavigation services.

177 In the western part of the European Broadcasting Area, the band 255-285 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.

178 Norwegian stations of the aeronautical fixed service situated in northern areas subject to auroral disturbances are allowed to continue operation on one frequency in the band 255-285 kHz

179 In northern areas which are subject to auroral disturbances the aeronautical fixed service is the primary service.

Allocation to Services		
Region 1	Region 2	Region 3
285—315	MARITIME RADIONAVIGATION (radiobeacons) *Aeronautical radionavigation*	
315—325 AERONAUTICAL RADIONAVIGATION 180	**315—325** MARITIME RADIONAVIGATION (radiobeacons) *Aeronautical radionavigation*	
325—405	AERONAUTICAL RADIONAVIGATION *Aeronautical mobile* 181	

180 In the U.S.S.R. and the Black Sea areas of Bulgaria, Roumania and Turkey, the band 315-325 kHz is also allocated to the maritime radionavigation service under the following conditions:

a) Stations of this service shall not cause interference to stations of the aeronautical radionavigation service in the North Sea area.

b) In the Black Sea and White Sea areas, the maritime radionavigation service is the primary service and the aeronautical radionavigation service is the permitted service.

c) In the Baltic Sea area, the assignment of frequencies in this band to new stations in the maritime or aeronautical radionavigation services shall be subject to prior consultation between the administrations concerned.

181 Norwegian fixed stations situated in northern areas subject to auroral disturbances are allowed to continue operation on two frequencies in the band 385-395 kHz for transmissions chiefly composed of weather messages.

kHz
405—510

Allocation to Services		
Region 1	Region 2	Region 3
405—415	**405—415**	**405—415**
MOBILE except aeronautical mobile AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radio direction-finding)	MARITIME RADIONAVIGATION (radio direction-finding) Aeronautical radionavigation *Aeronautical mobile*	RADIONAVIGATION *Aeronautical mobile*
182 183 184	182	182
415—490	MARITIME MOBILE	
	185 186	
490—510	MOBILE (distress and calling)	
	187	

182 The frequency 410 kHz is designated for the maritime radionavigation service (radio direction-finding). Other allocated services in the band 405-415 kHz shall not cause harmful interference to radio direction-finding. In the band 405-415 kHz no frequency shall be assigned to coast stations.

183 The use of the band 405-415 kHz by the radionavigation service is limited to radio direction-finding except in the Baltic and North Sea areas where this band may also be used for the maritime radionavigation service for radiobeacon stations of mean power not exceeding 10 watts and subject to not causing harmful interference to radio direction-finding.

184 In Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 405-415 kHz is also allocated, on a secondary basis, to the aeronautical mobile service.

185 In the European Maritime Area, subject to the conditions specified in the Final Acts of the European Maritime Conference (Copenhagen 1948), and any subsequent revision of that agreement, the administrations concerned may keep in the bands 415-485 kHz and 515-525 kHz such of the following broadcasting stations as will not cause harmful interference to the maritime mobile service: Hamar, Innsbruck, Oestersund, Oulu.

186 Limited to radiotelegraphy.

187 The frequency 500 kHz is the international distress and calling frequency for radiotelegraphy. The conditions for its use are prescribed in Article 32.

kHz
510—1 605

Allocation to Services		
Region 1	Region 2	Region 3
510—525 MARITIME MOBILE 186 *Aeronautical radionavigation* 185	**510—525** MOBILE Aeronautical radionavigation 188	**510—525** MARITIME MOBILE *Aeronautical mobile* *Land mobile* 189
525—535 BROADCASTING 190	**525—535** MOBILE Broadcasting 191 Aeronautical radionavigation 188	**525—535** MOBILE Broadcasting
535—1 605 BROADCASTING		

188 In operating stations of the aeronautical radionavigation service, the administrations concerned shall take all the technical steps necessary to avoid harmful interference to the maritime mobile service.

189 In India, Iran and Pakistan, the band 510-525 kHz is also allocated, on a secondary basis, to the aeronautical radionavigation service.

190 In Rhodesia and Nyasaland, and the Union of South Africa and the Territory of South-West Africa, the band 525-535 kHz is allocated to the mobile service

191 The carrier power of broadcasting stations in this band shall not exceed 250 watts.

kHz
1 605–2 000
(Spa2) (Mar2)

<table>
<tr><th colspan="3">Allocation to Services</th></tr>
<tr><th>Region 1</th><th>Region 2</th><th>Region 3</th></tr>
<tr><td rowspan="2">1 605 – 2 000

FIXED

MOBILE except aeronautical mobile

192 193 194 195 195A</td><td>1 605 – 1 800

FIXED

MOBILE

AERONAUTICAL RADIONAVIGATION

Radiolocation</td><td>1 605 – 1 800

FIXED

MOBILE

197</td></tr>
<tr><td colspan="2">1 800 – 2 000

AMATEUR

FIXED

MOBILE except aeronautical mobile

RADIONAVIGATION

198</td></tr>
</table>

192 In the Tropical Zone of Region 1, with the exception of that part of Libya north of the parallel 30° N, the band 1 605-1 800 kHz is also allocated, on a secondary basis, to the aeronautical radionavigation service (radiobeacons only).

193 Special agreements shall determine the conditions of operation of stations of the fixed and mobile services in order to protect these services from mutual harmful interference, having special regard to the difficulties of operation of stations of the maritime mobile service.

194 In Austria, Denmark, Finland, Ireland, Netherlands, the F.R. of Germany, Rhodesia and Nyasaland, United Kingdom, Switzerland, Czechoslovakia, and the Union of South Africa and Territory of South-West Africa, administrations may allocate up to 200 kHz to their amateur service within the band 1 715-2 000 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.

195 The operation of Loran radionavigation stations is authorized temporarily on 1 950 kHz (the band occupied being 1 925-1 975 kHz) provided that, except for the stations comprising the North-East Atlantic Loran System (north of latitude 55° N), the establishment and operation of specific Loran stations shall be the subject of special agreements among administrations having operations that would be affected. All practicable measures shall be taken to reduce harmful interference from Loran transmissions to other services to which this band or adjacent bands are allocated.

195A Mar2 The countries of the European Maritime Area use radiodetermination systems the establishment and operation of which are covered by special arrangements between administrations having services which may be affected.

196 SUP (Mar2)

197 Mar In Australia, North Borneo, Brunei, Sarawak, Singapore, China, Indonesia, Malaya, New Zealand and the Philippines, the band 1 605-1 800 kHz is allocated on a permitted basis to the aeronautical radionavigation service, the stations of which shall use a mean power not exceeding 2 kW.[1]

198 In Region 2 the Loran system has priority. Other services to which the band is allocated may use any frequency in this band provided that they do not cause harmful interference to the Loran system.

In Region 3 the Loran system in any particular area operates either on 1 850 or 1 950 kHz, the bands occupied being 1825-1875 kHz and 1925-1975 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.

199 SUP (Spa2)

197.1 Mar [1] In Australia, Malaysia [including Sabah (North Borneo) and Sarawak], Brunei, Singapore, China, Indonesia, New Zealand and the Philippines, the stations of the maritime mobile service are authorized to use this band subject to agreements to be reached with administrations whose services, operating in accordance with the Table, may be affected.

199.1 SUP (Spa2)

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td>2 000 – 2 045

FIXED

MOBILE except
aeronautical mobile

193 195A</td><td colspan="2" rowspan="2">2 000 – 2 065

FIXED

MOBILE</td></tr>
<tr><td>2 045 – 2 065

METEOROLOGICAL AIDS
FIXED
MOBILE except
aeronautical mobile

193 195A</td></tr>
<tr><td rowspan="2">2 065 – 2 170

FIXED

MOBILE except
aeronautical mobile (R)

193 195A</td><td colspan="2">2 065 – 2 107

MARITIME MOBILE

200</td></tr>
<tr><td>2 107 – 2 170

FIXED

MOBILE</td><td></td></tr>
<tr><td colspan="3">2 170 – 2 194

MOBILE (distress and calling)

201 201A</td></tr>
</table>

200 Mar 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;**

201 Mar The frequency 2 182 kHz is the international distress and calling frequency for radiotelephony. The conditions for the use of the band 2 170–2 194 kHz are prescribed in Article 35.

201A Spa2 The frequencies 2 182 kHz, 3 023·5 kHz, 5 680 kHz, 8 364 kHz, 121·5 MHz, 156·8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles.

The same applies to the frequencies 10 003 kHz, 14 993 kHz and 19 993 kHz, but in each of these cases emissions must be confined in a band of $\pm$ 3 kHz about the frequency.

Allocation to Services		
Region 1	Region 2	Region 3
2 194 – 2 300 FIXED MOBILE except aeronautical mobile (R) 193 195A	**2 194 – 2 300** FIXED MOBILE	
2 300 – 2 498 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 202 193 195A	**2 300 – 2 495** FIXED MOBILE BROADCASTING 202	
2 498 – 2 502 STANDARD FREQUENCY 203 203A	**2 495 – 2 505** STANDARD FREQUENCY 203 203A	
2 502 – 2 625 FIXED MOBILE except aeronautical mobile (R) 193 195A	**2 505 – 2 625** FIXED MOBILE	
2 625 – 2 650 MARITIME MOBILE MARITIME RADIONAVIGATION 175 195A	**2 625 – 2 850** FIXED MOBILE	
2 650 – 2 850 FIXED MOBILE except aeronautical mobile (R) 195A 205		

202 For the conditions of use of this band by the broadcasting service see Nos. **135, 136** and **423** to **428.**

203 The standard frequency is 2 500 kHz.

203A **Spa2** The bands 2 501 – 2 502 kHz, 5 003 – 5 005 kHz, 10 003 – 10 005 kHz, 15 005 – 15 010 kHz, 19 990 – 19 995 kHz, 20 005 – 20 010 kHz and 25 005 – 25 010 kHz are also allocated, on a secondary basis, to the space research service.

204 **SUP (Spa2)**

205 Special agreements shall determine the conditions of operation of stations of the fixed and mobile services in order to protect these services from mutual harmful interference, having special regard to the difficulties of operation of stations of the maritime mobile service and also to the needs of the fixed service in certain areas.

Allocation to Services		
Region 1	Region 2	Region 3
2 850 — 3 025	AERONAUTICAL MOBILE (R) 201A 205A	
3 025 — 3 155	AERONAUTICAL MOBILE (OR)	
3 155 — 3 200	FIXED MOBILE except aeronautical mobile (R)	
3 200 — 3 230	FIXED MOBILE except aeronautical mobile (R) BROADCASTING 202	
3 230 — 3 400	FIXED MOBILE except aeronautical mobile BROADCASTING 202	
3 400 — 3 500	AERONAUTICAL MOBILE (R)	

kHz
3 500 — 4 000

Allocation to Services		
Region 1	Region 2	Region 3
3 500 — 3 800 AMATEUR FIXED MOBILE except aeronautical mobile	**3 500 — 4 000** AMATEUR FIXED MOBILE exept aeronautical mobile (R)	**3 500 — 3 900** AMATEUR FIXED MOBILE 206 207
3 800 — 3 900 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE		
3 900 — 3 950 AERONAUTICAL MOBILE (OR)		**3 900 — 3 950** AERONAUTICAL MOBILE BROADCASTING
3 950 — 4 000 FIXED BROADCASTING		**3 950 — 4 000** FIXED BROADCASTING

205A The frequencies 3 023·5 kHz and 5 680 kHz may also be used, in accordance with
Mar2 Nos. **1326C** and **1353B** respectively, by stations of the maritime mobile service engaged in coordinated search and rescue operations.

206 In Australia, the band 3 500-3 700 kHz is allocated to the amateur service; the band 3 700-3 900 kHz is allocated to the fixed and mobile services.

207 In India, the band 3 500-3 890 kHz is allocated to the fixed and mobile services; the band 3 890-3 900 kHz is allocated to the amateur service.

kHz
4 000—4 850
(Mar2)

Allocation to Services		
Region 1	Region 2	Region 3
4 000 — 4 063 FIXED		
4 063 — 4 438 MARITIME MOBILE 208 209 209A		
4 438 — 4 650 FIXED MOBILE except aeronautical mobile (R)		**4 438 — 4 650** FIXED MOBILE except aeronautical mobile
4 650 — 4 700 AERONAUTICAL MOBILE (R)		
4 700 — 4 750 AERONAUTICAL MOBILE (OR)		
4 750 — 4 850 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING 202	**4 750 — 4 850** FIXED BROADCASTING 202	

208 In the U.S.S.R., in the bands 4 063-4 133 kHz and 4 408-4 438 kHz, fixed stations of limited power may operate provided that, in order to minimize the possibility of causing harmful interference to the maritime mobile service, they are situated at least 600 km from the coast. A limited power station is one whose power and antenna characteristics are so adjusted that the field strength established at any point in any direction does not exceed that obtainable with a non-directive antenna and a peak envelope power of 1 kW.

209 On condition that harmful interference is not caused to the maritime mobile service, the frequencies between 4 063 and 4 438 kHz may be used exceptionally by fixed stations communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 watts; however, in Regions 2 and 3, between 4 238 and 4 368 kHz, a mean power not exceeding 500 watts may be used by such fixed stations.

kHz
4 850—5 480
(Spa2)

<table>
<tr><th colspan="3">Allocation to Services</th></tr>
<tr><th>Region 1</th><th>Region 2</th><th>Region 3</th></tr>
<tr><td colspan="3">4 850 — 4 995
FIXED
LAND MOBILE
BROADCASTING 202</td></tr>
<tr><td colspan="3">4 995 — 5 005
STANDARD FREQUENCY
203A 210</td></tr>
<tr><td colspan="3">5 005 — 5 060
FIXED
BROADCASTING 202</td></tr>
<tr><td colspan="3">5 060 — 5 250
FIXED</td></tr>
<tr><td>5 250 — 5 430
FIXED
LAND MOBILE</td><td>5 250 — 5 450
FIXED
LAND MOBILE</td><td>5 250 — 5 430
FIXED
LAND MOBILE</td></tr>
<tr><td>5 430 — 5 480
FIXED
AERONAUTICAL MOBILE (OR)
LAND MOBILE</td><td>5 450 — 5 480
AERONAUTICAL MOBILE (R)</td><td>5 430 — 5 480
FIXED
AERONAUTICAL MOBILE (OR)
LAND MOBILE</td></tr>
</table>

209A Mar2 For the use of carrier frequency 4 136·3 kHz (as from 1 January 1978 to be replaced by carrier frequency 4 125 kHz) in the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, see No. **1351E**.

210 **The standard frequency is 5 000 kHz.**

Allocation to Services		
Region 1	Region 2	Region 3
5 480—5 680	AERONAUTICAL MOBILE (R) 201A 205A	
5 680—5 730	AERONAUTICAL MOBILE (OR) 201A 205A	
5 730—5 950	FIXED	
5 950—6 200	BROADCASTING	
6 200—6 525	MARITIME MOBILE 211 211A	
6 525—6 685	AERONAUTICAL MOBILE (R)	
6 685—6 765	AERONAUTICAL MOBILE (OR)	
6 765—7 000	FIXED	
7 000—7 100	AMATEUR AMATEUR-SATELLITE	

211 On condition that harmful interference is not caused to the maritime mobile service, the frequencies between 6 200 and 6 525 kHz may be used exceptionally by fixed stations, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 watts. At the time of notification of these frequencies, the attention of the International Frequency Registration Board will be drawn to the above conditions.

211A **Mar2** For the use of carrier frequency 6 204 kHz (as from 1 January 1978 to be replaced by carrier frequency 6 215·5 kHz) in the zone of Region 3 south of latitude 25° N, see No. **1351F**.

kHz
7 100—9 995
(Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
7 100 — 7 300 BROADCASTING 212	**7 100 — 7 300** AMATEUR	**7 100 — 7 300** BROADCASTING
7 300 — 8 195	FIXED	
8 195 — 8 815	MARITIME MOBILE 201A 213	
8 815 — 8 965	AERONAUTICAL MOBILE (R)	
8 965 — 9 040	AERONAUTICAL MOBILE (OR)	
9 040 — 9 500	FIXED	
9 500 — 9 775	BROADCASTING	
9 775 — 9 995	FIXED	

212 In the Union of South Africa and the Territory of South West Africa, the band 7 100-7 150 kHz is allocated to the amateur service.

213 Between 8 435·4 and 8 476 kHz, 8 615 and 8 704·4 kHz, 8 745 and 8 815 kHz,
Mar2 12 652·3 and 12 714 kHz, 12 925 and 13 070·8 kHz, 13 130 and 13 200 kHz, 16 859·4 and 16 952 kHz, 17 160 and 17 196·9 kHz and between 17 290 and 17 360 kHz, the U.S.S.R. will meet their special requirements for the fixed service with due regard to technical provisions (power, location, antenna, etc.) with a view to minimizing the possibility of harmful interference to the maritime mobile service. Coast stations in the maritime mobile service will also have due regard to technical provisions (power, location, antenna, etc.) with a view to minimizing the possibility of harmful interference to the fixed service in the U.S.S.R. The International Frequency Registration Board will be consulted regarding this subject.

Allocation to Services		
Region 1	Region 2	Region 3
9 995—10 005	STANDARD FREQUENCY 201A 203A 214	
10 005—10 100	AERONAUTICAL MOBILE (R) 201A	
10 100—11 175	FIXED	
11 175—11 275	AERONAUTICAL MOBILE (OR)	
11 275—11 400	AERONAUTICAL MOBILE (R)	
11 400—11 700	FIXED 216	
11 700—11 975	BROADCASTING	
11 975—12 330	FIXED	

214 The standard frequency is 10 000 kHz.

215 **215A** SUP (Spa2)

216 In the U.S.S.R., the band 11 400-11 450 kHz is also allocated to the aeronautical mobile (OR) service.

kHz
12 330—14 990
(Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
12 330 — 13 200	MARITIME MOBILE 213	
13 200 — 13 260	AERONAUTICAL MOBILE (OR)	
13 260 — 13 360	AERONAUTICAL MOBILE (R)	
13 360 — 14 000	FIXED 217	
14 000 - 14 250	AMATEUR AMATEUR-SATELLITE	
14 250 - 14 350	AMATEUR 218	
14 350 — 14 990	FIXED	

217 The frequency 13 560 kHz is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of ± 0·05 % of that frequency. Radiocommunication services operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

218 In the U.S.S.R., the band 14 250-14 350 kHz is also allocated to the fixed service.

Allocation to Services		
Region 1	Region 2	Region 3
14 990—15 010	STANDARD FREQUENCY 201A 203A 219	
15 010—15 100	AERONAUTICAL MOBILE (OR)	
15 100—15 450	BROADCASTING	
15 450—15 762	FIXED	
15 762—15 768	FIXED	
15 768—16 460	FIXED	
16 460—17 360	MARITIME MOBILE 213	
17 360—17 700	FIXED	
17 700—17 900	BROADCASTING	

219 The standard frequency is 15 000 kHz.

kHz
17 900—21 750
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
17 900 — 17 970	AERONAUTICAL MOBILE (R)	
17 970 — 18 030	AERONAUTICAL MOBILE (OR)	
18 030 - 18 052	FIXED	
18 052 - 18 068	FIXED *Space Research*	
18 068 - 19 990	FIXED	
19 990 - 20 010	STANDARD FREQUENCY 201A 203A 220	
20 010 — 21 000	FIXED	
21 000 — 21 450	AMATEUR AMATEUR-SATELLITE	
21 450 — 21 750	BROADCASTING	

220 The standard frequency is 20 000 kHz.

221 **221A** **SUP** **(Spa2)**

Allocation to Services		
Region 1	Region 2	Region 3
21 750 — 21 850	FIXED	
21 850 - 21 870	RADIO ASTRONOMY 221B	
21 870 - 22 000	AERONAUTICAL FIXED AERONAUTICAL MOBILE (R)	
22 000 — 22 720	MARITIME MOBILE	
22 720 — 23 200	FIXED	
23 200 — 23 350	AERONAUTICAL FIXED AERONAUTICAL MOBILE (OR)	
23 350 — 24 990	FIXED LAND MOBILE 222 222A	
24 990 — 25 010	STANDARD FREQUENCY 203A 223	

221B Spa2 In Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 21 850 – 21 870 kHz is also allocated to the aeronautical fixed and the aeronautical mobile (R) services. The administrations concerned will take all practicable steps to protect radio astronomy observations in this band from harmful interference.

222 Inter-ship radiotelegraphy may be used in the maritime mobile service between the frequencies 23 350 and 24 000 kHz.

222A Spa2 In Argentina and Uruguay, the band 24 528 – 24 538 kHz may be used by 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.

223 The standard frequency is 25 000 kHz.

Allocation to Services		
Region 1	Region 2	Region 3
25 010 — 25 070	FIXED MOBILE except aeronautical mobile	
25 070 — 25 110	MARITIME MOBILE 224	
25 110 — 25 600	FIXED MOBILE except aeronautical mobile	
25 600 — 26 100	BROADCASTING	
26 100 — 27 500	FIXED MOBILE except aeronautical mobile 225 226	

224 Limited to ship stations employing A1 or F1 emissions.

225 The frequency 27 120 kHz is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of ± 0·6% of that frequency. Radiocommunication services operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

226 In Region 2, Australia and New Zealand, the amateur service may operate between the frequencies 26 960 and 27 230 kHz.

MHz
27·5—37·75
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
27·5 — 28 METEOROLOGICAL AIDS 227	**27·5 — 28** METEOROLOGICAL AIDS FIXED MOBILE	
28 – 29·7 AMATEUR AMATEUR-SATELLITE		
29·7 – 30·005 FIXED 228 229 231 232 MOBILE		
30·005 – 30·01 SPACE OPERATION (Satellite identification) FIXED 228 229 231 MOBILE SPACE RESEARCH		
30·01 – 37·75 FIXED 228 229 230 231 MOBILE 233A		

227 In Albania, Bulgaria, Hungary, Poland, Roumania, Switzerland, Czechoslovakia and the U.S.S.R., the band 27·5-28 MHz is also allocated to the fixed and mobile services.

228 Stations designed to use ionospheric scatter may operate only subject to agreements between administrations concerned and those whose services, operating in accordance with the Table, may be affected.

229 Systems designed to use ionospheric scatter or other fixed service systems designed to operate over distances exceeding 800 km shall confine their emissions to the following bands

Region 1	Region 2	Region 3
32·6—33	32·6—33	32·6—33
36·2—36·6	34·6—35	34·6—35
39 —39·4	36·4—36·8	36·4—36·8

and shall have priority in Region 2 in the bands shown above for such use in that Region.

230 In the case of the bands referred to in No. **229**, which are limited to a particular Region the provisions of No. **117** shall apply and administrations shall avoid beaming such transmissions towards another Region unless specifically co-ordinated otherwise.

231 Ionospheric scatter stations, existing on 1 January 1960, and not causing harmful interference to the other services to which the band is allocated, may continue to operate on frequencies now assigned until re-accommodated.

232 Conventional (F2) long distance fixed service use of the band 29·7-30 MHz is not excluded in Region 2, provided that such use is coordinated between the administrations concerned.

233 SUP (Spa2)

233A Spa2 In Argentina and Uruguay, the bands 36·65 - 36·85 MHz, 41 15 - 41 35 MHz and 45·65 - 45·85 MHz, and in Argentina, Brazil and Uruguay, the band 170 55 - 170·95 MHz, are allocated to the radio astronomy service and no assignments shall be made to the fixed and mobile services in these bands.

MHz
37·75—50
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
37·75 – 38·25	FIXED 228 229 231 MOBILE *Radio Astronomy* 233B	
38·25 – 41	FIXED 228 229 230 231 MOBILE 235 236 236A	
41 – 47 BROADCASTING *Fixed* 228 237 *Mobile* 236A 238 239 240 241	**41 – 50** FIXED 228 231 237 MOBILE 233A 236A	**41 – 44** FIXED 228 237 MOBILE 236A
		44 – 50 FIXED 228 231 237 MOBILE BROADCASTING

233B Spa2 In making assignments to stations of other services to which the bands 37·75 – 38·25 MHz, 150·05 – 153 MHz, 406·1 – 410 MHz, 2 690 – 2 700 MHz and 4 700 – 5 000 MHz are allocated, administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference.

234 SUP (Spa)

235 Spa2 The band 39·986 – 40·02 MHz is also allocated, on a secondary basis, to the space research service.

236 The frequency 40·68 MHz is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of ± 0·05% of that frequency. Radiocommunication services operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

236A Spa2 The band 40·98 – 41·015 MHz is also allocated, on a secondary basis, to the space research service, in particular for measurements of the differential Faraday effect.

237 Systems designed to use ionospheric scatter which may cause harmful interference to the broadcasting service are prohibited.

238 In Rhodesia and Nyasaland, the band 41-44 MHz is allocated to the fixed, mobile and aeronautical radionavigation services; the bands 44-50 and 54-68 MHz are allocated to the fixed, mobile and broadcasting services; the band 50-54 MHz is allocated to the amateur service.

239 In the Belgian Congo and Ruanda Urundi, and the Union of South Africa and the Territory of South-West Africa, the band 41-50 MHz is also allocated to the fixed, mobile and aeronautical radionavigation services; the band 50-54 MHz is allocated to the amateur service; and the band 54-68 MHz is allocated to the fixed, mobile and broadcasting services. The band 53-54 MHz may be used for model control.

240 In Spain, France, Monaco and the United Kingdom, the band 41-47 MHz is allocated to the broadcasting service.

241 In the Portuguese Oversea Provinces in Region 1 south of the equator, the band 41-68 MHz is also allocated on a permitted basis to the fixed and mobile services.

MHz
47–68

Allocation to Services		
Region 1	Region 2	Region 3
47 — 68		
	50 — 54	
	AMATEUR	
	244 245 246 247	
BROADCASTING	**54 — 68**	**54 — 68**
	FIXED 228 237	FIXED 228 231 237
	MOBILE	MOBILE
	BROADCASTING	BROADCASTING
238 239 241 242 243		246

242 In Austria, the F. R. of Germany and Czechoslovakia, the band 47-68 MHz is also allocated, on a secondary basis, to the fixed service and mobile, except aeronautical mobile, service.

243 In Albania, Bulgaria, Hungary, Poland, Roumania and the U.S.S.R., the band 47-48·5 MHz is also allocated, on a secondary basis, to the fixed and mobile services; the band 56·5-58 MHz is also allocated, on a secondary basis, to the fixed service.

244 In Malaya, New Zealand and Singapore, the band 50-51 MHz is allocated to the fixed, mobile and broadcasting services.

245 In India, Indonesia, Iran and Pakistan, the band 50-54 MHz is allocated to the fixed and mobile services.

246 In Australia, the band 50-54 MHz is allocated to the fixed, mobile and broadcasting services; the band 56-58 MHz is allocated to the amateur service.

247 In New Zealand, the band 51-53 MHz is also allocated to the fixed and mobile services; the band 53-54 MHz is allocated to the fixed and mobile services.

68—75·4

(Spa)

<table>
<tr><th colspan="3">Allocation to Services</th></tr>
<tr><th>Region 1</th><th>Region 2</th><th>Region 3</th></tr>
<tr><td>68 — 74·8
FIXED
MOBILE except aeronautical mobile

248 249 250 251 252</td><td>68—73
FIXED
MOBILE
BROADCASTING

73—74·6
RADIO ASTRONOMY
253A 253B</td><td>68 — 70
FIXED
MOBILE
AERONAUTICAL RADIONAVIGATION
254 255 256

70 — 74·6
FIXED
MOBILE
256 257 258</td></tr>
<tr><td>74·8 — 75·2
AERONAUTICAL RADIONAVIGATION
259</td><td colspan="2">74·6 — 75·4
AERONAUTICAL RADIONAVIGATION
259</td></tr>
</table>

248 In the U.S.S.R., the bands 68-73 MHz and 76-87·5 MHz are allocated to the broadcasting service. The services to which these bands are allocated in other countries and the broadcasting service in the U.S.S.R. are subject to local agreement in order to avoid mutual harmful interference.

249 In Austria, Belgium, France, Greece, Morocco and the United Kingdom, the band 68-70 MHz is also allocated to the aeronautical radionavigation service for ground-based transmitters only.

250 In Albania, Bulgaria, Hungary, Poland, Roumania and Czechoslovakia, the bands 68-73 MHz (sound broadcasting) and 76-87·5 MHz (television) are also allocated to the broadcasting service. In these countries, broadcasting stations in these bands shall be established and operated only in accordance with agreements

and associated plans, to be drawn up by a special regional conference to be held not later than 1 May 1960. In the preparation of plans for the broadcasting service and the associated agreement concerning the fixed and mobile services, account should be taken of the existing assignments to broadcasting in the U.S.S.R. and to the fixed and mobile services in other countries which may be affected. The plans and agreement shall have the object of ensuring that no harmful interference is caused between the broadcasting service and the fixed and mobile services. The countries: Albania, Austria, Bulgaria, Denmark, Greece, Hungary, Italy, Poland, the F. R. of Germany, Yugoslavia, Roumania, Sweden, Switzerland, Czechoslovakia, Turkey, the U.S.S.R. and other interested countries shall participate in the conference.

251 In Greece and the United Kingdom, the band 72·8-74·8 MHz is also allocated to the aeronautical radionavigation service for ground-based transmitters only.

252 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the bands 73-74·8 MHz and 75·2-76 MHz are also allocated to the aeronautical radionavigation service for ground-based transmitters only.

253 SUP (Spa)

253A Spa In Region 2, fixed, mobile and broadcasting service operations previously authorized in the band 73-74·6 MHz may continue to operate on a non-interference basis to the radio astronomy service.

253B Spa In Cuba, the band 73-74·6 MHz is also allocated to the fixed, mobile and broadcasting services.

254 In Australia, the band 68-70 MHz is allocated to the fixed, mobile and broadcasting services; the band 85-88 MHz is allocated to the broadcasting and radionavigation services.

255 In China, the bands 68-70 MHz and 75·4-87 MHz are allocated to the fixed, mobile and broadcasting services; the band 100-108 MHz is allocated to the fixed and broadcasting services.

256 In Korea, the band 68-72 MHz is also allocated to the broadcasting service; the bands 76-87 MHz and 100-108 MHz are allocated to the fixed, mobile and broadcasting services.

257 In India, the bands 70-72·8 MHz and 76-85 MHz are also allocated to the broadcasting service.

258 In North Borneo, Brunei, Sarawak, Singapore and Malaya, the band 72·8-74·6 MHz is also allocated to the aeronautical radionavigation service; the band 100-108 MHz is allocated to the fixed, mobile and broadcasting services.

259 The frequency 75 MHz is assigned to aeronautical marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guard-band to stations of other services which, because of their power or geographical position, might cause harmful interference to marker beacons.

Allocation to Services		
Region 1	Region 2	Region 3
75·2 — 87·5 FIXED MOBILE except aeronautical mobile 248 250 252 260 261 262 263	**75·4 — 88** FIXED MOBILE BROADCASTING	**75·4 — 78** FIXED MOBILE 255 256 257 266
		78 — 80 FIXED MOBILE AERONAUTICAL RADIONAVIGATION 255 256 257 261 266
		80 — 87 FIXED MOBILE 254 255 256 257 261 266
87·5 — 100 BROADCASTING 264 265	**88 — 100** BROADCASTING	**87 — 100** FIXED MOBILE BROADCASTING 254 267 268

260 In Belgium, Morocco and the United Kingdom, the band 78-80 MHz is also allocated to the aeronautical radionavigation service for ground-based transmitters only; in France this band is allocated to the radionavigation service.

261 The band 79·75-80·25 MHz is also allocated in Regions 1 and 3 (except Korea, India and Japan) to the radio astronomy service. 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. The radio astronomy service shall be protected from harmful interference from services operating in other bands in accordance with the provisions of these Regulations, only to the extent that these services are protected from each other.

262 In the United Kingdom, the band 82-87 MHz is also allocated to the radiolocation service.

263 In Nigeria, Sierra Leone and Gambia, the band 86-87·5 MHz is also allocated to the broadcasting service.

264 In the United Kingdom, the band 87·5-88 MHz is also allocated to the land mobile service.

265 In the United Kingdom, the band 95-100 MHz is also allocated, on a permitted basis, to the fixed and land mobile services.

266 In Japan, the band 76-87 MHz is also allocated to the broadcasting service.

267 **Spa2** In New Zealand, the bands 87—88 MHz and 94—108 MHz are allocated to the fixed and mobile services.

268 In India, the band 87-100 MHz is allocated to the broadcasting service.

Allocation to Services		
Region 1	Region 2	Region 3
100 — 108	**100 — 108**	
MOBILE except aeronautical mobile (R)	BROADCASTING	
269 270 271	255 256 258 267 272	

269 In the Portuguese Oversea Provinces in Region 1 south of the equator, Rhodesia and Nyasaland, and the Union of South Africa and Territory of South-West Africa, the band 100-108 MHz is allocated to the broadcasting service.

270 In Austria, Belgium, Spain, Israel, Italy, Yugoslavia, Switzerland and, if necessary, in Denmark, the Netherlands and the F. R. of Germany, the band 100-104 MHz is allocated on a permitted basis to the broadcasting service. The introduction of the broadcasting service in these countries is subject to special agreements between the interested and affected administrations, to ensure that harmful interference is not caused to the services of the other countries operating in accordance with the Radio Regulations.

271 In Denmark, Finland, Greece, Ireland, Iceland, Norway, the F. R. of Germany, Sweden and Turkey, the band 100-108 MHz is also allocated to the fixed service and the same allocation will also be made eventually in the Netherlands and the United Kingdom. In Italy and Yugoslavia, the band 104-108 MHz is also allocated to the fixed service. The effective radiated power of any station in the fixed service shall normally not exceed 25 watts. In case higher powers are used, the introduction of the fixed service is subject to special agreements between interested and affected administrations.

272 In the Philippines, the band 100-108 MHz is also allocated to the fixed and mobile services.

MHz
108–138
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
108 — 117·975	AERONAUTICAL RADIONAVIGATION	
117·975 – 132	AERONAUTICAL MOBILE (R) 201A 273 273A	
132 – 136	AERONAUTICAL MOBILE (R) 273A 274 274A 274B 275	
136 – 137	SPACE RESEARCH (Space-to-Earth) 281A 281AA	
137 – 138	SPACE OPERATION (Telemetering and tracking) METEOROLOGICAL-SATELLITE SPACE RESEARCH (Space-to-Earth) 275A 279A 281C 281E	

273 Mar2 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.

273A Spa In the band 117·975-132 MHz and in the band 132-136 MHz where the aeronautical mobile (R) service is authorized, the use and development, for this service, of systems using space communication techniques may be authorized but limited initially to satellite relay stations of the aeronautical mobile (R) service. Such use and development shall be subject to co-ordination between administrations concerned and those having services operating in accordance with the Table, which may be affected.

274 Spa2 In Bulgaria, Japan, Poland, Portugal, the Portuguese Oversea Provinces in Region 1 south of the equator, Roumania, Sweden, Czechoslovakia and the U.S.S.R., existing stations in the aeronautical mobile (OR) service in the band 132 – 136 MHz, may continue to operate for an unspecified period on a primary basis.

274A Spa2 In Regions 2 and 3, stations of the fixed and mobile services may continue to use the band 132 – 136 MHz until 1 January 1976. Until that date, frequency assignments to stations of the aeronautical mobile (R) service shall be co-ordinated between the administrations concerned and shall be protected from harmful interference.

274B Spa2 In Cuba and Mexico, the band 132 – 136 MHz is also allocated to the fixed and mobile services.

275 Spa2 In Burundi, Ethiopia, Gambia, Malawi, Nigeria, the Portuguese Oversea Provinces in Region 1 south of the equator, Rhodesia, Rwanda, Sierra Leone and in the Republic of South Africa, the band 138 – 144 MHz is allocated to the fixed and mobile services. In these countries, existing stations in the fixed and mobile services may continue to operate in the band 132 – 136 MHz until 1 January 1976.

275A Spa In Burundi, Nigeria, Sierra Leone, Gambia, the Portuguese Oversea Provinces in Region 1 south of the equator, Rhodesia and Nyasaland, and Rwanda, the band 137-138 MHz is also allocated to the fixed and mobile services.

276 277 SUP **(Spa2)**

278 Spa2 In New Zealand, the band 138 – 144 MHz is allocated to the aeronautical mobile (OR) service.

279 SUP **(Spa2)**

279A Spa In Australia, the band 137-144 MHz is also allocated to the broadcasting service for television.

280 281 SUP **(Spa)**

281A Spa For the use of the band 136-137 MHz, see Recommendation No. Spa7.

281AA Spa2 In Bulgaria, China, Cyprus, Korea, Spain, Ethiopia, Ghana, Hungary, India, Indonesia, Iran, Iraq, Kenya, Kuwait, Malaysia, Uganda, Pakistan, the Philippines, Poland, Portugal, the United Arab Republic, Roumania, Senegal, Syria, Tanzania, Czechoslovakia and the U.S.S.R., the band 136-137 MHz is also allocated to the fixed and mobile services.

281B SUP **(Spa2)**

281C Spa2 In Bulgaria, Hungary, Kuwait, Lebanon, Poland, the United Arab Republic, Roumania, Czechoslovakia, the U.S.S.R. and in Yugoslavia, the band 137 – 138 MHz is also allocated to the aeronautical mobile (OR) service.

281D SUP (Spa2)

281E Spa2 In Malaysia, Pakistan and the Philippines, the band 137 – 138 MHz is also allocated to the fixed and mobile services.

281F SUP (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
138 – 143·6 AERONAUTICAL MOBILE (OR)	**138 – 143·6** FIXED MOBILE Radiolocation *Space Research* (Space-to-Earth)	**138 – 143·6** FIXED MOBILE *Space Research* (Space-to-Earth)
275 281G 282A 283	283A	278 279A 284

281G Spa2 In the F.R. of Germany, the band 138 – 140 MHz is also allocated, on a secondary basis, to the space research service (space-to-Earth).

282 **SUP (Spa2)**

282A Spa2 In Belgium, France, Israel, Italy, Liechtenstein, the Netherlands, the United Kingdom and Switzerland, the bands 138-143·6 MHz and 143·65-144 MHz are also allocated, on a secondary basis, to the space research service (space-to-Earth).

283 Spa2 In Austria, Denmark, Greece, Norway, the Netherlands, Portugal, the F.R. of Germany, the United Kingdom, Sweden, Switzerland and Turkey, the band 138-144 MHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services.

283A Spa2 In Argentina, the frequency 138·54 MHz ± 7·5 kHz and the band 143·6 – 143·65 MHz may be used by the space research service (telecommand), subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

284 Spa In China, the band 138-144 MHz is also allocated to the radiolocation service.

MHz
143·6—150·05
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
143·6 – 143·65 AERONAUTICAL MOBILE (OR) SPACE RESEARCH (Space-to-Earth) 275 283	**143·6 – 143·65** FIXED MOBILE SPACE RESEARCH (Space-to-Earth) Radiolocation 283A	**143·6 – 143·65** FIXED MOBILE SPACE RESEARCH (Space-to-Earth) 278 279A 284
143·65 – 144 AERONAUTICAL MOBILE (OR) 275 282A 283	**143·65 – 144** FIXED MOBILE Radiolocation *Space Research* (Space-to-Earth)	**143·65 – 144** FIXED MOBILE *Space Research* (Space-to-Earth) 278 279A 284
144 – 146 AMATEUR AMATEUR-SATELLITE		
146 – 149·9 FIXED MOBILE except aeronautical mobile (R) 285 285A	**146 – 148** AMATEUR 289	
	148 – 149·9 FIXED MOBILE 285A 290	
149·9 – 150·05 RADIONAVIGATION-SATELLITE 285B 285C		

Allocation to Services		
Region 1	Region 2	Region 3
150·05 – 151 FIXED MOBILE except aeronautical mobile (R) RADIO ASTRONOMY 233B 285 286A	**150·05 – 174** FIXED MOBILE	**150·05 – 170** FIXED MOBILE
151 – 153 FIXED MOBILE except aeronautical mobile (R) RADIO ASTRONOMY Meteorological Aids 233B 285 286A		
153 – 154 FIXED MOBILE except aeronautical mobile (R) Meteorological Aids 285		
154 – 156 FIXED MOBILE except aeronautical mobile (R) 285		201A 287 290
156 – 174 FIXED MOBILE except aeronautical mobile 201A 285 287 288	201A 233A 287	**170 – 174** FIXED MOBILE BROADCASTING

284A SUP (Spa2)

285 Spa In Rhodesia and Nyasaland, and the Republic of South Africa and Territory of South-West Africa, the bands 146-149·9 MHz and 150·05-174 MHz are also allocated to the aeronautical mobile service.

285A Spa2 The band 148 – 149 9 MHz may be authorized for space telecommand, subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected. The bandwidth of an individual transmission shall not exceed ± 15 kHz.

285B Spa2 In Austria, Bulgaria, Cuba, Hungary, Iran, Kuwait, Pakistan, Poland, the United Arab Republic, Roumania and Yugoslavia, the band 149·9 – 150·05 MHz is also allocated to fixed and mobile services (see Recommendation No. Spa 8).

285C Spa2 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.

286 SUP (Spa2) (*see* ADD **233B**)

286A Spa In the United Kingdom, the band 150·05-151 MHz is allocated to the radio astronomy service, and the band 151-153 MHz is allocated to the meteorological aids service on a secondary basis; however, in this band the provisions of No. **274** apply.

287 Mar2 The frequency 156·8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. Administrations shall ensure that a guard-band on each side of the frequency 156·8 MHz is provided. The conditions for the use of this frequency are contained in Article 35.

In the bands 156·025-157·425 MHz, 160·625-160·975 MHz and 161·475-162·025 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 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 radio communication service.

However, the frequency bands in which priority is given to the maritime mobile service may be used for radio communications on inland waterways, subject to agreements between interested and affected administrations and taking into account current frequency usage and existing agreements.

287A SUP (Mar2)

288 In France, Morocco and Monaco, the band 162-174 MHz is allocated to the broadcasting service.

289 In China, India and Japan, the band 146-148 MHz is also allocated to the fixed and mobile services.

290 **Spa** In New Zealand, the bands 148-149·9 MHz and 150·05-156 MHz are allocated to the aeronautical mobile (OR) service.

MHz
174–235
(Spa)

Allocation to Services		
Region 1	Region 2	Region 3
174 — 216 BROADCASTING 291 292 293 294	**174 — 216** FIXED MOBILE BROADCASTING 294 295 296	
216 — 223 AERONAUTICAL RADIONAVIGATION BROADCASTING 297 298 299 300 301	**216 — 220** FIXED MOBILE RADIOLOCATION	**216 — 225** AERONAUTICAL RADIONAVIGATION *Radiolocation*
220 — 225 AMATEUR RADIOLOCATION	306 307 308	
223 — 235 AERONAUTICAL RADIONAVIGATION *Fixed* *Mobile* 299 300 301 302 303 304 305	**225 — 235** FIXED MOBILE	**225 — 235** FIXED MOBILE AERONAUTICAL RADIONAVIGATION

291 In the Union of South Africa and the Territory of South-West Africa, the bands 174-181 MHz and 213-216 MHz are also allocated to the fixed and land mobile services.

292 In the United Kingdom, the band 174-184 MHz is also allocated to the fixed service; the band 211-216 MHz is allocated to the broadcasting and aeronautical radionavigation services.

293 In Ethiopia, Kenya, Tanganyika, Uganda, Nigeria, Sierra Leone, Gambia, Rhodesia and Nyasaland, and Zanzibar, the band 174-216 MHz is also allocated to the fixed and mobile services.

294 The band 183·1-184·1 MHz is also allocated, on a secondary basis, to the space
Spa research service.

295 In India, the band 197-216 MHz and in New Zealand, Pakistan and the Philippines, the band 200-216 MHz are also allocated to the aeronautical radionavigation service.

296 In Australia, the band 202-209 MHz is allocated to the aeronautical radionavigation service.

297 The aeronautical radionavigation service will be operated only in Denmark, Spain, France, Greece, Nigeria, the Netherlands, Portugal, the United Kingdom, Sweden, Turkey and the Union of South Africa and Territory of South-West Africa.

The broadcasting service will be introduced in such a way so as not to reduce the areas of coverage of the aeronautical radionavigation service of the above-mentioned countries existing on 21st December, 1959, or such lesser areas as may exist thereafter. The agreement of administrations concerned shall be obtained before new broadcasting stations are brought into operation which could cause harmful interference to the aeronautical radionavigation service.

The administrations employing the aeronautical radionavigation service shall not operate airborne equipment during flights over countries in which the band 216-223 MHz is used exclusively for the broadcasting service.

298 In Italy, the band 216-223 MHz is also allocated to the fixed service.

299 In France and in Italy, the provisions of No. **297** concerning the introduction of the broadcasting service apply to the band 216-225 MHz.

300 In the United Kingdom, the band 216-225 MHz is allocated to the aeronautical radionavigation and radiolocation services. The radiolocation service is a secondary service.

301 In Rhodesia and Nyasaland, the band 220-225 MHz is allocated to the amateur service.

302 In Austria and Switzerland, the band 223-230 MHz is allocated on a permitted basis to the broadcasting service; the band 230-235 MHz is allocated to the fixed and mobile services.

303 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 223-230 MHz is allocated to the broadcasting service. The broadcasting service in these countries shall be introduced so as not to cause harmful interference to the aeronautical radionavigation service and broadcasting stations operating in this band shall be established only in accordance with agreements and associated plans to be concluded at the next European VHF/UHF Broadcasting Conference.

304 In the Union of South Africa and the Territory of South-West Africa, the band 223-235 MHz is also allocated to the broadcasting service and the provisions of No. **297** concerning the introduction of that service will apply to this band.

305 In Nigeria, Sierra Leone and Gambia, the band 223-251 MHz is also allocated to the broadcasting service

305A Spa2 In New Zealand, the band 235 – 239·5 MHz is also allocated to the aeronautical radionavigation service.

306 In Indonesia, the band 216-222 MHz is allocated to the fixed, mobile and broadcasting services

307 In Japan, the band 216-222 MHz is allocated to the broadcasting service.

308 In China, Korea and the Philippines, the band 216-225 MHz is also allocated to the fixed and broadcasting services.

Allocation to Services		
Region 1	Region 2	Region 3
235 – 267	FIXED MOBILE 201A 305 305A 308A 309	
267 – 272	FIXED MOBILE *Space operation* (Telemetering) 309A 309B 308A	
272 – 273	SPACE OPERATION (Telemetering) 309A FIXED MOBILE 308A	
273 – 328·6	FIXED MOBILE 308A 310 310A	
328·6 – 335·4	AERONAUTICAL RADIONAVIGATION 311	

308A Spa2 The bands 240 – 328·6 MHz and 335·4 – 399·9 MHz may also be used by the mobile-satellite service. The use and development of this service shall be subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

309 The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes.

309A Spa Space stations employing frequencies in the band 267-273 MHz for telemetering purposes may also transmit tracking signals in the band.

309B Spa In the band 267-272 MHz individual administrations may use space telemetering in their countries on a primary basis, subject to the agreement of the administrations concerned and those having services operating in accordance with the Table, which may be affected.

310 Spa2 Radio astronomy observations in the band 322 – 328 6 MHz are carried out in a number of countries under national arrangements. Administrations should bear in mind the needs of the radio astronomy service in using this band.

310A Spa2 In India, the band 322 – 328·6 MHz is also allocated to the radio astronomy service.

311 Limited to Instrument Landing Systems (glide path).

335·4—401

(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
335·4 – 399·9	FIXED MOBILE 308A	
399·9 – 400·05	RADIONAVIGATION-SATELLITE 285C 311A	
400·05 – 400·15	STANDARD FREQUENCY-SATELLITE 312B 313 314	
400·15 – 401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Maintenance telemetering) SPACE RESEARCH (Telemetering and tracking) 313 314	

311A Spa2 In Bulgaria, Cuba, Greece, Hungary, Indonesia, Iran, Kuwait, Lebanon, the United Arab Republic, Syria and Yugoslavia, the band 399·9 – 400·05 MHz is also allocated to the fixed and mobile services (see Recommendation No. Spa 8).

312 SUP (Spa)

312A SUP (Spa2)

312B Spa2 In this band the standard frequency is 400·1 MHz. Emissions shall be confined in a band of ± 25 kHz about this frequency.

313 Spa In Albania, Bulgaria, Greece, Hungary, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the band 400·05-401 MHz is also allocated to the fixed and mobile services.

314 Spa In the United Kingdom, the band 400·05-420 MHz is also allocated to the radiolocation service; however, between 400·05 and 410 MHz the allocation to the radiolocation service is on a secondary basis.

MHz
401–406
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
401 – 402	METEOROLOGICAL AIDS SPACE OPERATION (Telemetering) 315A *Fixed* *Meteorological-Satellite* (Earth-to-space) *Mobile* except aeronautical mobile 314 315 315B 315C 316	
402 – 403	METEOROLOGICAL AIDS *Fixed* *Meteorological-Satellite* (Earth-to-space) *Mobile* except aeronautical mobile 314 315 315C 316	
403 – 406	METEOROLOGICAL AIDS *Fixed* *Mobile* except aeronautical mobile 314 315 316	

315 In France, the band 401-406 MHz is allocated to the meteorological aids service.

315A Spa Space stations employing frequencies between 401-402 MHz for telemetering purposes may also transmit tracking signals in this band.

315B Spa In Australia, the space operation service (telemetering) in the band 401-402 MHz is a secondary service.

315C Spa2 In the band 401 – 403 MHz, earth exploration-satellite applications, other than the meteorological-satellite service, may also be used for Earth-to-space transmissions on condition that no harmful interference is caused to stations operating in accordance with the Table.

316 In Albania, Bulgaria, Greece, Hungary, Iran, Norway, Poland, Yugoslavia, Roumania, Sweden, Switzerland, Czechoslovakia, Turkey and the U.S.S.R., the band 401-406 MHz is also allocated, on a primary basis, to the fixed service and mobile, except aeronautical mobile, service.

317 **SUP** **(Spa2)** (*see* ADD 233B)

MHz
406—420
(Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
406 – 406·1	MOBILE-SATELLITE (Earth-to-space) 314 317A 317B	
406·1 – 410	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 233B 314	
410 – 420	FIXED MOBILE except aeronautical mobile 314	

317A Spa2 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.

317B Spa2 In Austria, Bulgaria, Chile, Cuba, Ethiopia, Hungary, India, Iran, Kenya, Kuwait, Liechtenstein, Malaysia, Uganda, Poland, the United Arab Republic, Rwanda, Sweden, Switzerland, Syria, Tanzania, Czechoslovakia and in the U.S.S.R., the band 406 – 406 1 MHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service.

Allocation to Services		
Region 1	Region 2	Region 3
420 – 430 FIXED MOBILE except aeronautical mobile *Radiolocation* 318 319	**420 – 450** RADIOLOCATION *Amateur*	
430 – 440 AMATEUR RADIOLOCATION 318 319 319B 320 320A 321 322		
440 – 450 FIXED MOBILE except aeronautical mobile *Radiolocation* 318 319 319A	318 319A 319B 320A 323 324	
450 – 460 FIXED MOBILE 318B 318C 318 319A		
460 – 470 FIXED MOBILE 318B 318C *Meteorological-Satellite* (Space-to-Earth) 318A 324B		

318 **Spa2** Radio altimeters may also be used until 31 December 1974 in the band 420 – 460 MHz. However, after this date, they may be authorized to continue to operate on a secondary basis except in the U.S.S.R. where they will continue to operate on a primary basis.

318A **Spa** In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 460-470 MHz may be used, on a primary basis, by the meteorological-satellite service subject to agreement among administrations concerned and those having services, or intending to introduce services, operating in accordance with the Table, which may be affected.

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.

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, 467·775 MHz, 467·800 MHz and 467·825 MHz. The characteristics of the equipment used shall conform to those specified in Appendix 19A.

319 In the United Kingdom, the band 420-450 MHz is allocated, on a primary basis to the radiolocation service and on a secondary basis to the amateur service.

319A **Spa2** The band 449·75 – 450·25 MHz may be used for space telecommand and space research (Earth-to-space), subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

319B **Spa2** In France and the French Department of Guyana (Region 2) the frequency 434 MHz ± 0·25 MHz may be used for space operation (Earth-to-space) subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

320 In Greece, Italy and Switzerland, the band 430-440 MHz is also allocated to the fixed service and mobile, except aeronautical mobile, service.

320A **Spa2** In the band 435 – 438 MHz, the amateur-satellite service may be authorized, on condition that no harmful interference shall be caused to other services operating in accordance with the Table. Administrations authorizing such use shall ensure that any harmful interference caused by emissions from an amateur satellite is immediately eliminated in accordance with the provisions of No. **1567A**.

321 In Austria, Portugal, the F. R. of Germany, Yugoslavia and Switzerland, the frequency 433·92 MHz is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of ± 0·2% of that frequency.

322 **Spa2** In Denmark, Norway and Sweden, the bands 430 – 432 MHz and 438 – 440 MHz are also allocated to the fixed and mobile services.

323 In Indonesia, the band 420-450 MHz is also allocated, on a secondary basis, to the fixed service and mobile, except aeronautical mobile, service.

324 In Australia, the band 420-450 MHz is also allocated to the fixed service until the frequency assignments in this band for the fixed service stations are transferred to another band.

324A **Spa2** It is intended that meteorological-satellite space stations operating in the band 1 670 – 1 690 MHz shall transmit to selected earth stations. The location of such earth stations is subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

324B **Spa2** Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460 – 470 MHz and 1 690 – 1 700 MHz for space-to-Earth transmissions on condition that no harmful interference is caused to stations operating in accordance with the Table.

MHz
470–942
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
470 — 582 BROADCASTING	**470 — 890** BROADCASTING	**470 — 585** BROADCASTING 335
582 — 606 BROADCASTING RADIONAVIGATION 325 327 328 329		**585 — 610** RADIONAVIGATION 330B 336 337
606 — 790 BROADCASTING 329 330 330A 331 332 332A		**610 — 890** FIXED MOBILE BROADCASTING 330B 332 332A
790 — 890 FIXED BROADCASTING 329 331 333 334	329A 332 332A	338 339
890 — 942 FIXED BROADCASTING *Radiolocation* 329 331 333 339A	**890 — 942** FIXED RADIOLOCATION 339A 340	**890 — 942** FIXED MOBILE BROADCASTING *Radiolocation* 339 339A

325 In the United Kingdom, the band 582-606 MHz is allocated on a primary basis to the aeronautical radionavigation service and on a secondary basis to the radiolocation service.

326 **SUP (Spa2)**

327 In France and the F. R. of Germany, the band 582-606 MHz is allocated on a primary basis to the broadcasting service and on a secondary basis to the radionavigation service.

328 In Belgium, the band 582-606 MHz is allocated on a primary basis to the radionavigation service and on a secondary basis to the broadcasting service.

329 In Israel, the band 582-960 MHz is also allocated to the fixed service and mobile, except aeronautical mobile, service.

329A **Spa2** In Argentina and Uruguay, the band 602 – 608 MHz is allocated to the radio astronomy service.

330 **Spa** In Region 1, except the African Broadcasting Area*, the radionavigation service may continue to operate in the band 606-610 MHz until the band is required for the broadcasting service.

330A **Spa** In the African Broadcasting Area*, the band 606-614 MHz is allocated to the radio astronomy service.

330B **Spa2** In India, the band 608 – 614 MHz is also allocated to the radio astronomy service.

331 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 645-960 MHz is also allocated to the aeronautical radionavigation service.

332 **Spa** In Region 1, except the African Broadcasting Area*, the band 606-614 MHz and in Region 3, the band 610-614 MHz may be used by the radio astronomy service. Administrations shall avoid using the band concerned for the broadcasting service as long as possible, and thereafter, as far as practicable, shall avoid the use of such effective radiated powers as will cause harmful interference to radio astronomy observations.

In Region 2, the band 608-614 MHz is reserved exclusively for the radio astronomy service until the first Administrative Radio Conference after 1 January, 1974 which is competent to review this provision; however, this provision does not apply to Cuba.

330.1 * For the purposes of this Regulation the term " African Broadcasting Area " means:

Spa

a) African countries, parts of countries, territories and groups of territories situated between the parallels 40° South and 30° North.

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. **131** of these Regulations, situated between the parallels 40° South and 30° North.

332A Spa2 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/m² 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.

333 In Region 1, stations of the fixed service using tropospheric scatter may operate in the band 790-960 MHz subject to agreements between the administrations concerned and affected. Such operations in the band 790-860 MHz shall be on a secondary basis to those of the broadcasting service.

334 In Belgium, France and Monaco, the band 790-860 MHz is allocated to the broadcasting service.

335 In Australia, the band 470-500 MHz is allocated to the fixed and mobile services.

336 In China, Korea, Japan and the Philippines, the band 585-610 MHz is also allocated to the broadcasting service.

337 In Australia, the band 585-610 MHz is allocated on a primary basis to the broadcasting service and on a secondary basis to the radionavigation service.

338 In Australia, the band 610-820 MHz is allocated to the broadcasting service; the bands 820-890 MHz and 942-960 MHz are allocated to the fixed service.

339 In India and Pakistan, the band 610-960 MHz is allocated to the broadcasting service.

339A Spa Specific portions of the frequency band 900-960 MHz may also be used, on a secondary basis, for experimental purposes in connection with space research.

340 Spa2 In Region 2, the frequency 915 MHz is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of ± 13 MHz of that frequency. Radiocommunication services operating within these limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

Allocation to Services		
Region 1	Region 2	Region 3
942–960 FIXED BROADCASTING 329 331 333 339A	**942–960** FIXED 339A	**942–960** FIXED MOBILE BROADCASTING 338 339 339A

MHz
960—1 350
(Spa)

Allocation to Services		
Region 1	Region 2	Region 3
960—1 215	AERONAUTICAL RADIONAVIGATION 341	
1 215—1 300	RADIOLOCATION *Amateur* 342 343 344 345	
1 300—1 350	AERONAUTICAL RADIONAVIGATION 346 *Radiolocation* 347 348	

341 Spa The band 960-1 215 MHz is reserved on a world-wide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based facilities.

342 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 1 215-1 300 MHz is also allocated to the fixed service.

343 In Belgium, France, Norway, the Netherlands, Portugal and Sweden, the band 1 215-1 300 MHz is also allocated to the radionavigation service.

344 In China, India, Indonesia, Japan, Pakistan, the Portuguese Oversea Provinces in Region 1 south of the equator, and in Switzerland, the band 1 215-1 300 MHz is also allocated to the fixed and mobile services.

345 In the F. R. of Germany, the band 1 250-1 300 MHz is allocated to the amateur service.

346 The use of the bands 1 300-1 350 MHz, 2 700-2 900 MHz and 9 000-9 200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and, in the future, to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.

347 In the United Kingdom, the band 1 300-1 350 MHz is allocated to the radiolocation service.

348 In Albania, Austria, Bulgaria, Hungary, Indonesia, Poland, Roumania, Sweden, Switzerland, Czechoslovakia and the U.S.S.R., the band 1 300-1 350 MHz is also allocated to the fixed and mobile services.

Allocation to Services		
Region 1	Region 2	Region 3
1 350 — 1 400 FIXED MOBILE RADIOLOCATION 349 349A	**1 350 — 1 400** RADIOLOCATION 349 349A	
1 400 — 1 427 RADIO ASTRONOMY		
1 427—1 429	SPACE OPERATION (Telecommand) FIXED MOBILE except aeronautical mobile	
1 429 — 1 525 FIXED MOBILE except aeronautical mobile	**1 429 — 1 435** FIXED MOBILE	**1 429 — 1 525** FIXED MOBILE
	1 435 — 1 525 MOBILE *Fixed*	

349 In Region 2 and Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the existing installations of the radionavigation service may continue to operate, temporarily, in the band 1 350-1 400 MHz.

349A **Spa2** Radio astronomy observations on the Hydrogen line displaced towards lower frequencies are carried out in a number of countries under national arrangements. Administrations should bear in mind the needs of the radio astronomy service in their future planning of the band 1 350 - 1 400 MHz.

350 SUP (Spa)

MHz
1 525–1 535
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
1 525 - 1 535	**1 525 - 1 535**	**1 525 - 1 535**
SPACE OPERATION (Telemetering) 350A	SPACE OPERATION (Telemetering) 350A	SPACE OPERATION (Telemetering) 350A
FIXED 350B	*Earth Exploration-Satellite*	FIXED 350B
Earth Exploration-Satellite	*Fixed*	*Earth Exploration-Satellite*
Mobile except aeronautical mobile 350C	*Mobile* 350D	*Mobile*

350A Spa2 Space stations employing frequencies in the band 1 525 - 1 535 MHz for telemetering purposes may also transmit tracking signals in this band.

350B Spa As regards the category of the fixed service, see Resolution No. Spa 3.

350C Spa In Albania, Bulgaria, France, Hungary, Kuwait, Lebanon, Morocco, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the band 1 525-1 535 MHz is also allocated, on a primary basis, to the mobile, except aeronautical mobile, service. As regards the category of this service, see Resolution No. Spa 3.

350D Spa In Cuba, the band 1 525-1 535 MHz is also allocated, on a primary basis, to the mobile service.

350E **SUP (Spa2)**

MHz
1 535–1 660
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
1 535 – 1 542·5	MARITIME MOBILE-SATELLITE 352 352D 352E	
1 542·5 – 1 543·5	AERONAUTICAL MOBILE-SATELLITE (R) MARITIME MOBILE-SATELLITE 352 352D 352F	
1 543·5 – 1 558·5	AERONAUTICAL MOBILE-SATELLITE (R) 352 352D 352G	
1 558·5 – 1 636·5	AERONAUTICAL RADIONAVIGATION 352 352A 352B 352D 352K	
1 636·5 – 1 644	MARITIME MOBILE-SATELLITE 352 352D 352H	
1 644 – 1 645	AERONAUTICAL MOBILE-SATELLITE (R) MARITIME MOBILE-SATELLITE 352 352D 352I	
1 645 – 1 660	AERONAUTICAL MOBILE-SATELLITE (R) 352 352D 352J	

351 **SUP (Spa2)**

352 Spa In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 1 535-1 660 MHz is also allocated to the fixed service. As regards the category of the fixed service in the band 1 535-1 540 MHz, see Resolution No. Spa 3.

352A Spa2 The bands 1 558·5 – 1 636·5 MHz, 4 200 – 4 400 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.

352B Spa2 The bands 1 558·5 – 1 636·5 MHz, 5 000 – 5 250 MHz and 15·4 – 15·7 GHz are also allocated to the aeronautical mobile (R) service for the use and development of systems using space radiocommunication techniques. Such use and development is subject to agreement and co-ordination between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

352C **SUP (Spa2)**

352D Spa In Austria, Indonesia and the F. R. of Germany, the band 1 540-1 660 MHz is also allocated to the fixed service.

352E Spa2 The use of the band 1 535 – 1 542·5 MHz is limited to transmissions from space to earth stations in the maritime mobile-satellite service for communication and/or radiodetermination purposes. Transmissions from coast stations directly to ship stations, or between ship stations, are also authorized when such transmissions are used to extend or supplement the satellite-to-ship links.

352F Spa2 The use of the band 1 542·5 – 1 543·5 MHz is limited to transmissions from space to earth stations in the aeronautical mobile-satellite (R) and maritime mobile-satellite services for communication and/or radiodetermination purposes. Transmissions from land stations directly to mobile stations, or between mobile stations, of the aeronautical mobile (R) and maritime mobile services, are also authorized. The utilization of this band is subject to prior operational co-ordination between the two services.

352G Spa2 The use of the band 1 543·5 – 1 558·5 MHz is limited to transmissions from space to earth stations in the aeronautical mobile-satellite (R) service for communication and/or radiodetermination purposes. Transmissions from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links.

352H Spa2 The use of the band 1 636·5 – 1 644 MHz is limited to transmissions from earth to space stations in the maritime mobile-satellite service for communication and/or radiodetermination purposes. Transmissions from ship stations directly to coast stations, or between ship stations, are also authorized when such transmissions are used to extend or supplement the ship-to-satellite links.

352I Spa2 The use of the band 1 644 – 1 645 MHz is limited to transmissions from earth to space stations in the aeronautical mobile-satellite (R) and maritime mobile-satellite services for communication and/or radiodetermination purposes. Transmissions from mobile stations directly to land stations, or between mobile stations, of the aeronautical mobile (R) and maritime mobile services, are also authorized. The utilization of this band is subject to prior operational coordination between the two services.

352J Spa2 The use of the band 1 645 – 1 660 MHz is limited to transmissions from earth to space stations in the aeronautical mobile-satellite (R) service for communication and/or radiodetermination purposes. Transmissions from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links.

352K Spa2 Radio astronomy observations on important spectral lines due to the hydroxyl radicle OH at frequencies 1 612·231 MHz and 1 720·530 MHz are carried out in a number of countries under national arrangements; the bands observed being 1 611·5 – 1 612·5 MHz and 1 720 – 1 721 MHz respectively. Administrations should bear in mind the needs of radio astronomy service in their future planning of the bands 1 558·5 – 1 636·5 MHz and 1 710 – 1 770 MHz.

MHz
1 660–1 710
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
1 660 – 1 670	METEOROLOGICAL AIDS RADIO ASTRONOMY 353A 354 354A 354B	
1 670 – 1 690	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (Space-to-Earth) 324A MOBILE except aeronautical mobile 354	
1 690 – 1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Space-to-Earth) *Fixed* *Mobile* except aeronautical mobile 324B 354A	**1 690 – 1 700** METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Space-to-Earth) 324B 354A 354C	
1 700 – 1 710 FIXED SPACE RESEARCH (Space-to-Earth) *Mobile* 354D	**1 700 – 1 710** FIXED MOBILE SPACE RESEARCH (Space-to-Earth) 354D	

353 **SUP (Spa2)**

353A Spa2 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 – 1 670 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.

354 **In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the bands 1 660-1 690 MHz, 3 165-3 195 MHz, 4 800-4 810 MHz, 5 800-5 815 MHz and 8 680-8 700 MHz are also used for radio astronomy observations.**

354A Spa2 In Bulgaria, Cuba, Ethiopia, Hungary, Israel, Jordan, Kenya, Kuwait, Lebanon, Uganda, Pakistan, Poland, the United Arab Republic, Roumania, Syria, Tanzania, Czechoslovakia, the U.S.S.R. and Yugoslavia, the bands 1 660 – 1 670 MHz and 1 690 – 1 700 MHz are also allocated to the fixed service and the mobile, except aeronautical mobile, service.

354B Spa In Australia, Cyprus, Spain, Ethiopia, Indonesia, Israel, New Zealand, Portugal, the Spanish Provinces in Africa, the United Kingdom, Sweden and Switzerland, the band 1 660-1 670 MHz is also allocated, on a secondary basis, to the fixed service, and the mobile, except aeronautical mobile, service.

354C Spa In Australia, Indonesia and New Zealand, the band 1 690-1 700 MHz is also allocated, on a secondary basis, to the fixed service and the mobile, except aeronautical mobile, service.

354D Spa2 The band 1 700 – 1 700·2 MHz may be used, on a secondary basis, for the transmission from space stations on board satellites of frequencies harmonically related to those emitted in the bands 149·9 – 150·05 MHz and 399·9 – 400·05 MHz for the requirements of ionospheric investigation and geodesy.

355 **SUP (Spa)**

355A **SUP (Spa2)**

MHz
1 710–2 300
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
1 710 – 1 770 FIXED *Mobile* 352K 356	**1 710 – 1 770** FIXED MOBILE 352K 356A	
1 770 – 1 790 FIXED *Meteorological-Satellite* 356AA *Mobile* 356	**1 770 – 1 790** FIXED MOBILE *Meteorological-Satellite* 356AA 356A	
1 790 – 2 290 FIXED *Mobile* 356 356AB 356ABA 356AC	**1 790 – 2 290** FIXED MOBILE 356A 356AB 356ABA	
2 290 – 2 300 FIXED SPACE RESEARCH (Space-to-Earth) *Mobile* 356C	**2 290 – 2 300** FIXED MOBILE SPACE RESEARCH (Space-to-Earth)	

356 **Spa2** In Switzerland, the band 1 710 – 2 290 MHz is allocated to the fixed service and the mobile, except the aeronautical mobile, service and the band 1 770 – 1 790 MHz is also allocated, on a secondary basis, to the meteorological-satellite service.

356A **Spa2** In Region 2, in Australia and Japan, the band 1 750 – 1 850 MHz may also be used for Earth-to-space transmissions, and in Regions 2 and 3, the band 2 200 – 2 290 MHz may also be used 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.

356AA **Spa** In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the meteorological-satellite service, in the band 1 770-1 790 MHz, shall be on a primary basis, subject to co-ordination with the administrations concerned and those having services operating in accordance with the Table, which may be affected by the siting of earth stations.

356AB **Spa2** In Regions 2 and 3 and in Spain, in the band 2 025 – 2 120 MHz Earth-to-space transmissions in the earth exploration-satellite service may be authorized with equality of right to operate with stations of other space radiocommunication services in this band and subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

356ABA **Spa2** In Region 2, in Australia and Spain, in the band 2 025 – 2 120 MHz and in Regions 1 and 3, in the band 2 110 – 2 120 MHz Earth-to-space transmissions in the space research service may be authorized with equality of right to operate with other space radiocommunication services in these bands and subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

356AC **Spa2** In Region 1, in the band 2 096 – 2 120 MHz, Earth-to-space transmissions in the earth exploration-satellite service may be authorized with equality of right to operate with stations of other space radiocommunication services in this band and subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see No. **356AB**).

356B **SUP** **(Spa2)**

356C **Spa** In Austria, the space research service in the band 2 290-2 300 MHz is a secondary service.

MHz
2 300 — 2 450

Allocation to Services		
Region 1	Region 2	Region 3
2 300 — 2 450	**2 300 — 2 450**	
FIXED	RADIOLOCATION	
Amateur	*Amateur*	
Mobile	*Fixed*	
Radiolocation	*Mobile*	
357 358 359	357 360	

357 The frequency 2 450 MHz is designated for industrial, scientific and medical purposes except in Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., where the frequency 2 375 MHz is used. Emissions must be confined within ± 50 MHz of the frequencies designated. Radiocommunication services operating within these limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

358 In the United Kingdom, the band 2 300-2 450 MHz is allocated on a primary basis to the radiolocation service and on a secondary basis to the amateur, fixed and mobile services.

359 In the F. R. of Germany, the band 2 300-2 350 MHz is allocated to the amateur service and this service is excluded from the band 2 350-2 450 MHz.

360 In India, Japan and Pakistan, the band 2 300-2 450 MHz is allocated on a primary basis to the fixed, mobile and radiolocation services, and on a secondary basis to the amateur service.

Allocation to Services		
Region 1	Region 2	Region 3
2 450 – 2 500 FIXED MOBILE *Radiolocation* 357 361	**2 450 – 2 500** FIXED MOBILE RADIOLOCATION 357	
2 500 – 2 550 FIXED 364C MOBILE except aeronautical mobile BROADCASTING-SATELLITE 361B 361A 362 364F	**2 500 – 2 535** FIXED 364C FIXED-SATELLITE (Space-to-Earth) MOBILE except aeronautical mobile BROADCASTING-SATELLITE 361B 361A 364E 364F	
	2 535 – 2 550 FIXED 364C MOBILE except aeronautical mobile BROADCASTING-SATELLITE 361B 361A 364F	
2 550 – 2 655 FIXED 364C MOBILE except aeronautical mobile BROADCASTING-SATELLITE 361B 362 363 364 364F		

MHz
2 655–2 700
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
2 655 – 2 690	**2 655 – 2 690**	
FIXED 364C 364D	FIXED 364C 364D	
MOBILE except aeronautical mobile	FIXED-SATELLITE (Earth-to-space)	
	MOBILE except aeronautical mobile	
BROADCASTING-SATELLITE 361B 364H	BROADCASTING-SATELLITE 361B 364H	
363 364 364F 364G	364E 364F 364G	
2 690 – 2 700		
	RADIO ASTRONOMY	
	233B 363 364A 364B	

361 Spa2 In France and the United Kingdom, the band 2 450 – 2 500 MHz is allocated on a primary basis to the radiolocation service and, on a secondary basis, to the fixed and mobile services.

361A Spa2 In France, the band 2 500 – 2 550 MHz is also allocated, on a primary basis, to the radiolocation service and, on a secondary basis, to the fixed and mobile services. In Canada, the band 2 500 – 2 550 MHz is also allocated on a primary basis to the radiolocation service.

361B Spa2 The use of the band 2 500 – 2 690 MHz by the broadcasting-satellite service is limited to domestic and regional systems for community reception and such use is 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). The power flux density at the Earth's surface shall not exceed the values given in Nos. **470NH–470NK.**

362 Spa2 In the United Kingdom, the band 2 500 – 2 600 MHz is also allocated, on a secondary basis, to the radiolocation service.

363 Spa In the F. R. of Germany, the band 2 550-2 690 MHz is allocated to the fixed service; and the band 2 690-2 700 MHz is also allocated to the fixed service.

364 **Spa2** In Region 1, tropospheric scatter systems may operate in the band 2 550 – 2 690 MHz, subject to agreement between the administrations concerned and those having terrestrial radiocommunication services, operating in accordance with the Table, which may be affected.

364A **Spa2** In Bulgaria, Cuba, Hungary, India, Israel, Kuwait, Lebanon, Morocco, Pakistan, the Philippines, Poland, the United Arab Republic, Roumania, Czechoslovakia, the U.S.S.R. and Yugoslavia, the band 2 690 – 2 700 MHz is also allocated to the fixed and mobile services.

364B **Spa** In Algeria, Bulgaria, Hungary, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., tropospheric scatter systems may operate in the band 2 690-2 700 MHz under agreements concluded between administrations concerned and those having services operating in accordance with the Table, which may be affected.

364C **Spa2** When planning new tropospheric scatter radio-relay links in the band 2 500 – 2 690 MHz, all possible measures shall be taken to avoid directing the antennae of these links towards the geostationary satellite orbit.

364D **Spa2** Administrations shall make all practicable effort to avoid developing new tropospheric scatter systems in the band 2 655 – 2 690 MHz.

364E **Spa2** The use of the bands 2 500 – 2 535 MHz and 2 655 – 2 690 MHz by the fixed-satellite service is limited to domestic and regional systems and such use is subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Article 9A). In the direction space-to-Earth, the power flux density at the Earth's surface shall not exceed the values given in No. **470NE**.

364F **Spa2** In Bulgaria, Iran, Portugal and the U.S.S.R., the band 2 500 – 2 690 MHz is allocated to the fixed service and the mobile, except aeronautical mobile, service.

364G **Spa2** Radio astronomy observations in the band 2 670 – 2 690 MHz are carried out in a number of countries under national arrangements. Administrations should bear in mind the needs of the radio astronomy service in their future planning of this band.

364H **Spa2** In the design of systems in the broadcasting-satellite service, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2 690 – 2 700 MHz.

365 **SUP** **(Spa2)** (*see* ADD **233B**)

MHz
2 700–3 400

(Spa) (Mar2)

Allocation to Services		
Region 1	Region 2	Region 3
2 700 — 2 900	AERONAUTICAL RADIONAVIGATION 346 *Radiolocation* 366	
2 900 – 3 100	RADIONAVIGATION 367 367A 367B *Radiolocation*	
3 100 — 3 300	RADIOLOCATION 354 368 369	
3 300—3 400 RADIOLOCATION 370 371	**3 300—3 400** RADIOLOCATION *Amateur* 376	

366 In the band 2 700-2 900 MHz ground-based radars used for meteorological purposes are authorized to operate on the basis of equality with stations of the aeronautical radionavigation service.

367 The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars.

367A **Mar2** In the bands 2 900-2 920 MHz and 9 300-9 320 MHz in the maritime radionavigation service, the use of shipborne radars other than those existing on 1 January 1976 is not permitted.

367B **Mar2** In the bands 2 920-3 100 MHz and 9 320-9 500 MHz in the maritime radionavigation service, the use of fixed-frequency radar beacons on land or at sea is not permitted.

368 In Albania, Austria, Belgium, Bulgaria, Hungary, Poland, Roumania, Sweden, Switzerland, Czechoslovakia and the U.S.S.R., the band 3 100-3 300 MHz is also allocated to the radionavigation service.

369 In the band 3 100-3 300 MHz, existing radar beacons (racons) and shipborne
Mar2 radars in merchant ships may operate within the band 3 100-3 266 MHz.

370 **In Albania, Austria, Bulgaria, Hungary, Poland, Portugal, Roumania, Switzerland, Czechoslovakia and the U.S.S.R., the band 3 300-3 400 MHz is also allocated to the radionavigation service.**

371 **In Austria, Greece, Norway, the Netherlands, Portugal and Sweden, the band 3 300-3 400 MHz is also allocated to the fixed and mobile services.**

372 **In Austria, the band 3 400-3 600 MHz is also allocated to the radionavigation service.**

373 In Denmark, Norway, Sweden and Switzerland, the fixed, mobile, radio-
Spa2 location and fixed-satellite services operate on a basis of equality of rights in the band 3 400 – 3 600 MHz.

374 **In the United Kingdom, the band 3 400-3 770 MHz is allocated to the radiolocation service.**

374A SUP (Spa2)

375 In Austria, Israel, Netherlands, F. R. of Germany and the United Kingdom, the band 3 400-3 475 MHz is also allocated, on a secondary basis, to the amateur service.

376 In China, India, Indonesia, Japan and Pakistan, the band 3 300-3 500 MHz is also allocated to the fixed and mobile services.

MHz
3 400—4 700
(Spa*) (Spa2)

<table>
<tr><th colspan="3">Allocation to Services</th></tr>
<tr><th>Region 1</th><th>Region 2</th><th>Region 3</th></tr>
<tr><td>3 400 – 3 600
FIXED
FIXED-SATELLITE
(Space-to-Earth)
MOBILE
Radiolocation

372 373 374 375</td><td colspan="2">3 400 – 3 500
FIXED-SATELLITE
(Space-to-Earth)
RADIOLOCATION
Amateur

376</td></tr>
<tr><td rowspan="2">3 600 – 4 200
FIXED
FIXED-SATELLITE
(Space-to-Earth)
Mobile

374</td><td>3 500 – 3 700
FIXED
FIXED-SATELLITE
(Space-to-Earth)
MOBILE
RADIOLOCATION</td><td>3 500 – 3 700
FIXED-SATELLITE
(Space-to-Earth)
RADIOLOCATION
Fixed
Mobile

377 378</td></tr>
<tr><td colspan="2">3 700 – 4 200
FIXED
FIXED-SATELLITE (Space-to-Earth)
MOBILE

379</td></tr>
<tr><td>4 200 – 4 400</td><td colspan="2">AERONAUTICAL RADIONAVIGATION

352A 379A 381 382 383</td></tr>
<tr><td>4 400 – 4 700</td><td colspan="2">FIXED
FIXED-SATELLITE (Earth-to-space)
MOBILE</td></tr>
</table>

Allocation to Services		
Region 1	Region 2	Region 3
4 700 – 4 990	FIXED MOBILE 233B 354 382A 382B	
4 990 – 5 000 FIXED MOBILE RADIO ASTRONOMY 233B	**4 990 – 5 000** RADIO ASTRONOMY 383A	**4 990 – 5 000** FIXED MOBILE RADIO ASTRONOMY 233B
5 000 – 5 250	AERONAUTICAL RADIONAVIGATION 352A 352B 383B	

377 **Spa2** In China and Japan, the band 3 500 – 3 700 MHz is also allocated to the fixed and mobile services.

378 **In Japan, in the band 3 620-3 700 MHz the radiolocation service is excluded.**

379 **Spa2** In Australia, the band 3 700 –3 770 MHz is allocated to the radiolocation and fixed-satellite services.

379A **Spa2** The standard frequency-satellite service and the 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 ±2 MHz of these frequencies and shall be subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

380 SUP (Spa)

381 In China and the Philippines, the band 4 200-4 400 MHz is also allocated, on a secondary basis, to the fixed service.

382 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 4 200-4 400 MHz is also allocated to the fixed and mobile services subject to causing no harmful interference to the aeronautical radionavigation service used by aircraft on international air routes in these countries.

382A Spa2 Radio astronomy observations on the formaldehyde line (rest frequency 4 829·649 MHz) are being carried out in a number of countries under national arrangements. Administrations should bear in mind the needs of the radio astronomy service in their future planning of the band 4 825 – 4 835 MHz.

382B Spa2 Radio astronomy observations in the band 4 950 – 4 990 MHz are being carried out in a number of countries under national arrangements. Administrations should bear in mind the needs of the radio astronomy service in their future planning of this band.

383 In Austria, Denmark, Norway, the F. R. of Germany, Sweden and Switzerland, the band 4 200-4 210 MHz is also allocated, on a secondary basis, to the fixed service.

383A Spa2 In Cuba, the band 4 990 – 5 000 MHz is also allocated to the fixed and mobile services, and the provisions of No. **233B** apply.

383B Spa2 The band 5 000 – 5 250 MHz is also allocated to the fixed-satellite service for connection between one or more earth stations at specified fixed points on the Earth and satellites used by the aeronautical mobile (R) service and/or the radiodetermination service. Such use and development shall be subject to agreement and co-ordination between the administrations concerned and those having services, operating in accordance with the Table, which may be affected.

Allocation to Services		
Region 1	Region 2	Region 3
5 250—5 255	RADIOLOCATION *Space Research* 384	
5 255—5 350	RADIOLOCATION 384 384A	
5 350 — 5 460	AERONAUTICAL RADIONAVIGATION 385 *Radiolocation*	
5 460 — 5 470	RADIONAVIGATION 385 *Radiolocation*	
5 470 — 5 650	MARITIME RADIONAVIGATION *Radiolocation* 386 387	
5 650—5 670	RADIOLOCATION *Amateur* 388 389	
5 670—5 725	RADIOLOCATION *Amateur* *Space Research* (Deep Space) 388 389 389A	

384 Spa In Albania, Austria, Bulgaria, Hungary, Poland, Roumania, Switzerland, Czechoslovakia and the U.S.S.R., the band 5 250-5 350 MHz is also allocated to the radionavigation service.

384A Spa In Sweden, the band 5 255-5 350 MHz is also allocated to the radionavigation service.

385 The use of the band 5 350-5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.

386 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 5 470-5 650 MHz is also allocated to the aeronautical radionavigation service.

387 Between 5 600 and 5 650 MHz ground-based radars used for meteorological purposes are authorized to operate on the basis of equality with stations of the maritime radionavigation service.

388 In the F. R. of Germany, the band 5 650-5 775 MHz is allocated to the amateur service and the band 5 775-5 850 MHz is allocated to the fixed service.

389 In China, India, Indonesia, Japan and Pakistan, the band 5 650-5 850 MHz is also allocated to the fixed and mobile services.

389A Spa In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the space research service is a primary service in the band 5 670-5 725 MHz.

Allocation to Services		
Region 1	Region 2	Region 3
5 725 - 5 850 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION *Amateur* 354 388 390 391 391A	**5 725 - 5 850** RADIOLOCATION *Amateur* 389 391 391A	

390 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the
Spa2 U.S.S.R., the band 5 800 - 5 850 MHz is allocated to the fixed, mobile and fixed-satellite services.

391 The frequency 5 800 MHz is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of ± 75 MHz of that frequency. Radiocommunication services operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

391A Radio astronomy observations are being carried out in the bands 5 750 -
Spa2 5 770 MHz and 36·458 - 36 488 GHz in a number of countries under national arrangements. Administrations are urged to take all practicable steps to protect radio astronomy observations in these bands from harmful interference.

392 SUP (**Spa**)

MHz
5 850–7 300
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
5 850 – 5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 391	**5 850 – 5 925** RADIOLOCATION *Amateur* 391	**5 850 – 5 925** FIXED FIXED-SATELLITE (Earth-to-space) MOBILE *Radiolocation* 391
5 925 – 6 425 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE		
6 425 – 7 250 FIXED MOBILE 379A 392AA 392B 393		
7 250 – 7 300 FIXED-SATELLITE (Space-to-Earth) 392D 392G		

7 300–7 750
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
7 300 – 7 450	FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE 392D	
7 450 – 7 550	FIXED FIXED-SATELLITE (Space-to-Earth) METEOROLOGICAL-SATELLITE (Space-to-Earth) MOBILE 392D	
7 550 – 7 750	FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE 392D	

392A **SUP (Spa2)**

392AA Spa2 In Brazil, Canada and the United States of America, the band 6 625 – 7 125 MHz is also allocated, on a secondary basis, to the fixed-satellite service for space-to-Earth transmissions. In Region 2, the power flux density produced by space stations in this band shall be in accordance with the provisions of No. **470NM**. In Regions 1 and 3, it shall be at least 6 dB lower. Receiving earth stations in this band may not impose restrictions on the locations or technical parameters of existing or future terrestrial stations of other countries.

392B Spa2 The band 7 145 – 7 235 MHz may be used for Earth-to-space 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.

392C **SUP (Spa2)**

392D Spa2 As an exception, passive fixed-satellite systems also may be accommodated in the band 7 250 – 7 750 MHz subject to:

a) agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected;

b) the co-ordination procedures laid down in Articles 9 and 9A.

Such systems shall not cause any more interference at active earth station receivers than would be caused by the fixed or mobile service. Power flux density limitations at the Earth's surface after reflection from the passive fixed-satellites shall not exceed those prescribed in the present Regulations for active fixed-satellite systems.

392E *(Not used)*

392F **SUP (Spa2)**

392G Spa In Algeria, Austria, Bulgaria, Cyprus, Cuba, Ethiopia, Finland, Hungary, Japan, Kuwait, Lebanon, Liberia, Malaysia, Morocco, the Philippines, Poland, the United Arab Republic, Yugoslavia, Roumania, Sweden, Switzerland, Czechoslovakia and the U.S.S.R., the band 7 250-7 300 MHz is also allocated to the fixed and mobile services.

392H Spa In Algeria, Bulgaria, Cuba, Ethiopia, Finland, Hungary, Japan, Kuwait, Lebanon, Morocco, Poland, the United Arab Republic, Yugoslavia, Roumania, Sweden, Switzerland, Czechoslovakia and the U.S.S.R., the band 7 975-8 025 MHz is also allocated to the fixed and mobile services.

393 Spa In Italy, the band 6 450-6 575 MHz is also allocated to the radiolocation service.

7 750–8 025

(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
7 750–7 900	FIXED MOBILE	
7 900 – 7 975	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	
7 975 – 8 025	FIXED-SATELLITE (Earth-to-space) 392H	

MHz

8 025–8 400

(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
8 025 – 8 175 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE *Earth Exploration-Satellite* (Space-to-Earth) 394B	**8 025 – 8 175** EARTH EXPLORATION-SATELLITE (Space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	**8 025 – 8 175** FIXED FIXED-SATELLITE (Earth-to-space) MOBILE *Earth Exploration-Satellite* (Space-to-Earth)
8 175 – 8 215 FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE *Earth Exploration-Satellite* (Space-to-Earth) 394B	**8 175 – 8 215** EARTH EXPLORATION-SATELLITE (Space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE	**8 175 – 8 215** FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE *Earth Exploration-Satellite* (Space-to-Earth)
8 215 – 8 400 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE *Earth Exploration-Satellite* (Space-to-Earth) 394 394B	**8 215 – 8 400** EARTH EXPLORATION-SATELLITE (Space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	**8 215 – 8 400** FIXED FIXED-SATELLITE (Earth-to-space) MOBILE *Earth Exploration-Satellite* (Space-to-Earth) 394

8 400–8 500
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
8 400 – 8 500		
	FIXED	
	MOBILE	
	SPACE RESEARCH (Space-to-Earth)	
	394A 394D	

394 **Spa2** In Australia and the United Kingdom, the band 8 250 – 8 400 MHz is allocated to the radiolocation and fixed-satellite services.

394A **Spa2** In the United Kingdom, the band 8 400 – 8 500 MHz is allocated to the radiolocation and space research services.

394B **Spa2** In Israel, the band 8 025 – 8 400 MHz is allocated, on a primary basis, to the fixed and mobile services and, on a secondary basis, to the fixed-satellite service.

394C **SUP (Spa2)**

394D **Spa** In Austria, Belgium, France, Israel, Luxembourg and Malaysia, the allocation to the space research service in the band 8 400-8 500 MHz is on a secondary basis.

MHz

8 500–9 500

(Mar2)

Allocation to Services		
Region 1	Region 2	Region 3
8 500 — 8 750	RADIOLOCATION 354 395	
8 750 — 8 850	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 396 397	
8 850 — 9 000	RADIOLOCATION 397 398	
9 000 — 9 200	AERONAUTICAL RADIONAVIGATION 346 *Radiolocation* 397	
9 200 — 9 300	RADIOLOCATION 397 398	
9 300 — 9 500	RADIONAVIGATION 367A 367B *Radiolocation* 399	

Allocation to Services		
Region 1	Region 2	Region 3
9 500 — 9 800		
	RADIOLOCATION	
	398	
9 800 — 10 000		
	RADIOLOCATION	
	Fixed	
	400 401 401A	
10 000 — 10 500		
	RADIOLOCATION	
	Amateur	
	401A 402 403	

395 In Albania, Austria, Bulgaria, Hungary, Poland, Roumania, Sweden, Czechoslovakia and the U.S.S.R., the band 8 500-8 750 MHz is also allocated to the radionavigation service.

396 The use of the band 8 750-8 850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8 800 MHz.

397 In Belgium. France, the Netherlands and the F. R. of Germany, the band 8 825-9 225 MHz is also allocated to the maritime radionavigation service for use by shore-based radars.

398 In Albania, Austria, Bulgaria, Hungary, Poland, Roumania, Sweden, Switzerland, Czecholslovakia and the U.S.S.R., the bands 8 850-9 000 MHz, 9 200-9 300 MHz and 9 500-9 800 MHz are also allocated to the radionavigation service.

399 The use of the band 9 300-9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars, and ground-based radars. In this band ground-based radars used for meteorological purposes have priority over other radiolocation devices.

400 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 9 800-10 000 MHz is also allocated to the fixed and radionavigation services.

401 In India, Indonesia, Japan and Sweden, the fixed and radiolocation services operate on a basis of equality in the band 9 800-10 000 MHz.

401A Spa The band 9 975-10 025 MHz may be used by weather radar on meteorological-satellites.

402 In Japan and Sweden, the band 10 000-10 500 MHz is also allocated to the fixed and mobile services.

403 In the F. R. of Germany and Switzerland, the band 10 000-10 250 MHz is also allocated to the fixed and mobile services; the band 10 250-10 500 MHz is allocated to the amateur service.

Allocation to Services		
Region 1	Region 2	Region 3
10·5 — 10·55 FIXED MOBILE *Radiolocation*	**10·5—10·55** RADIOLOCATION 404	

404 Limited to continuous wave systems.

GHz
10·55–10·7
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
10·55 – 10·6	FIXED MOBILE *Radiolocation*	
10·6 – 10·68	FIXED MOBILE RADIO ASTRONOMY *Radiolocation* 404A	
10·68 – 10·7	RADIO ASTRONOMY 405B	

404A **Spa2** In the F.R. of Germany, in the band 10·6 – 10·68 GHz, the radio astronomy service is a secondary service.

405 SUP (Spa)

405A SUP (Spa2)

405B **Spa** In Algeria, Bulgaria, Cuba, Hungary, Japan, Kuwait, Lebanon, Pakistan, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the band 10·68-10·7 GHz is also allocated to the fixed and mobile services.

GHz
10·7–12·5
(Spa2)

<table>
<tr><th colspan="3">Allocation to Services</th></tr>
<tr><th>Region 1</th><th>Region 2</th><th>Region 3</th></tr>
<tr><td colspan="3">10·7 – 10·95
FIXED
MOBILE</td></tr>
<tr><td>10·95 – 11·2
FIXED
FIXED-SATELLITE (Space-to-Earth) (Earth-to-space)
MOBILE</td><td colspan="2">10·95 – 11·2
FIXED
FIXED-SATELLITE (Space-to-Earth)
MOBILE</td></tr>
<tr><td colspan="3">11·2 – 11·45
FIXED
MOBILE</td></tr>
<tr><td colspan="3">11·45 – 11·7
FIXED
FIXED-SATELLITE (Space-to-Earth)
MOBILE</td></tr>
<tr><td rowspan="2">11·7 – 12·5
FIXED
MOBILE except aeronautical mobile
BROADCASTING
BROADCASTING-SATELLITE

405BA</td><td>11·7 – 12·2
FIXED
FIXED-SATELLITE (Space-to-Earth)
MOBILE except aeronautical mobile
BROADCASTING
BROADCASTING-SATELLITE

405BB 405BC</td><td>11·7 – 12·2
FIXED
MOBILE except aeronautical mobile
BROADCASTING
BROADCASTING-SATELLITE

405BA</td></tr>
<tr><td colspan="2">12·2 – 12·5
FIXED
MOBILE except aeronautical mobile
BROADCASTING</td></tr>
</table>

GHz
12·5–15·35
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
12·5 – 12·75 FIXED-SATELLITE (Space-to-Earth) (Earth-to-space) 405BD 405BE	**12·5 – 12·75** FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile	**12·5 – 12·75** FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE except aeronautical mobile
12·75 – 13·25 FIXED MOBILE		
13·25 – 13·4 AERONAUTICAL RADIONAVIGATION 406 407 407A		
13·4 – 14 RADIOLOCATION 407 407A 408 409		
14 – 14·3 FIXED-SATELLITE (Earth-to-space) RADIONAVIGATION 408A 407 407A		
14·3 – 14·4 FIXED-SATELLITE (Earth-to-space) RADIONAVIGATION-SATELLITE 408A		
14·4 – 14·5 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 408B 408C		
14·5 – 15·35 FIXED MOBILE 408B 408C		

405BA Spa2 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, 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.

405BB Spa2 Terrestrial radiocommunication services in the band 11·7 – 12 2 GHz in Region 2 shall be introduced only after the elaboration and approval of plans for the space radiocommunication services, so as to ensure compatibility between the uses that each country decides for this band.

405BC Spa2 The use of the band 11·7 – 12·2 GHz in Region 2 by the broadcasting-satellite and fixed-satellite services is limited to domestic systems and is subject to previous agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Article 9A and Resolution No. Spa2 – 3).

405BD Spa2 In Bulgaria, Cameroon, Congo (Brazzaville), the Ivory Coast, Gabon, Ghana, Hungary, Iraq, Israel, Jordan, Kuwait, Libya, Mali, Niger, Poland, Syria, the United Arab Republic, Roumania, Senegal, Czechoslovakia, Togo and the U.S.S.R., the band 12·5-12·75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service.

405BE Spa2 In Algeria, Belgium, Denmark, Spain, Ethiopia, Finland, France, Greece, Kenya, Liechtenstein, Luxembourg, Monaco, Norway, Uganda, the Netherlands, Portugal, the F.R. of Germany, Sweden, Switzerland, Tanzania and Tunisia, the band 12·5-12·75 GHz is also allocated, on a secondary basis, to the fixed service and the mobile, except aeronautical mobile, service.

405C Spa In Cuba, the band 31·5-31·8 GHz is also allocated, on a secondary basis, to the fixed and mobile services.

406 Limited to Doppler navigation aids.

407 Spa2 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the bands 13·25 – 13·5 GHz, 14·175 – 14·3 GHz, 15 4 – 17 7 GHz, 23·6 – 24 GHz, 24·05 – 24·25 GHz and 33 4 – 36 GHz are also allocated to the fixed and mobile services.

407A Spa2 The band 13·25 – 14 2 GHz may also be used, on a secondary basis, for Earth-to-space 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.

408 Spa2 In Sweden, the bands 13·4 – 14 GHz, 15 7 – 17·7 GHz and 33 4 – 36 GHz are also allocated to the fixed and mobile services.

408A Spa2 The use of the bands 14 – 14·3 GHz and 14·3 - 14·4 GHz by the radionavigation service and radionavigation-satellite service respectively, shall be such as to provide sufficient protection to space stations of the fixed-satellite service (see Recommendation No. Spa2 – 15, paragraph 2.14).

408B Spa2 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.

408C Spa2 Radio astronomy observations on the formaldehyde line (rest frequency 14·489 GHz) are being carried out in a number of countries under national arrangements. In making assignments to stations in the fixed and mobile services, administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference in the band 14·485 – 14·515 GHz.

409 In Albania, Bulgaria, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the band 13·5-14 GHz is also allocated to the radionavigation service.

409A 409B SUP (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
15·35—15·4	RADIO ASTRONOMY 409C	
15·4—15·7	AERONAUTICAL RADIONAVIGATION 352A 352B 407	
15·7—17·7	RADIOLOCATION 407 408	

409C Spa In Algeria, Bulgaria, Cuba, Hungary, Kuwait, Lebanon, Morocco, Pakistan, Poland, the United Arab Republic, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the band 15·35-15·4 GHz is also allocated to the fixed and mobile services.

GHz
17·7–23·6
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
17·7 – 19·7	FIXED FIXED-SATELLITE (Space-to-Earth) MOBILE	
19·7 – 21·2	FIXED-SATELLITE (Space-to-Earth) 409E	
21·2 – 22	EARTH EXPLORATION-SATELLITE (Space-to-Earth) FIXED MOBILE	
22 – 22·5	FIXED MOBILE 410A	
22·5 – 23 FIXED MOBILE		**22·5 – 23** FIXED MOBILE BROADCASTING-SATELLITE 410B
23 – 23·6	FIXED MOBILE	

GHz
23·6–24·25
(Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
23·6 – 24	RADIO ASTRONOMY 407	
24 – 24·05	AMATEUR AMATEUR-SATELLITE 410C	
24·05 – 24·25	RADIOLOCATION *Amateur* 407 410C	

409D SUP (Spa2)

409E Spa2 In Japan, the bands 19 7 - 21·2 GHz and 29·5 – 31 GHz are also allocated to the fixed and mobile services. This additional use shall not impose any limitation on the power flux density of space stations in the fixed-satellite service.

410 SUP (Spa2)

410A Spa2 The band 22·21 – 22·26 GHz is also allocated to the radio astronomy service for observations of a spectral line due to water vapour (rest frequency 22·235 GHz). Administrations are urged to give all practicable protection in this band for future research in radio astronomy.

410B Spa2 In Region 3, the broadcasting-satellite service is authorized in the band 22·5 - 23·0 GHz, subject to power flux density limits for the protection of the terrestrial services in this band.

410C Spa2 The frequency 24·125 GHz is designated for industrial, scientific and medical purposes. Emissions must be confined within the limits of ±125 MHz of that frequency. Radiocommunication services operating within those limits must accept any harmful interference that may be experienced from the operation of industrial, scientific and medical equipment.

GHz
24·25—33
(Spa*) (Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
24·25 — 25·25	RADIONAVIGATION 411 412	
25·25 - 27·5	FIXED MOBILE	
27·5 - 29·5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	
29·5 - 31	FIXED-SATELLITE (Earth-to-space) 409E	
31 - 31·3	FIXED MOBILE *Space Research* 412H 412I	
31·3—31·5	RADIO ASTRONOMY 412A	
31·5—31·8 SPACE RESEARCH *Fixed* *Mobile*	**31·5—31·8** SPACE RESEARCH 405C	**31·5—31·8** SPACE RESEARCH *Fixed* *Mobile*
31·8—32·3	RADIONAVIGATION *Space Research* 412B	
32·3—33	RADIONAVIGATION	

Allocation to Services		
Region 1	Region 2	Region 3
33—33·4	**33—33·4**	
RADIO ASTRONOMY	RADIONAVIGATION	
RADIONAVIGATION	412F	
33·4—34·2		
	RADIOLOCATION	
	407 408 412 412G	
34·2—35·2		
	RADIOLOCATION	
	Space Research	
	407 408 412 412C 412D	
35·2—36		
	RADIOLOCATION	
	407 408 412	
36 - 40		
	FIXED	
	MOBILE	
	391A 412E	

411 In the band 24·25-25·25 GHz, ground-based radionavigation aids are not permitted except where they operate in cooperation with airborne or shipborne radionavigation devices.

412 In Japan, the bands 24·25-25·25 GHz, and 33·4-36 GHz, are also allocated to the meteorological aids service.

412A Spa In Bulgaria, Cuba, Hungary, Poland, the United Arab Republic, Roumania, Czechoslovakia and the U.S.S.R., the band 31·3-31·5 GHz is also allocated to the fixed and mobile services.

412B Spa In Bulgaria, Cuba, Hungary, Poland, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the space research service is a primary service in the band 31·8-32·3 GHz.

412C Spa In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the space research service is a primary service in the band 34·2-35·2 GHz.

412D Spa The band 34·4-34·5 GHz may be used by weather radar devices on meteorological-satellites for the detection of cloud.

412E Spa In Bulgaria, Cuba, Hungary, Poland, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the band 36·5-37·5 GHz is also allocated to the radio astronomy service.

412F Spa In Cuba and India, the band 33-33·4 GHz is also allocated to the radio astronomy service.

412G Spa In Bulgaria, Cuba, Hungary, Poland, Yugoslavia, Roumania, Czechoslovakia and the U.S.S.R., the band 33·4-34 GHz is also allocated to the radio astronomy service.

412H Spa In Bulgaria, Cuba, Hungary, Poland, Roumania, Czechoslovakia and the U.S.S.R., the space research service is a primary service in the band 31-31·3 GHz.

412I Spa2 Radio astronomy observations in the band 31·2 – 31·3 GHz are carried out in a number of countries under national arrangements. Administrations are urged to take all practicable steps to protect radio astronomy observations in this band from harmful interference.

Allocation to Services		
Region 1	Region 2	Region 3
40 – 41	FIXED-SATELLITE (Space-to-Earth)	
41 – 43	BROADCASTING-SATELLITE	
43 – 48	AERONAUTICAL MOBILE-SATELLITE MARITIME MOBILE-SATELLITE AERONAUTICAL RADIONAVIGATION-SATELLITE MARITIME RADIONAVIGATION-SATELLITE	
48 – 50	(Not allocated)	
50 – 51	FIXED-SATELLITE (Earth-to-space)	
51 – 52	EARTH EXPLORATION-SATELLITE SPACE RESEARCH	
52 – 54·25	SPACE RESEARCH (Passive) 412J	
54·25 – 58·2	INTER-SATELLITE	

412J **Spa2** All emissions in the bands 52-54·25 GHz, 58·2-59 GHz, 64-65 GHz, **86 – 92 GHz, 101 – 102 GHz, 130 – 140 GHz, 182 – 185 GHz and 230 – 240 GHz** are prohibited. The use of passive sensors by other services is also authorized.

GHz
58·2–92
(Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
58·2 – 59	SPACE RESEARCH (Passive) 412J	
59 – 64	INTER-SATELLITE	
64 – 65	SPACE RESEARCH (Passive) 412J	
65 – 66	EARTH EXPLORATION-SATELLITE SPACE RESEARCH	
66 – 71	AERONAUTICAL MOBILE-SATELLITE MARITIME MOBILE-SATELLITE AERONAUTICAL RADIONAVIGATION-SATELLITE MARITIME RADIONAVIGATION-SATELLITE	
71 – 84	(Not allocated)	
84 – 86	BROADCASTING-SATELLITE	
86 – 92	RADIO ASTRONOMY SPACE RESEARCH (Passive) 412J	

Allocation to Services		
Region 1	Region 2	Region 3
92 – 95	FIXED-SATELLITE (Earth-to-space)	
95 – 101	AERONAUTICAL MOBILE-SATELLITE MARITIME MOBILE-SATELLITE AERONAUTICAL RADIONAVIGATION-SATELLITE MARITIME RADIONAVIGATION-SATELLITE	
101 – 102	SPACE RESEARCH (Passive) 412J	
102 – 105	FIXED-SATELLITE (Space-to-Earth)	
105 – 130	INTER-SATELLITE 412K	
130 – 140	RADIO ASTRONOMY SPACE RESEARCH (Passive) 412J	
140 – 142	FIXED-SATELLITE (Earth-to-space)	

412K Spa2 Radio astronomy observations on the carbon monoxide line at 115·271 GHz are carried out in a number of countries under national arrangements In making assignments to other services in the Table, administrations should bear in mind the need to protect radio astronomy observations from harmful interference in the band 115·16 – 115·38 GHz.

GHz
142–230
(Spa2)

Allocation to Services		
Region 1	Region 2	Region 3
142 – 150	AERONAUTICAL MOBILE-SATELLITE MARITIME MOBILE-SATELLITE AERONAUTICAL RADIONAVIGATION-SATELLITE MARITIME RADIONAVIGATION-SATELLITE	
150 – 152	FIXED-SATELLITE (Space-to-Earth)	
152 – 170	(Not allocated)	
170 – 182	INTER-SATELLITE	
182 – 185	SPACE RESEARCH (Passive) 412J	
185 – 190	INTER-SATELLITE	
190 – 200	AERONAUTICAL MOBILE-SATELLITE MARITIME MOBILE-SATELLITE AERONAUTICAL RADIONAVIGATION-SATELLITE MARITIME RADIONAVIGATION-SATELLITE	
200 – 220	(Not allocated)	
220 – 230	FIXED-SATELLITE	

Allocation to Services		
Region 1	Region 2	Region 3
230 – 240	RADIO ASTRONOMY SPACE RESEARCH (Passive) 412J	
240 – 250	(Not allocated)	
250 – 265	AERONAUTICAL MOBILE-SATELLITE MARITIME MOBILE-SATELLITE AERONAUTICAL RADIONAVIGATION-SATELLITE MARITIME RADIONAVIGATION-SATELLITE	
265 - 275	FIXED-SATELLITE	
Above **275**	(Not allocated)	

ARTICLE 6

Special Rules for the Assignment and Use of Frequencies

413 § 1. (1) Members and Associate Members of the Union 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.

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.

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 terrestrial radiocommunication service or an earth station in the fixed-satellite service may, on a secondary basis, transmit to mobile stations on its normal frequencies;

b) a land station may communicate, on a secondary basis, with fixed stations in the terrestrial radiocommunication service or earth stations in the fixed-satellite service or other land stations of the same category.

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.

417 § 3. Any administration may assign a frequency in a band
Spa2 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.

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.

419 § 5. In certain cases provided for in Articles 32 and 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. **952**).

419A § 5A. Earth stations on board aircraft are authorized to use
Spa2 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.

420 § 6. In Region 1, stations which use frequencies in the band 1 625-1 670 kHz allocated for low-power telephony services shall, in principle, employ a power which is as low as possible. Such power shall not exceed 20 watts.

421 § 7. Any emission capable of causing harmful interference to
Mar2 distress, alarm, urgency or safety communications on the international distress frequencies 500 kHz or 2 182 kHz is prohibited (see Nos. **187, 201, 1112** and **1325**). Any emission causing harmful interference to distress, safety and calling communications on the frequency 156·8 MHz is prohibited (see Nos. **287, 1363** and **1376**).

ARTICLE 7

Special Rules Relating to Particular Services

Section I. Broadcasting Service

General

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.

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.

Broadcasting in the Tropical Zone

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. **135** and **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.

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)

426 (3) Within the Tropical Zone, the broadcasting service has priority over the other services with which it shares the bands listed in No. **425**.

427 (4) However, in that part of Libya north of parallel 30° North the broadcasting service in the bands listed in No. **425** has equal rights to operate with other services in the Tropical Zone with which it shares these bands.

428 (5) The broadcasting service operating inside the Tropical Zone, and other services operating outside the Zone, are subject to the provisions of No. **117**.

Spa2 **Section IA. Broadcasting-Satellite Service**

428A Spa2 § 2A. 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.

Section II. Aeronautical Mobile Service

429 § 3. 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.

430 § 4. 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.

431 Aer § 5. Frequencies in the bands allocated to the aeronautical mobile service between 2 850 and 18 030 kHz (see Article 5) shall be assigned in conformity with the provisions of Appendices 26 and 27 and the other relevant provisions of these Regulations.

432 § 6. 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 and Associate Members of the Union are invited. Such regulations shall recognize the absolute priority of safety and control messages.

Section III. Aeronautical Radiobeacons

433 § 7. (1) The assignment of frequencies to aeronautical radiobeacons operating in the bands between 160 and 415 kHz shall be based on a protection ratio against interference of at least 10 dB for each beacon throughout its service area.

434 (2) It is agreed that, to provide the protection ratio required, the radiated power should be kept to the value necessary to give the desired field strength at the service range.

435 (3) The daylight service range of radiobeacons referred to in No. **433** shall be based on the following field strengths:

436 (4) *Regions 1 and 2*

- 70 microvolts per metre for radiobeacons north of 30°N.
- 120 microvolts per metre for radiobeacons between 30°N and 30°S.
- 70 microvolts per metre for radiobeacons south of 30°S.

437 (5) *Region 3*

- 70 microvolts per metre for radiobeacons north of 40°N.
- 120 microvolts per metre for radiobeacons between 40°N and 50°S.
- 70 microvolts per metre for radiobeacons south of 50°S.

Section IV. Maritime Mobile Service

437A **Mar** § 7A. Stations of the maritime mobile service employing single sideband radiotelegraph transmissions shall use upper sideband emissions. The frequencies specified in the Radio Regulations for class A2H emissions in the maritime mobile service such as 410, 425, 454, 468, 480, 500, 512 and 8 364 kHz shall be used as carrier frequencies.

438 § 8. (1) Except as provided in No. **418**, ship stations authorized to work in the bands between 415 and 535 kHz shall transmit on the frequencies indicated in Article 32 (see No. **1123**).

438A § 8A. As a general rule, the minimum separation between adjacent
Mar frequencies used respectively by coast stations and by ship stations is 4 kHz.

439 § 9. In the band 405 - 415 kHz in Region 1, no frequency is assigned to coast stations, in order to protect the frequency 410 kHz which is designated for the maritime radionavigation service (radio direction-finding).

440 § 10. (1) In the African Area of Region 1, in the bands 415 - 490 kHz and 510 - 525 kHz the separation between adjacent frequencies assigned to coast stations is, as a general rule, 3 kHz. However, in order that the frequencies may coincide with those used in the European Area in these bands, this spacing is reduced in certain cases.

441 **SUP** (**Mar**)

442 § 11. (1) In Region 1, frequencies assigned to stations of the maritime
Mar mobile service operating in the bands between 1 605 and 3 800 kHz (see Article 5) should, whenever possible, be in accordance with the following subdivision:

— 1 605	- 1 625	kHz:	Radiotelegraphy exclusively.
— 1 625	- 1 670	kHz:	Low power radiotelephony.
— 1 670	- 1 950	kHz:	Coast stations.
— 1 950	- 2 053	kHz:	Ship stations working to coast stations.
— 2 053	- 2 065	kHz:	Intership working.
— 2 065	- 2 170	kHz:	Ship stations working to coast stations.
— 2 170	- 2 173·5	kHz:	Coast stations calling ship stations (including selective calling) and, exceptionally, coast stations transmitting safety messages.

— *2 173·5 - 2 190·5* kHz: *Guard-band for the distress and calling frequency 2 182 kHz.*

— 2 190·5 - 2 194 kHz: Ship stations calling coast stations.

— 2 194 - 2 440 kHz: Intership working.

— 2 440 - 2 578 kHz: Ship stations working to coast stations.

— 2 578 - 2 850 kHz: Coast stations.

— 3 155 - 3 340 kHz: Ship stations working to coast stations.

— 3 340 - 3 400 kHz: Intership working.

— 3 500 - 3 600 kHz: Intership working.

— 3 600 - 3 800 kHz: Coast stations.

443 Mar (2) In these bands, in Region 1, the frequencies assigned to the maritime mobile service are spaced, as far as possible, by:

— 7 kHz when two adjacent frequencies are used for double sideband radiotelephony;

— 3 kHz when two adjacent frequencies are used for radiotelegraphy;

— 5 kHz when one frequency is used for double sideband radiotelephony and the adjacent frequency is used for radiotelegraphy.

444 Mar (3) However, in the case of the intership bands, in Region 1, the spacing is reduced to 5 kHz for adjacent frequencies used for double sideband radiotelephony.

444A Mar (4) When these bands are used for single sideband radiotelephony, a station operating in the lower half of a double sideband channel shall use upper sideband emission with the carrier frequency located 3 kHz below the centre frequency of that channel.

444B **Mar** (5) However, in the case of the intership bands, the carrier frequency of a station operating in the lower half of the double sideband channel is located only 2·5 kHz below the centre frequency of that channel.

445 **Mar** § 11A. In Regions 2 and 3, the carrier frequencies 2 635 kHz (assigned frequency 2 636·4 kHz) and 2 638 kHz (assigned frequency 2 639·4 kHz) are used as single sideband intership radiotelephony working frequencies in addition to the frequencies prescribed for common use in certain services. The carrier frequency 2 635 kHz should be used with class A3A and A3J emissions only. The carrier frequency 2 638 kHz may be used with class A3, A3H, A3A and A3J emissions. However, after 1 January 1982, class A3 and A3H emissions are no longer authorized. In Region 3 these frequencies are protected by a guard-band between 2 634 and 2 642 kHz.

445A **Mar** § 11B. The assigned frequency of a single sideband channel of a station in the radiotelephone maritime mobile service shall be 1 400 Hz higher than the carrier frequency.

446 § 12. (1) The bands exclusively allocated to the maritime mobile service between 4 000 and 27 500 kHz (see Articles 5, 32 and 35) are subdivided into the following categories :

447 **Mar2** *a) Ship stations,* telephony, duplex operation (two-frequency channels)

4 063 - 4 139·5 kHz
6 200 - 6 210·4 kHz
8 195 - 8 281·2 kHz
12 330 - 12 421 kHz
16 460 - 16 565 kHz
22 000 - 22 094·5 kHz

As from 1 January 1978, the bands listed above will be replaced by:

4 063 - 4 143·6 kHz
6 200 - 6 218·6 kHz
8 195 - 8 291·1 kHz
12 330 - 12 429·2 kHz
16 460 - 16 587·1 kHz
22 000 - 22 124 kHz

448 **Mar2** *b) Coast stations,* telephony, duplex operation (two-frequency channels)

4 361 - 4 438 kHz
6 514 - 6 525 kHz
8 728·5 - 8 815 kHz
13 107·5 - 13 200 kHz
17 255 - 17 360 kHz
22 624·5 - 22 720 kHz

As from 1 January 1978, the bands listed above will be replaced by:

4 357·4 - 4 438 kHz
6 506·4 - 6 525 kHz
8 718·9 - 8 815 kHz
13 100·8 - 13 200 kHz
17 232·9 - 17 360 kHz
22 596 - 22 720 kHz

449 **Mar2** *c) Ship stations and coast stations,* telephony, simplex operation (single-frequency channels) and intership cross-band operation (two-frequencies)

4 139·5 - 4 142·5 kHz
6 210·4 - 6 216·5 kHz
8 281·2 - 8 288 kHz
12 421 - 12 431·5 kHz
16 565 - 16 576 kHz
22 094·5 - 22 112 kHz

As from 16 July 1977, the following bands will be in use simultaneously with the bands listed above and, as from 1 January 1978, will replace them:

4 143·6 - 4 146·6 kHz
6 218·6 - 6 224·6 kHz
8 291·1 - 8 297·3 kHz
12 429·2 - 12 439·5 kHz
16 587·1 - 16 596·4 kHz
22 124 - 22 139·5 kHz

450 SUP (**Mar**)

Note by the General Secretariat: *As from 1 July 1977, the bands indicated in No.* **451 Mar2** *will be used simultaneously with those mentioned in No.* **451 Mar**; *they will replace the latter as from 16 July 1977 (see Resolution No. Mar2 – 2).*

451 **Mar** *(e) Ship stations*, wide-band telegraphy, facsimile, and special transmission systems

4 142·5 - 4 162·5 kHz
6 216·5 - 6 244·5 kHz
8 288 - 8 328 kHz
12 431·5 - 12 479·5 kHz
16 576 - 16 636·5 kHz
22 112 - 22 160·5 kHz

451 **Mar2** *e) Ship stations*, wide-band telegraphy, facsimile and special transmission systems

4 146·6 - 4 162·5 kHz
4 166 - 4 170 kHz
6 224·6 - 6 244·5 kHz
6 248 - 6 256 kHz

8 300 - 8 328 kHz
8 331·5 - 8 343·5 kHz
12 439·5 - 12 479·5 kHz
12 483 - 12 491 kHz
16 596·4 - 16 636·5 kHz
16 640 - 16 660 kHz
22 139·5 - 22 160·5 kHz
22 164 - 22 192 kHz

451A *(f) Ship stations,* oceanographic data transmission (see note *c)* in Appendix 15)
Mar2*

4 162·5 - 4 166 kHz
6 244·5 - 6 248 kHz
8 328 - 8 331·5 kHz
12 479·5 - 12 483 kHz
16 636·5 - 16 640 kHz
22 160·5 - 22 164 kHz

Note by the General Secretariat: *These bands are to be vacated between 1 and 30 June 1977 (see Resolution No. Mar2 – 2).*

451B *(g) Ship stations,* **narrow-band direct-printing telegraph and**
Mar **data transmission systems**

4 166 - 4 172·25 kHz
6 248 - 6 258·25 kHz
8 331·5 - 8 341·75 kHz
12 483 - 12 503·25 kHz
16 640 - 16 660·5 kHz
22 164 - 22 184·5 kHz

Note by the General Secretariat: *The bands mentioned in the following No.* **451B Mar2** *may be used only from 1 June 1977 onwards (see Resolution No. Mar2 – 2).*

451B *g) Ship stations,* narrow-band direct-printing telegraph and
Mar2 data transmission systems, at speeds not exceeding 100 bauds (frequencies paired with those in No. **452C**)

4 170 - 4 177·25 kHz
6 256 - 6 267·75 kHz
8 343·5 - 8 357·25 kHz
12 491 - 12 519·75 kHz
16 660 - 16 694·75 kHz
22 192 - 22 225·75 kHz

Note by the General Secretariat: *In the following No.* **451C Mar2**, *the bands 4 177·25-4 179·75; 6 267·75-6 269·75; 12 519·75-12 526·75; 16 694·75-16 705·8 and 22 225·75-22 227 kHz may be used only as from 1 June 1977. The bands 8 297·3-8 300 and 8 357·25-8 357·75 kHz may be used only as from 16 July 1977. The band 25 076-25 090·1 kHz may be used as from 2 June 1976 (see Resolution No. Mar2 – 2).*

451C *ga)* *Ship stations*, narrow-band direct-printing telegraph and
Mar2 data transmission systems, at speeds not exceeding 100 bauds (non-paired frequencies)

4 177·25 - 4 179·75 kHz
6 267·75 - 6 269·75 kHz
8 297·3 - 8 300 kHz
8 357·25 - 8 357·75 kHz
12 519·75 - 12 526·75 kHz
16 694·75 - 16 705·8 kHz
22 225·75 - 22 227 kHz
25 076 - 25 090·1 kHz

Note by the General Secretariat: *The provisions of this number will completely cease to apply as from 31 May 1977 (see Resolution No. Mar2 – 2).*

452 ***(h) Ship stations,*** **telegraphy**
Mar

4 172·25 - 4 231 kHz
6 258·25 - 6 345·5 kHz
8 341·75 - 8 459·5 kHz
12 503·25 - 12 689 kHz
16 660·5 - 16 917·5 kHz
22 184·5 - 22 374 kHz
25 070 - 25 110 kHz

452.1 SUP **(Mar)**

Note by the General Secretariat: *As from 2 June 1976, the bands indicated in the following No.* **452 Mar2** *will be used simultaneously with those mentioned in No.* **1174 Mar**; *they will replace the latter as from 1 June 1977 (see Resolution No. Mar2 – 2).*

452 **Mar2** *h) Ship stations,* A1 Morse telegraphy, calling

4 179·75	- 4 187·2	kHz
6 269·75	- 6 280·8	kHz
8 359·75	- 8 374·4	kHz
12 539·6	- 12 561·6	kHz
16 719·8	- 16 748·8	kHz
22 227	- 22 247	kHz
25 070	- 25 076	kHz

Note by the General Secretariat: *The bands indicated in the following No.* **452A Mar2** *may be used only from 1 June 1977 onwards (see Resolution No. Mar2 – 2).*

452A **Mar2** *ha) Ship stations,* digital selective calling

4 187·2	- 4 188	kHz
6 280·8	- 6 282	kHz
8 374·4	- 8 376	kHz
12 561·6	- 12 564	kHz
16 748·8	- 16 752	kHz
22 247	- 22 250	kHz

Note by the General Secretariat: *Use of the bands mentioned in the following No.* **452B Mar2** *may commence on 1 January 1976, except for the bands 8 357·75-8 359·75; 12 526·75-12 539·6; 16 705·8-16 719·8 and 22 250-22 310·5 kHz which may be used only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

452B **Mar2** *hb) Ship stations,* A1 Morse telegraphy, working

4 188	-	4 219·4	kHz
6 282	-	6 325·4	kHz
8 357·75	-	8 359·75	kHz
8 376	-	8 435·4	kHz
12 526·75	-	12 539·6	kHz
12 564	-	12 652·3	kHz
16 705·8	-	16 719·8	kHz
16 752	-	16 859·4	kHz
22 250	-	22 310·5	kHz
25 090·1	-	25 110	kHz

Note by the General Secretariat: *The bands mentioned in the following Nos.* **452C Mar2** *and* **452D Mar2** *may be used only as from 1 June 1977 (see Resolution No. Mar2 — 2).*

452C
Mar2

hc) Coast stations, narrow-band direct-printing telegraph and data transmission systems, at speeds not exceeding 100 bauds (frequencies paired with those in No. **451B**)

4 349·4	-	4 356·75	kHz
6 493·9	-	6 505·75	kHz
8 704·4	-	8 718·25	kHz
13 070·8	-	13 099·75	kHz
17 196·9	-	17 231·75	kHz
22 561	-	22 594·75	kHz

452D
Mar2

hd) Coast stations, digital selective calling

4 356·75	-	4 357·4	kHz
6 505·75	-	6 506·4	kHz
8 718·25	-	8 718·9	kHz
13 099·75	-	13 100·8	kHz
17 231·75	-	17 232·9	kHz
22 594·75	-	22 596	kHz

Note by the General Secretariat: *As from 2 June 1976, the bands indicated in No.* **453 Mar2** *will be used simultaneously with those mentioned in No.* **453 Mar;** *they will replace the latter as from 1 August 1976 (see Resolution No. Mar2 – 2).*

453 Mar *(i) Coast stations,* wide-band and manual telegraphy, facsimile, special and data transmission systems and direct-printing telegraph systems

4 231	-	4 361	kHz
6 345·5	-	6 514	kHz
8 459·5	-	8 728·5	kHz
12 689	-	13 107·5	kHz
16 917·5	-	17 255	kHz
22 374	-	22 624·5	kHz

453.1 SUP **(Mar)**

453 Mar2 *i) Coast stations,* wide-band and A1 Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraph systems

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

453A Mar (1A) Frequencies in the bands 25 010-25 070 kHz, 25 110-25 600 kHz and 26 100-27 500 kHz may be assigned to coast stations.

454 – 455 SUP **(Mar)**

456 **Mar2** § 13. (1) Appendix 17 and Appendix 17 Rev. show the radiotelephone channels of the maritime mobile sevice in the frequency bands listed in Nos. **447, 448** and **449**.

457 **Mar2** (2) The Frequency Allotment Plan for coast radiotelephone stations in the high frequency bands is contained in Appendix 25 MOD which remains in force up to and including 31 December 1977, and in Appendix 25 Mar2 which will enter into force on 1 January 1978 (see Resolution No. Mar2 – 12).

Mar2 **Section IVA. Ship Movement Service**

457A **Mar2** The ship movement service should be operated only on frequencies allocated to the maritime mobile service in the band 156-174 MHz.

Section V. Maritime Radiobeacons

458 § 14. (1) The protection ratio required for maritime radiobeacons operating in the bands between 285 and 325 kHz is based on the radiated power being kept to the value necessary to give the desired field strength at the service range.

459 (2) The daylight service range of the radiobeacons referred to in No. **458** shall be based on the following field strengths:

460 (3) *Region 1*

— 50 microvolts per metre for radiobeacons north of 43°N.

— 75 microvolts per metre for radiobeacons between 43°N and 30°N.

— 100 microvolts per metre for radiobeacons between 30°N and 30°S.

— 75 microvolts per metre for radiobeacons between 30°S and 43°S.

— 50 microvolts per metre for radiobeacons south of 43°S.

461 (4) *Region 2*

— 50 microvolts per metre for radiobeacons north of 40°N.

— 75 microvolts per metre for radiobeacons between 40°N and 31°N.

— 100 microvolts per metre for radiobeacons between 31°N and 30°S.

— 75 microvolts per metre for radiobeacons between 30°S and 43°S.

— 50 microvolts per metre for radiobeacons south of 43°S.

462 (5) *Region 3*

— 75 microvolts per metre for radiobeacons north of 40°N.

— 100 microvolts per metre for radiobeacons between 40°N and 50°S.

— 75 microvolts per metre for radiobeacons south of 50°S.

463 (6) In Region 1, for maritime radiobeacons in these bands, the assignment of frequencies is based on a separation of 2·3 kHz between adjacent frequencies used for class A2 emissions.

464 (7) In Region 1, for maritime radiobeacons, the depth of modulation should be at least 70 %.

Section VI. Fixed Service

General

465 § 15. (1) Administrations are urged to discontinue, in the fixed service, the use of double sideband radiotelephone transmissions in the bands below 30 MHz, if possible as from January 1, 1970.

466 (2) Class F3 emissions are prohibited in the fixed service in the bands below 30 MHz.

Selection of Frequencies for the International Exchange of Police Information.

467 § 16. (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 among interested administrations, in accordance with Article 31 of the Convention.

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.

Selection of Frequencies for the International Exchange of Synoptic Meteorological Information.

469 § 17. (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 among interested administrations, in accordance with Article 31 of the Convention.

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.

Spa2 **Section VII. Terrestrial Radiocommunication Services sharing Frequency Bands with Space Radiocommunication Services above 1 GHz**

Choice of Sites and Frequencies

470A § 18. Sites and frequencies for terrestrial stations, operating in
Spa2 frequency bands shared with equal rights between terrestrial radiocommunication and space radiocommunication services shall be selected having regard to the relevant Recommendations of the C.C.I.R. with respect to geographical separation from earth stations.

470AA § 18A. (1) As far as practicable, sites for transmitting [1] stations,
Spa2 in the fixed or mobile service, employing maximum values of equivalent isotropically radiated power exceeding +35 dBW in the frequency bands between 1 and 10 GHz, should be selected so that the direction of maximum radiation of any antenna will be at least 2° away from the geostationary satellite orbit, taking into account the effect of atmospheric refraction[2].

470AB (2) As far as practicable, sites for transmitting [3] stations, in
Spa2 the fixed or mobile service, employing maximum values of equivalent isotropically radiated power exceeding +45 dBW in the frequency bands between 10 and 15 GHz, should be selected so that the direction of maximum radiation of any antenna will be at least 1·5° away from the geostationary satellite orbit, taking into account the effect of atmospheric refraction[4].

470AC (3) In the frequency bands above 15 GHz there shall be no
Spa2 restriction as to the direction of maximum radiation for stations in the fixed or mobile service.

470AA.1 [1] For their own protection receiving stations in the fixed or mobile services
Spa2 operating in bands shared with space radiocommunication services (space-to Earth) should also avoid directing their antennae towards the geostationary satellite orbit if their sensitivity is sufficiently high that interference from space station transmissions may be significant.

470AA.2 [2] Information on this subject is given in the most recent version of C.C.I.R.
Spa2 Report No. 393.

470AB.1 [3] See No. **470AA.1**.
Spa2

470AB.2 [4] See No. **470AA.2**.
Spa2

Power Limits

470B § 19. (1) The maximum equivalent isotropically radiated power of
Spa2 a station in the fixed or mobile service shall not exceed +55 dBW.

470BA (1A) Where compliance with No. **470AA** is impracticable the
Spa2 maximum equivalent isotropically radiated power of a station in the fixed or mobile service shall not exceed:

+47 dBW in any direction within 0·5° of the geostationary satellite orbit; or

+47 dBW to +55 dBW, on a linear decibel scale (8 dB per degree), in any direction between 0·5° and 1·5° of the geostationary satellite orbit, taking into account the effect of atmospheric refraction[1].

470C (2) The power delivered by a transmitter to the antenna of
Spa2 a station in the fixed or mobile service in frequency bands between 1 and 10 GHz, shall not exceed +13 dBW.

470CA (2A) The power delivered by a transmitter to the antenna of a
Spa2 station in the fixed or mobile service in frequency bands above 10 GHz shall not exceed +10 dBW.

470D (3) The limits given in Nos. **470AA**, **470B**, **470BA** and **470C**
Spa2 apply in the following frequency bands allocated to the fixed-satellite

---

470BA.1 [1] See No. **470AA.2**.
Spa2

service and the meteorological-satellite service for reception by space stations, where these bands are shared with equal rights with the fixed or mobile service:

2 655 - 2 690 MHz (for Regions 2 and 3)
5 800 - 5 850 MHz (for the countries mentioned in No. **390**)
5 850 - 5 925 MHz (for Regions 1 and 3)
5 925 - 6 425 MHz
7 900 - 7 975 MHz
7 975 - 8 025 MHz (for the countries mentioned in No. **392H**)
8 025 - 8 400 MHz

470DA (4) The limits given in Nos. **470AB**, **470B** and **470CA** apply
Spa2 in the following frequency bands allocated to the fixed-satellite service for reception by space stations, where these bands are shared with equal rights with the fixed or mobile service:

10·95 - 11·20 GHz (Region 1)
12·50 - 12·75 GHz (Regions 1 and 2)
14·175 - 14·300 GHz (for the countries mentioned in No. **407**)
14·4 - 14·5 GHz

470DB (5) The limits given in Nos. **470B** and **470CA** apply in the
Spa2 following frequency bands allocated to the fixed-satellite service for reception by space stations, where these bands are shared with equal rights with the fixed or mobile service:

27·5 - 29·5 GHz
29·5 - 31·0 GHz (for the country mentioned in No. **409E**)

Spa2 Section VIII. Space Radiocommunication Services sharing Frequency Bands with Terrestrial Radiocommunication Services above 1 GHz

Choice of Sites and Frequencies

470E Spa2 § 20. Sites and frequencies for earth stations, operating in frequency bands shared with equal rights between terrestrial radiocommunication and space radiocommunication services, shall be selected having regard to the relevant Recommendations of the C.C.I.R. with respect to geographical separation from terrestrial stations.

Power Limits

470F Spa2 § 21. (1) Earth stations.

470G Spa2 (2) The equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station operating in frequency bands between 1 and 15 GHz, shall not exceed the following limits except as provided in Nos. **470H** or **470GC**:

$+40$ dBW in any 4 kHz band for $\theta \leqslant 0°$

$+40 + 3\,\theta$ dBW in any 4 kHz band for $0° < \theta \leqslant 5°$

where θ is the angle of elevation of the horizon viewed from the centre of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.

470GA Spa2 (2A) The equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station operating in frequency bands above 15 GHz shall not exceed the following limits except as provided in Nos. **470H** or **470GD**:

$+64$ dBW in any 1 MHz band for $\theta \leqslant 0°$

$+64+3\,\theta$ dBW in any 1 MHz band for $0° < \theta \leqslant 5°$

where θ is as defined in No. **470G**.

470GB Spa2 (2B) For angles of elevation of the horizon greater than 5° there shall be no restriction as to the equivalent isotropically radiated power transmitted by an earth station towards the horizon.

470GC Spa2 (2C) As an exception to the limits given in No. **470G**, the equivalent isotropically radiated power towards the horizon for an earth station in the space research service (deep-space) shall not exceed $+55$ dBW in any 4 kHz band.

470GD Spa2 (2D) As an exception to the limits given in No. **470GA**, the equivalent isotropically radiated power towards the horizon for an earth station in the space research service (deep-space) shall not exceed $+79$ dBW in any 1 MHz band.

470H Spa2 (3) The limits given in No. **470G**, No. **470GA**, No. **470GC** and No. **470GD**, as applicable, may be exceeded by not more than 10 dB. However, when the resulting co-ordination area extends into the territory of another country, such increase shall be subject to agreement by the administration of that country.

470I **SUP** **(Spa2)**

470J Spa2 (3A) The limits given in No. **470G** apply in the following frequency bands allocated to transmission by earth stations in the fixed-satellite service and earth exploration-satellite service, and in particular the meteorological-satellite service, where these bands are shared with equal rights with the fixed or mobile service:

2 655 - 2 690 MHz		(Regions 2 and 3)
4 400 - 4 700 MHz		
5 800 - 5 850 MHz		(for the countries mentioned in No. **390**)
5 850 - 5 925 MHz		(Regions 1 and 3)
5 925 - 6 425 MHz		
7 900 - 7 975 MHz		
7 975 - 8 025 MHz		(for the countries mentioned in No. **392H**)
8 025 - 8 400 MHz		
10·95 - 11·20	GHz	(Region 1)
12·50 - 12·75	GHz	(Regions 2 and 3 and for the countries mentioned in No. **405BD**)
14·175 - 14·300	GHz	(for the countries mentioned in No. **407**)
14·4 - 14·5	GHz	

470JA **Spa2** (3B) The limits given in No. **470GA** apply in the following frequency band allocated to transmission by earth stations in the fixed-satellite service, where this is shared with equal rights with the fixed or mobile service:

27·5 - 29·5 GHz

Minimum Angle of Elevation

470K **Spa2** § 22. (1) Earth stations.

470L **Spa2** (2) Earth station antennae shall not be employed for transmission at elevation angles of less than 3 degrees measured from the horizontal plane to the direction of maximum radiation, except when agreed to by administrations concerned or those whose services may be affected. In case of reception by an earth station, the above value shall be used for co-ordination purposes if the operating angle of elevation is less than that value.

470LA (2A) As an exception to No. **470L**, earth station antennae in the
Spa2 space research service (near-earth) shall not be employed for transmission at elevation angles of less than 5 degrees, and earth station antennae in the space research service (deep-space) shall not be employed for transmission at elevation angles of less than 10 degrees, both angles being those measured from the horizontal plane to the direction of maximum radiation. In case of reception by an earth station, the above values shall be used for co-ordination purposes if the operating angle of elevation is less than those values.

470M **SUP (Spa2)**

Spa2 *Limits of Power Flux Density from Space Stations*

470N § 23. (1) Power flux density limits between 1 690 MHz and 1 700
Spa2 MHz.

470NA *a)* The power flux density at the Earth's surface produced
Spa2 by emissions from a space station or reflected from a passive satellite for all conditions and for all methods of modulation shall not exceed -133 dBW/m^2 in any 1·5 MHz band. This limit relates to the power flux density which would be obtained under assumed free-space propagation conditions.

470NB *b)* The limit given in No. **470NA** applies in the frequency
Spa2 band listed in No. **470NC** which is allocated to transmission by space stations in the earth exploration-satellite service and in particular the meteorological-satellite service where this band is shared with equal rights with the meteorological aids service.

470NC 1 690 - 1 700 MHz
Spa2

470ND (2) Power flux density limits between 1 670 MHz and 2 535
Spa2 MHz.

470NE *a)* The power flux density at the Earth's surface produced
Spa2 by emissions from a space station or reflected from a passive satellite for all conditions and for all methods of modulation shall not exceed the following values:

-154 dBW/m^2 in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-154 + \frac{\delta - 5}{2}$ dBW/m^2 in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-144 dBW/m^2 in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

470NF *b)* The limits given in No. **470NE** apply in the frequency
Spa2 bands listed in No. **470NG** which are allocated to transmission by space stations in the following space radiocommunication services:

— Earth exploration-satellite service and in particular meteorological-satellite service (space-to-Earth)

— space research service (space-to-Earth)

— fixed-satellite service (space-to-Earth)

where these bands are shared with equal rights with the fixed or mobile service:

470NG **Spa2**

1 670 - 1 690 MHz
1 690 - 1 700 MHz (for the countries mentioned in No. **354A**)
1 700 - 1 710 MHz
1 770 - 1 790 MHz (for the countries mentioned in No. **356AA**)
2 200 - 2 290 MHz
2 290 - 2 300 MHz
2 500 - 2 535 MHz

470NGA **Spa2**

c) The power flux density values given in No. **470NE** are derived on the basis of protecting the fixed service using line-of-sight techniques. Where a fixed service using tropospheric scatter operates in the bands listed in No. **470NG** and where there is insufficient frequency separation, there must be sufficient angular separation between the direction to the space station and the direction of maximum radiation of the antenna of the receiving station of the fixed service using tropospheric scatter to ensure that the interference power at the receiver input of the station of the fixed service does not exceed −168 dBW in any 4 kHz band.

470NH **Spa2** (3) Power flux density limits between 2 500 MHz and 2 690 MHz.

470NI **Spa2**

a) The power flux density at the Earth's surface produced by emissions from a space station in the broadcasting-satellite service for all conditions and for all methods of modulation shall not exceed the following values:

−152 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-152 + \frac{3(\delta - 5)}{4}$ dBW/m² in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

— 137 dBW/m² in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

470NJ **Spa2**

b) The limits given in No. **470NI** apply in the frequency band:

2 500 - 2 690 MHz

which is shared by the broadcasting-satellite service with the fixed or mobile service.

470NK **Spa2**

c) The power flux density values given in No. **470NI** are derived on the basis of protecting the fixed service using line-of-sight techniques. Where a fixed service using tropospheric scatter operates in the band mentioned in No. **470NJ** and where there is insufficient frequency separation, there must be sufficient angular separation between the direction to the space station and the direction of maximum radiation of the antenna of the receiving station of the fixed service using tropospheric scatter to ensure that the interference power at the receiver input of the station of the fixed service does not exceed —168 dBW in any 4 kHz band.

470NL (4) Power flux density limits between 3 400 MHz and 7 750
Spa2 MHz.

470NM *a)* The power flux density at the Earth's surface produced
Spa2 by emissions from a space station or reflected from a passive satellite for all conditions and for all methods of modulation shall not exceed the following values:

-152 dBW/m^2 in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-152 + \frac{\delta - 5}{2}$ dBW/m^2 in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-142 dBW/m^2 in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

470NN *b)* The limits given in No. **470NM** apply in the frequency
Spa2 bands listed in No. **470NO** which are allocated to transmission by space stations in the following space radiocommunication services:

— fixed-satellite service (space-to-Earth)

— meteorological-satellite service (space-to-Earth)

where these bands are shared with equal rights with the fixed or mobile service:

470NO **Spa2**

3 400 - 4 200 MHz
7 250 - 7 300 MHz (for the countries mentioned in No. **392G**)
7 300 - 7 750 MHz

470NP **Spa2** (5) Power flux density limits between 8 025 MHz and 11·7 GHz.

470NQ **Spa2** *a)* The power flux density at the Earth's surface, produced by emissions from a space station, or reflected from a passive satellite for all conditions and for all methods of modulation shall not exceed the following values:

-150 dBW/m^2 in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-150 + \frac{\delta - 5}{2}$ dBW/m^2 in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-140 dBW/m^2 in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

470NR **Spa2** *b)* The limits given in No. **470NQ** apply in the frequency bands listed in No. **470NS** which are allocated to transmission by space stations in the following space radiocommunication services:

— earth exploration-satellite service (space-to-Earth)

— space research service (space-to-Earth)

— fixed-satellite service (space-to-Earth)

where these bands are shared with equal rights with the fixed or mobile service:

470NS
Spa2

8 025 - 8 400 MHz
8 400 - 8 500 MHz
10·95 - 11·20 GHz
11·45 - 11·70 GHz

470NT
Spa2

(6) Power flux density limits between 12·50 GHz and 12·75 GHz.

470NU
Spa2

a) The power flux density at the Earth's surface, produced by emissions from a space station or reflected from a passive satellite for all conditions and for all methods of modulation shall not exceed the following values:

-148 dBW/m^2 in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-148 + \frac{\delta - 5}{2}$ dBW/m^2 in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-138 dBW/m^2 in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

470NV *b)* The limits given in No. **470NU** apply in the frequency
Spa2 band indicated in No. **470NW** which is allocated to the fixed-satellite service for transmission by space stations where this band is shared with equal rights with the fixed or mobile service:

470NW 12·50 - 12·75 GHz (Region 3 and for the countries men-
Spa2 tioned in No. **405BD**)

470NX (7) Power flux density limits between 17·7 GHz and 22·0 GHz.
Spa2

470NY *a)* The power flux density at the Earth's surface pro-
Spa2 duced by emissions from a space station or reflected from a passive satellite for all conditions and for all methods of modulation shall not exceed the following values:

-115 dBW/m^2 in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-115 + \frac{\delta - 5}{2}$ dBW/m^2 in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-105 dBW/m^2 in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

470NZ *b)* The limits given in No. **470NY** apply in the frequency
Spa2 bands listed in No. **470NZA** which are allocated to transmission by space stations in the following space radiocommunication services:

— fixed-satellite service (space-to-Earth)

— earth exploration-satellite service (space-to-Earth)

where these bands are shared with equal rights with the fixed or mobile service:

470NZA	17·7	-	19·7	GHz
Spa2	21·2	-	22·0	GHz

470NZB (8) The limits given in Nos. **470NA**, **470NE**, **470NI**,
Spa2 **470NM**, **470NQ**, **470NU** and **470NY** may be exceeded on the territory of any country the administration of which has so agreed.

470O – 470U SUP (Spa2)

Spa2 **Section IX. Space Radiocommunication Services**

Cessation of Emissions

470V § 24. Space stations shall be fitted with devices to ensure imme-
Spa2 diate cessation of their radio emissions by telecommand, whenever such cessation is required under the provisions of these Regulations.

Spa2 *Control of Interference between Geostationary-Satellite Systems and non-synchronous inclined Orbit-Satellite Systems*

470VA § 25. Non-geostationary space stations in the fixed-satellite
Spa2 service shall cease or reduce to a negligible level radio emissions, and their associated earth stations shall not transmit to them whenever there is insufficient angular separation between the non-geostationary satellite and geostationary satellites and unacceptable interference [1] to geostationary satellite space systems operating in accordance with these Regulations.

Spa2 *Station Keeping of Space Stations* [2]

470VB § 26. Space stations on geostationary satellites:
Spa2

470VC — shall have the capability of maintaining their positions
Spa2 within ± 1 degree of the longitude of their nominal positions, but efforts should be made to achieve a capability of maintaining their positions at least within $\pm$ 0·5 degree of the longitude of their nominal positions;

470VD — shall maintain their positions within ± 1 degree of lon-
Spa2 gitude of their nominal positions irrespective of the cause of variation; but

---

470VA.1 [1] The level of unacceptable interference shall be fixed by agreement between
Spa2 the administrations concerned, using the relevant C.C.I.R. Recommendations as a guide.

Spa2 [2] In the case of space stations on geosynchronous satellites with orbits having an angle of inclination greater than 5 degrees the positional tolerance shall relate to the nodal point.

470VE **Spa2** — need not comply with No. **470VD** as long as the satellite network to which the space station belongs does not produce an unacceptable level of interference[1] into any other satellite network whose space station complies with the limits given in No. **470VD**.

Spa2 *Pointing Accuracy of Antennae on Geostationary Satellites*

470VF **Spa2** § 27. The pointing direction of maximum radiation of any earthward beam of antennae on geostationary satellites shall be capable of being maintained within:

10% of the half power beamwidth relative to the nominal pointing direction, or

0·5 degree relative to the nominal pointing direction,

whichever is greater. This provision applies only when such a beam is intended for less than global coverage.

In the event that the beam is not rotationally symmetrical about the axis of maximum radiation, the tolerance in any plane containing this axis shall be related to the half power beamwidth in that plane.

This accuracy shall be maintained only if it is required to avoid unacceptable interference[2] to other systems.

470VE.1 **Spa2** [1] The level of unacceptable interference shall be fixed by agreement between the administrations concerned, using the relevant C.C.I.R. Recommendations as a guide.

470VF.1 **Spa2** [2] The level of unacceptable interference shall be fixed by agreement between the administrations concerned, using the relevant C.C.I.R. Recommendations as a guide.

Spa2 *Power Flux Density at the Geostationary Satellite Orbit*

470VG **Spa2** § 28. In the frequency band 8 025 to 8 400 MHz, which the Earth exploration-satellite service using non-geostationary satellites shares with the fixed-satellite service (Earth-to-space) or the meteorological-satellite service (Earth-to-space), the maximum power flux density produced at the geostationary satellite orbit by any earth exploration-satellite service space station shall not exceed -174 dBW/m^2 in any 4 kHz band.

CHAPTER III

Notification and Registration of Frequencies. International Frequency Registration Board

ARTICLE 8

General Provisions

471 § 1. The constitution and the essential duties of the International Frequency Registration Board are defined in the Convention.

472 § 2. The functions of the Board shall include:

473 *a)* the processing of frequency assignment notices received from administrations for recording in the Master International Frequency Register;

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;

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;

476 *d)* 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;

477 Spa2 *e)* 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;

478 *f)* the investigation, at the request of one or more of the interested administrations, of harmful interference and the formulation of recommendations with respect thereto ;

479 *g)* 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 ;

480 *h)* 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 ;

481 *i)* the formulation and reference to the C.C.I.R. of all general technical questions arising from the Board's examination of frequency assignments ;

482 *j)* the technical planning for radio conferences with a view to reducing their duration ; and

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.

484 § 3. The working arrangements of the Board are set forth in the remaining articles of this Chapter.

485 § 4. The Board shall have the assistance of an adequate specialized secretariat of the requisite qualifications and experience, which shall work under the immediate direction of the Board to enable it to discharge its prescribed duties and functions.

ARTICLE 9

Spa2 **Notification and Recording in the Master International Frequency Register of Frequency Assignments[1] to Terrestrial Radiocommunication Stations[2]**

Section I. Notification of Frequency Assignments and Co-ordination Procedure to be Applied in appropriate Cases

486 Spa2 § 1. (1) Any frequency assignment[3] to a fixed, land, broadcasting[4], 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[5]; 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[5].

---

[1] 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*).

[2] For the notification and recording in the Master International Frequency Register of frequency assignments to radio astronomy and space radiocommunication stations, see Article 9A.

486.1 Spa2 [3] In the case where a frequency is used by numerous stations under the jurisdiction of the same administration, see Appendix 1 (Section E, II, Column 5a, paragraphs 2c and 2d).

486.2 Spa2 [4] 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 10.

486.3 Spa2 [5] The attention of administrations is specifically drawn to the application of the provisions of Nos. **486** *a)* and **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. **492A**), in a band which terrestrial radiocommunication services share with equal rights with space radiocommunication services in the frequency spectrum above 1 GHz.

487 (2) Similar notice shall be given for any frequency to be used
Spa for the reception of mobile stations by a particular land station in each case where one or more of the conditions specified in No. **486** are applicable.

488 (3) 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.

489 § 2. (1) For any notification under Nos. **486** or **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.

490 (2) When stations of the same service, such as the land mobile
Spa2 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 to broadcasting stations or to other terrestrial stations to which the provisions of Sub-Section IIB of this article apply or 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.

491 § 3. (1) Whenever practicable, each notice should reach the Board
Spa2 before the date on which the assignment is brought into use. It must reach the Board not earlier than 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 IIB of this article or in No. **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.

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 IIB 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. **491**.

492A **Spa2** § 3A. (1) Before an administration notifies to the Board, or brings into use any frequency assignment to a terrestrial station [1] for transmitting in a band allocated with equal rights to terrestrial radiocommunication services and space radiocommunication services (space-to-Earth) in the frequency spectrum above 1 GHz, it shall initiate co-ordination of the proposed assignment with the administration responsible for the receiving earth station concerned if the assignment is for use within the co-ordination area of an existing receiving earth station or of one for which the co-ordination procedure referred to in No. **639AN** has been initiated. For the purpose of effecting co-ordination, it shall send to any other such administration,

---

492A.1 **Spa2** [1] Appendix 28 contains criteria relating only to co-ordination between earth stations and stations in the fixed or the mobile service. Until the C.C.I.R., in accordance with Recommendation No. Spa2-9 provides criteria for other terrestrial radiocommunication services, the criteria to be used in effecting co-ordination between earth stations and terrestrial stations other than those of the fixed or the mobile service, shall be agreed between the administrations concerned.

by the fastest possible means, a copy of a diagram drawn to an appropriate scale indicating the location of the terrestrial station and all other pertinent details of the proposed frequency assignment, and the approximate date on which it is planned to bring the station into use.

492B **Spa2** (2) An administration with which co-ordination is sought under No. **492A** shall acknowledge receipt of the co-ordination data immediately by telegram. If no acknowledgement is received within fifteen days of dispatch, the administration seeking co-ordination may dispatch a telegram requesting acknowledgement of receipt of the co-ordination data, to which the receiving administration shall reply. Upon receipt of the co-ordination data an administration shall promptly examine the matter with regard to interference [1] which would be caused to the services rendered by its earth stations operating in accordance with the Convention and these Regulations, or to be so operated within the next three years, with the proviso that in this latter case co-ordination specified in No. **639AN** has been effected or that the co-ordination procedure has already been initiated; and shall, within an overall period of sixty days from dispatch of the co-ordination data, either notify the administration requesting co-ordination of its agreement to the proposals or, if this is not possible, indicate the reasons therefor and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.

492C **Spa2** (3) No co-ordination under No. **492A** is required when an administration proposes:

a) to bring into use a terrestrial station which is located, in relation to an earth station, outside the co-ordination area; or

---

492B.1 **Spa2** [1] The criteria to be employed in evaluating interference levels shall be based upon relevant C.C.I.R. Recommendations or, in the absence of such Recommendations, shall be agreed between the administrations concerned.

b) to change the characteristics of an existing assignment in such a way as not to increase the level of interference to the earth stations of other administrations.

492D (4) An administration seeking co-ordination may request the
Spa2 Board to endeavour to effect co-ordination, in those cases where:

a) an administration with which co-ordination is sought under No. **492A** fails to acknowledge receipt under No. **492B** within thirty days of dispatch of the co-ordination data;

b) an administration which has acknowledged receipt under No. **492B** but fails to give a decision within ninety days of dispatch of the co-ordination data;

c) there is disagreement between the administration seeking co-ordination and an administration with which co-ordination is sought as to the acceptable level of interference; or

d) co-ordination between administrations is not possible for any other reason.

In so doing, it shall furnish the Board with the necessary information to enable it to endeavour to effect such co-ordination.

492E (5) Either the administration seeking co-ordination or an
Spa2 administration with which co-ordination is sought, or the Board, may request additional information which they may require to assess the level of interference to the services concerned.

492F (6) Where the Board receives a request under No. **492D** *a)*,
Spa2 it shall forthwith send a telegram to the administration concerned requesting immediate acknowledgement.

492FA Spa2 (7) Where the Board receives an acknowledgement following its action under No. **492F**, or where the Board receives a request under No. **492D** *b)*, it shall forthwith send a telegram to the administration concerned requesting an early decision in the matter.

492FB Spa2 (8) Where the Board receives a request under No. **492D** *d)*, it shall endeavour to effect co-ordination in accordance with the provisions of No. **492A**. Where the Board receives no acknowledgement of its request for co-ordination within the period specified in No. **492B**, it shall act in accordance with No. **492F**.

492FC Spa2 (9) Where an administration fails to reply within thirty days of dispatch of the Board's telegram sent under No. **492F** requesting an acknowledgement, or fails to give a decision in the matter within sixty days of dispatch of the Board's telegram of request sent under No. **492FA**, it shall be deemed that the administration with which co-ordination was sought has undertaken that no complaint will be made in respect of any harmful interference which may be caused by the terrestrial station being co-ordinated to the service rendered by its earth station.

492G Spa2 (10) Where necessary, as part of the procedure under No. **492D**, the Board shall assess the level of interference. In any case, the Board shall inform the administrations concerned of the results obtained.

492GA Spa2 (11) In the event of continuing disagreement between one administration seeking to effect co-ordination and one with which co-ordination has been sought, provided that the assistance of the Board has been requested, the administration seeking co-ordination may, after sixty days from the date of the request for the assistance of the Board, taking into consideration the provisions of No. **491**, send its notice concerning the proposed assignment to the Board.

492GB § 3B. Where the Board receives information from an administra-
Spa2 tion in accordance with the provisions of No. **639AQ** in reply to a request for co-ordination for an earth station, it shall consider as notifications under this Section, only that information relating to assignments to existing terrestrial stations or to those to be brought into use within the time limits defined in No. **491**. Such notifications shall be examined by the Board with respect to the provisions of Nos. **570AB** and **570AD**, as appropriate, and shall be treated accordingly.

493 § 3C. (1) Whatever the means of communication, including tele-
Spa2 graph, by which a notice is transmitted to the Board, it shall be considered complete if it contains at least those appropriate basic characteristics specified in Appendix 1.

494 (2) Complete notices shall be considered by the Board in the
Spa order of their receipt.

495 § 4. 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

496 § 5. Any notice which is incomplete shall be returned by the Board immediately, by airmail, to the notifying administration with the reasons therefor.

497 § 6. Upon receipt of a complete notice, the Board shall include the particulars thereof, with the date of receipt, in a weekly circular sent by airmail to Administrations, Members and Associate Members of the Union ; this circular shall contain the particulars of all such notices received since the publication of the previous circular.

498 § 7. The circular shall constitute the acknowledgment to the notifying administration of the receipt of a complete notice.

499 § 8. Complete notices shall be considered by the Board in the order specified in No. **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.

Spa2 **Sub-Section IIA. Procedure to be followed in cases not covered by Sub-Section IIB of this Article**

500 § 9. (1) Except for notices referred to in Nos. **541**, **547**, **552**, **561** and **568**, the Board shall examine each notice with respect to

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) ;

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. **607**) ; or

2) is in conformity with the provisions of No. **501** and bears a date in Column 2b (see No. **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. **501** with an earlier date in Column 2b ; or

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 :

1) is in conformity with the provisions of No. **501** and either bears a symbol [1] in Column 2d (see No. **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. **503**; or

2) is in conformity with the provisions of No. **501** and was recorded in the Master Register with a date in Column 2d after an unfavourable finding with respect to No. **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. **501.**

504 (2) The Board shall not make the examination specified in No. **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. **503** at the request of an administration directly concerned or affected when co-ordination has not been possible between the administrations involved.

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. **501** and **502** or **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.

503·1 [1] 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.

506 § 10. Depending upon the findings of the Board subsequent to the examination prescribed in Nos. **501** and **502** or **503**, further action shall be as follows :

507 § 11. (1) *Finding Favourable with Respect to No.* **501** *in cases where the Provisions of Nos.* **502** *or* **503** *are not applicable (see No.* **504***).*

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.

509 § 12. (1) *Finding Favourable with Respect to Nos.* **501** *and* **502** *or* **503**.

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.

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.

512 § 13. (1) *Finding Favourable with Respect to No.* **501** *but Unfavourable with Respect to Nos.* **502** *or* **503**.

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.

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. **502** or **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.

515 (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. **514** 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 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.

516 (5) In the case of a frequency assignment recorded in accordance with the provisions of No. **515**, the Board shall investigate the assignments that contributed to the unfavourable finding, using such means at its disposal as are appropriate in the circumstances, and, with the agreement of the notifying administration concerned, shall effect any cancellations or amendments found to be necessary, in order that the recordings in the Master Register shall reflect the actual frequency usage. If, as a result, the Board is able to reach a favourable finding with respect to Nos. **502** or **503** with regard to any assignment recorded under the provisions of No. **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.

517 (6) Moreover, if, as a result of investigations under No. **516** it is confirmed that an assignment recorded is being used in accordance with the notified basic characteristics, a symbol shall be entered in Column 13a of the Master Register to indicate this fact.

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. **513**. If the notice is resubmitted again and subsequently recorded, 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 submitted for the second time.

519 § 14. (1) *Finding Unfavourable with Respect to No.* **501** *in cases where the Provisions of Nos.* **502** *or* **503** *are not applicable (see No.* **504***).*

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. **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.

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. **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.

522 (4) If the notifying administration resubmits the notice, 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 resubmitted notice.

523 § 15. (1) *Finding Unfavourable with Respect to No.* **501** *in cases where the Provisions of Nos.* **502** *or* **503** *are applicable.*

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. **115** of these Regulations, it shall be examined immediately with respect to Nos. **502** or **503**, and the provisions of Nos. **525** or **526** applied, as appropriate.

525 (3) If the finding is favourable with respect to Nos. **502** or **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.

526 (4) If the finding is unfavourable with respect to Nos. **502** or **503**, the notice shall be returned immediately by airmail to the notifying administration. Should the administration insist upon re-consideration 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.

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. **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.

528 (6) If the notifying administration resubmits the notice with modifications which result after re-examination in a favourable finding by the Board with respect to No. **501**, the notice shall be examined with respect to Nos. **502** or **503** and treated subsequently according to the provisions of Nos. **510** or **511**, or No. **513** as appropriate. 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 modified notice.

529 (7) If, however, the notifying administration insists upon re-consideration of the notice, and should the Board's finding remain unchanged, the notice shall be examined with respect to Nos. **502** or **503** and the provisions of Nos. **530** or **531** applied, as appropriate.

530 (8) If the finding is favourable with respect to Nos. **502** or **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 resubmitted notice.

531 (9) If the finding is unfavourable with respect to Nos. **502** or **503**, the notice shall be returned immediately by airmail to the notifying administration. Should the administration insist upon re-consideration 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 first resubmitted 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.

532 § 16. (1) *Change in the basic Characteristics of Assignments already recorded in the Master Register.*

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. **501** and **502**, **503** or **504**, as appropriate, and the provisions of Nos. **507** to **531** inclusive applied. Where the change should be recorded, the assignment shall be amended according to the notice.

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. **89**) which is in conformity with No. **501**, should the Board reach a favourable finding with respect to Nos. **502** or **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.

535 § 17. *In applying the provisions of the whole of this Sub-Section,*
Spa 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.

536 § 18. (1) *Recording of Frequency Assignments notified before being brought into use.*

537 (2) If a frequency assignment notified in advance of bringing into use has received favourable findings by the Board with respect to Nos. **501** and **502** or **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.

538 (3) If, within the period of thirty days (see No. **491**) after the projected date of bringing into use, the Board receives confirmation from the notifying administration of the date of putting into use, the special symbol shall be deleted from the Remarks Column. In the case where the Board, in the light of a request from the notifying administration received before the end of the thirty-day period, finds that exceptional circumstances warrant an extension of this period, the extension shall in no case exceed ninety days.

539 (4) If the Board does not receive this confirmation within the period referred to in No. **538**, the entry concerned shall be cancelled.

540 Mar2 (5) The provisions of Nos. **537** to **539** do not apply to frequency assignments which are in conformity with the Allotment Plans appearing in Appendices 25 Mar2, 26 and 27 to these Regulations; such frequency assignments shall be entered in the Master Register on receipt of the notice by the Board.

541 Mar2 § 19. (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.* **500**).[1]

542 Mar2 (2) The Board shall examine each notice covered by No. **541**:

542A Mar2 *a)* with respect to the provisions of No. **501** and in particular those of No. **1351C**;

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.

541.1 Mar2 [1] See paragraph 10 of Resolution No. Mar2 – 12.

543 (3) Any frequency assignment for which the finding is
Mar2 favourable with respect to Nos. **542A** and **542B** shall be recorded in the Master Register (see also No. **540**). The date to be entered in Column 2a shall be that determined according to the relevant provisions of Section III of this Article.

543A (4) Any frequency assignment for which the finding is un-
Mar2 favourable with respect to No. **542A** shall be examined with respect to Nos. **520** and **521**. The date to be entered in Column 2b shall be determined according to the relevant provisions of Section III of this Article.

544 SUP **(Mar2)**

545 (5) In the case of a notice which has received a favourable find-
Mar2 ing with respect to No. **542A** but unfavourable with respect to No. **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. **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. **545**, but has not, in fact, caused harmful interference to any frequency assignment to a coast radiotelephone station previously recorded in the Master Register.

546 Mar2 (6) According to the finding of the Board with respect to No. **545**, further action shall be in accordance with the provisions of Nos. **509** to **518** inclusive, or Nos. **532** to **534** inclusive, as appropriate, it being understood that in those provisions No. **545** shall be read for No. **502**.

547 Mar2 § 20. (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.* **487** *and* **500**).[1]

548 Mar2 (2) The Board shall examine each notice covered by No. **547**:

548A Mar2 *a)* with respect to the provisions of No. **501** and in particular those of No. **1351D**;

548B Mar2 *b)* in order to determine whether the notified assignment corresponds to a 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.

549 Mar2 (3) Any frequency assignment for reception by a coast radiotelephone station for which the finding is favourable with respect to Nos. **548A** and **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.

547.1 Mar2 [1] See paragraph 10 of Resolution No. Mar2 – 12.

549A Mar2 (4) Any frequency assignment for reception by a coast radiotelephone station for which the finding is unfavourable with respect to No. **548A** shall be examined with respect to Nos. **520** and **521.** The date to be entered in Column 2b shall be that determined according to the relevant provisions of Section III of this Article.

550 SUP **(Mar2)**

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. **548A** but unfavourable with respect to No. **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.

552 § 21. (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.* **500***).*

553 (2) The Board shall examine each notice covered by No. **552** to determine whether :

554 Aer *a)* 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, 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;

555 *b)* the limitations of use set forth in Column 3 of the Plan have been appropriately observed ;

556 Aer *c)* the notice is in conformity with the technical principles of the Plan set forth in Appendix 27;

557 Aer *d)* the area of use is within the boundaries of the Areas as set forth in Column 2 of the Plan.

558 Aer (3) In the case of a notice in conformity with the provisions of Nos. **554** to **556**, but not with those of No. **557**, the Board shall examine whether the protection specified in Appendix 27 (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, Part I, Section II B, paragraph 4 .

559 SUP (Aer)

560 Aer (4) All frequency assignments referred to in No. **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.

561 § 22. (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.* **500***).*

562 (2) The Board shall examine each notice covered by No. **561** to determine whether :

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) ;

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 ;

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.

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).

567 (4) All frequency assignments referred to in No. **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.

568 § 23. (1) *Frequency Assignments to Broadcasting Stations in the Bands allocated exclusively to the Broadcasting Service between 5 950 and 26 100 kHz (see No.* **500***).*

569 (2) When the Board has prepared according to the provisions of Article 10 the High Frequency Broadcasting Schedule for a particular season, this Schedule shall be compared with the listings in the Master Register, to determine whether all the frequency assignments included in that Schedule correspond to frequency assignments recorded in the Master Register on behalf of the administrations concerned.

570 (3) In the case where a frequency assignment included in a Schedule for a particular season is not covered by any listing in the Master Register, that frequency assignment shall be considered as being notified, and the Board, without further examination, shall make an appropriate entry 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 projected seasonal schedule.

Spa2 **Sub-Section IIB. 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**

570AA § 23A. The Board shall examine each notice:
Spa

570AB *a)* with respect to its conformity with the Convention, the
Spa 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);

570AC *b)* with respect to its conformity with the provisions of
Spa No. **492A** relating to co-ordination of the use of the frequency assignment with the other administrations concerned;

570AD *c)* where appropriate, with respect to the probability of
Spa2 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. **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 No. **501** or **570AB**, as appropriate, previously recorded in the Master Register.

570AE§23B. Depending upon the findings of the Board subsequent to
Spa the examination prescribed in Nos. **570AB, 570AC** and **570AD,** further action shall be as follows:

570AF§23C.(1) *Finding unfavourable with respect to No.* **570AB.**
Spa

570AG (2) Where the notice includes a specific reference to the fact that
Spa2 the station will be operated in accordance with the provisions of No. **115,** it shall be examined immediately with respect to Nos. **570AC** and **570AD.**

570AGA (3) If the finding is favourable with respect to No. **570AC** or
Spa2 **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.

570AGB (4) If the finding is unfavourable with respect to No. **570AC** or
Spa2 **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. 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.

570AGC (5) The period of one hundred and twenty days mentioned in
Spa2 Nos. **570AGB** and **570AX** shall count:

— from the date when the assignment to the terrestrial station which received an unfavourable finding is brought into use, if the assignment to the earth station is then in use;

— otherwise, from the date when the assignment to the earth station is brought into use.

But if the assignment to the earth station has not been brought into use by the notified date, the period of one hundred and twenty days shall be counted from that date. Allowance, if necessary, may be made for the additional period mentioned in No. **570BF**.

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. **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.

570AI Spa2 (7) If the notifying administration resubmits the notice unchanged, it shall be treated in accordance with the provisions of No. **570AH**.

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. **115**, it shall be treated in accordance with the provisions of Nos. **570AG** and **570AGA** or No. **570AGB**, as appropriate.

570AK Spa2 (9) If the notifying administration resubmits the notice with modifications which, after re-examination, result in a favourable finding by the Board with respect to No. **570AB**, the notice shall be treated under the provisions of Nos. **570AL** to **570AX**. However, in any subsequent recording of the assignment, the date of receipt by the Board of the resubmitted notice shall be entered in Column 2d.

570AL § 23D. (1) *Finding favourable with respect to No.* **570AB.**
Spa

570AM Spa (2) Where the Board finds that the co-ordination procedure mentioned in No. **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.

570AN Spa (3) Where the Board finds that the co-ordination procedure mentioned in No. **570AC** has not been applied, and the notifying administration requests the Board to effect the required co-ordination, the Board shall take the appropriate action necessary and shall inform the administrations concerned of the results obtained. If the Board's efforts are successful, the notice shall be treated in accordance with No. **570AM.** If the Board's efforts are unsuccessful, the notice shall be examined by the Board with respect to the provisions of No. **570AD.**

570AO Spa (4) Where the Board finds that the co-ordination procedure mentioned in No. **570AC** has not been applied, and the notifying administration does not request the Board to effect the required co-ordination, the notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this action and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.

570AP Spa (5) Where the notifying administration resubmits the notice and the Board finds that the co-ordination procedure mentioned in No. **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.

570AQ Spa (6) Where the notifying administration resubmits the notice with a request that the Board effect the required co-ordination, it shall be treated in accordance with the provisions of No. **570AN.**

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.

570AR (7) Where the notifying administration resubmits the notice
Spa and states it has been unsuccessful in effecting the co-ordination, it shall be examined by the Board with respect to the provisions of No. **570AD.** 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.

570AS §23E.(1) *Finding favourable with respect to Nos.* **570AB** *and* **570AD.**
Spa

570AT (2) The assignment shall be recorded in the Master Register.
Spa The date of receipt by the Board of the notice shall be entered in Column 2d.

570AU §23F.(1) *Finding favourable with respect to No.* **570AB** *but unfavour-*
Spa *able with respect to No.* **570AD.**

570AV (2) The notice shall be returned immediately by airmail to the
Spa 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.

570AW (3) Should the notifying administration resubmit the notice
Spa with modifications which result, after re-examination, in a favourable finding by the Board with respect to No. **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.

570AX (4) Should the notifying administration resubmit the notice,
Spa2 either unchanged, or with modifications which decrease the probability of harmful interference, but not sufficiently to permit the

provisions of No. **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. **570AGC**.

570AY SUP (Spa2)

570AZ §23G.(1) *Change in the Basic Characteristics of Assignments already*
Spa *recorded in the Master Register.*

570BA (2) A notice of a change in the basic characteristics of an assign-
Spa2 ment 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. **570AB** and **570AC** and, where appropriate, No. **570AD**, and the provisions of Nos. **570AF** to **570AX** inclusive applied. Where the change should be recorded, the original assignment shall be amended according to the notice.

570BB (3) However, in the case of a change in the basic characteristics
Spa of an assignment which is in conformity with No. **570AB**, should the Board reach a favourable finding with respect to No. **570AC**, and, where its provisions are applicable, with respect to No. **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.

570BC Spa2 § 23H. 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.

570BD Spa § 23I. (1) *Recording of Frequency Assignments notified before being brought into use.*

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. **570AB** and **570AC** and, where appropriate, with respect to No. **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.

570BF Spa2 (3) If, within the period of thirty days after the projected date of bringing into use, the Board receives confirmation from the notifying administration of the date of bringing into use, the special symbol shall be deleted from the Remarks Column. In the case where the Board, in the light of a request from the notifying administration received before the end of the thirty-day period, finds that exceptional circumstances warrant an extension of this period, the extension shall in no case exceed one hundred and fifty days.

570BG Spa2 (4) In the circumstances described in No. **570AX**, and as long as an assignment which received an unfavourable finding cannot be resubmitted as a consequence of the provisions of No. **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. **570AX**, the information relating to the absence of complaint of harmful interference.

570BH Spa2 (5) If the Board does not receive this confirmation within the period referred to in No. **570BF** or at the end of the period referred to in No. **570BG**, as appropriate, the entry concerned shall be cancelled. The Board shall advise the notifying administration before taking such action.

Section III. Recording of Dates and Findings in the Master Register

571 § 24. 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.

572 § 25. The procedure for recording dates in the appropriate part
Spa 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. **573** to **604** for frequency assignments referred to in Sub-Section IIA.

573 § 26. (1) *Frequency Bands:*
Mar2

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*	

574 (2) For any assignment to which the provisions of Nos. **510**, **511** or **514** apply, the relevant date shall be entered in Column 2a of the Master Register.

575 (3) For any assignment to which the provisions of Nos. **515**, **518**, **520**, **522**, **525**, **526**, **530** or **531** apply, the relevant date shall be entered in Column 2b of the Master Register.

576 (4) However, no date shall be entered in Column 2a or Column 2b in respect of frequency assignments to broadcasting stations in Region 2 in the band 535-1 605 kHz. The date entered in Column 2c is given for information only.

577 **Mar2** § 27. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Coast Radiotelephone Stations.*[1]

578 **Mar2** (2) If the finding is favourable with respect to Nos. **542A** and **542B**, the date of 7 June 1974 shall be entered in Column 2a.

579 SUP **(Mar2)**

580 (4) For all other cases referred to in No. **541**, the relevant date shall be entered in Column 2b (see Nos. **510**, **514**, **515**, **518**, **533** and **534**).

581 (5) For assignments to stations other than radiotelephone coast stations, the relevant date shall be entered in Column 2b (see Nos. **525**, **526**, **530** and **531**).

582 **Mar2** § 28. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kHz for Ship Radiotelephone Stations.*[2]

583 **Mar2** (2) If the finding is favourable with respect to Nos. **548A** and **548B**, the date of 7 June 1974 shall be entered in Column 2a.

577.1 Mar2 [1] See paragraph 10 of Resolution No. Mar2 – 12.

582.1 Mar2 [2] See paragraph 10 of Resolution No. Mar2 – 12.

584 SUP **(Mar2)**

585 (4) In all other cases covered by No. **547**, the date of receipt of the notice by the Board shall be entered in Column 2b.

586 (5) For assignments other than assignments of frequencies for reception by radiotelephone coast stations, the relevant date shall be entered in Column 2b (see Nos. **525**, **526**, **530** and **531**).

587 § 29. (1) *Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 25 110 kHz for Radiotelegraph Ship Stations (see No.* **488***).*

588 (2) For assignments to stations other than radiotelegraph ship stations, the relevant date shall be entered in Column 2b (see Nos. **525, 526, 530** and **531**).

589 § 30. (1) *Frequency Bands allocated exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz.*

590 Aer (2) If the finding is favourable with respect to Nos. **554** to **557** the date of 29 April 1966 shall be entered in Column 2a.

591 Aer (3) If the finding is favourable with respect to No. **558**, the date of 29 April 1966 shall be entered in Column 2b.

592 (4) In all other cases covered by No. **552**, the date of receipt of the notice by the Board shall be entered in Column 2b.

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. **525, 526, 530** and **531**).

594 § 31. (1) *Frequency Bands allocated exclusively to the Aeronautical Mobile (OR) Service between 3 025 and 18 030 kHz.*

595 (2) If the finding is favourable with respect to No. **563**, the date of 3 December, 1951 shall be entered in Column 2a.

596 (3) If the finding is favourable with respect to No. **564** the date of 3 December, 1951 shall be entered in Column 2b.

597 (4) If the provisions of No. **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.

598 (5) In all other cases covered by No. **561**, the date of receipt of the notice by the Board shall be entered in Column 2b.

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. **525, 526, 530** and **531**).

600 § 32. (1) *Frequency Bands allocated exclusively to the Broadcasting Service between 5 950 and 26 100 kHz.*

601 (2) For any frequency assignment which is to be recorded under the provisions of No. **570**, the relevant date shall be entered in Column 2d.

602 (3) For assignments to stations other than broadcasting stations, the relevant date shall be entered in Column 2d.

603 § 33. (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.*

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.

605 § 34. *Date to be entered in Column 2c.*

606 The date to be entered in Column 2c shall be the date of putting into use notified by the administration concerned (see Nos. **491** and **492**). However, in cases covered by No. **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.

Section IV. Categories of Frequency Assignments

607 § 35. (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.

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. **502**, sub-paragraph 2).

609 (3) For frequency assignments having dates in two parts of Column 2, the date in Column 2c is given for information only.

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.

611 (5) If harmful interference to the reception of any station whose assignment is in accordance with No. **501** is actually caused by the use of a frequency assignment which is not in conformity with No. **501**, the station using the latter frequency assignment must immediately cease operations upon receipt of advice of this harmful interference.

611A (6) If harmful interference to the reception of any station whose
Spa2 assignment is in accordance with No. **639BM** is actually caused by the use of a frequency assignment which is not in conformity with No. **501** or **570AB**, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.

Section V. Review of Findings

612 § 36. (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.

613 (2) The Board, in the light of all the data at its disposal, shall
Spa review the matter, taking into account No. **501** or **570AB** and No. **502, 503, 570AC** or **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.

614 § 37. 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.

615 Spa § 38. (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 No. **502, 503** or **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.

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.

617 (3) If the finding with regard to the probability of harmful interference remains unfavourable, no change shall be made in the original entry.

618 § 39. In the case where a frequency assignment has been entered in the Master Register on the insistence of the notifying administration, following an unfavourable finding with respect to Nos. **502** or **503**, and where the Board finds, after having consulted the administrations concerned, that harmful interference has not, in fact, occurred, although the assignment has been in actual use, according to be notified characteristics, during a period covering all the phases of a solar cycle in which the assignment could be normally used, the Board shall amend the entry in the Master Register in such a way that it shall appear in the future as if the original finding had been favourable with respect to Nos. **502** or **503**.

Section VI. Modification, Cancellation and Review of Entries in the Master Register

619 § 40. 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.

620 § 41. 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.

621 § 42. If, in connection with an enquiry by the Board under Nos. **516** or **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.

622 § 43. As far as possible, the Board shall maintain the entries in the Master Register under continuous review for those bands for which technical examination by the Board is prescribed in this Article, with a view to determining whether or not the assignments are being used in accordance with the notified basic characteristics, and shall take action under No. **620**.

Section VII. Studies and Recommendations

623 § 44. (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 :

624 *a)* in cases arising under No. **512** as to a possible alternative frequency assignment to avoid probable harmful interference ;

625 *b)* in cases where a need arises for additional frequency assignments within a specified portion of the radio spectrum ;

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

627 *d)* in cases of alleged contravention or non-observance of these Regulations, or of harmful interference.

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.

629 § 45. 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. **501** will :

630 *a)* accommodate a new assignment ; or

631 *b)* facilitate the solution of a problem of harmful interference ; or

632 *c)* otherwise facilitate the more effective use of a particular portion of the radio spectrum ; and

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.

634 § 46. 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.

Section VIII. Miscellaneous Provisions

635 § 47. The provisions of Sections V, VI (excepting No. **619**) and VII
Mar2 of this Article shall not be applied to frequency assignments in conformity with the Allotment Plans contained in Appendices 25 Mar2, 26 and 27 to these Regulations.

635A § 47A. (1) If it is requested by any administration, particularly by an
Spa2 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. **639AN**;

b) computation of the interference level, as referred to in No. **492B**;

c) any other assistance of a technical nature for completion of the procedures in this Article.

635B (2) In making a request to the Board under No. **635A**, the admi-
Spa2 nistration shall furnish the Board with the necessary information.

636 § 48. 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 C.C.I.R., the state of the radio art, and the development of new transmission techniques.

637 § 49. The Board shall promulgate to administrations its findings and reasons therefor, together with all changes made to the Master Register, through the weekly circular referred to in No. **497**, which shall be published in the working languages of the Union as defined in the Convention. In carrying out the various procedures stipulated in this Article, the Board shall use the weekly circular as a means of communicating with administrations to the maximum extent practicable.

638 § 50. The Board shall inform administrations, at appropriate intervals, of the cases of special assistance which were studied under Nos. **614** and **623** to **634** inclusive of these Regulations.

639 § 51. 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.

Spa2

ARTICLE 9A

Co-ordination, Notification and Recording in the Master International Frequency Register of Frequency Assignments[1] to Radio Astronomy and Space Radiocommunication Stations except Stations in the Broadcasting-Satellite Service

Section I. Procedure for the Advance Publication of Information on Planned Satellite Systems

639AA § 1. (1) An administration (or one acting on behalf of a group of
Spa2 named administrations) which intends to establish a satellite system shall, prior to the co-ordination procedure in accordance with No. **639AJ** where applicable, send to the International Frequency Registration Board not earlier than five years before the date of bringing into service each satellite network of the planned system, the information listed in Appendix 1B.

639AB (2) Any amendments to the information sent concerning a
Spa2 planned satellite system in accordance with No. **639AA** shall also be sent to the Board as soon as they become available.

639AC (3) The Board shall publish the information sent under
Spa2 Nos. **639AA** and **639AB** 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.

---

[1] 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*).

639AD (4) If, after studying the information published under
Spa2 No. **639AC**, any administration is of the opinion that interference, which may be unacceptable, may be caused to its existing or planned space radiocommunication services, it shall within ninety days after the date of the weekly circular publishing the information listed in Appendix 1B, send its comments to the administration concerned. A copy of these comments shall also be sent to the Board. If no such comments are received from an administration within the period mentioned above, it may be assumed that that administration has no basic objections to the planned satellite network(s) of that system on which details have been published.

639AE (5) An administration receiving comments sent in accordance
Spa2 with No. **639AD** shall endeavour to resolve any difficulties that may arise.

639AF (6) In case of difficulties arising when any planned satellite
Spa2 network of a system is intended to use the geostationary satellite orbit:

a) the administration responsible for the planned system shall first explore all possible means of meeting its requirements, taking into account the characteristics of the geostationary satellite networks of other systems, and without considering the possibility of adjustment to systems of other administrations. If no such means can be found, the administration concerned is then free to apply to other administrations concerned to solve these difficulties;

b) an administration receiving a request under *a)* above shall, in consultation with the requesting administration, explore all possible means of meeting the requirements of the requesting administration, for example, by relocating one or more of its own geostationary space stations involved, or by changing the emissions, frequency usage (including changes in frequency bands) or other technical or operational characteristics;

c) if after following the procedure outlined in *a)* and *b)* above there are unresolved difficulties, the administrations concerned shall together make every possible effort to resolve these difficulties by means of mutually acceptable adjustments, for example, to geostationary space station locations and to other characteristics of the systems involved in order to provide for the normal operation of both the planned and existing systems.

639AG (7) In their attempts to resolve the difficulties mentioned above
Spa2 administrations may seek the assistance of the Board.

639AH (8) In complying with the provisions of Nos. **639AE** to **639AG**,
Spa2 an administration responsible for a planned satellite system shall, if necessary, defer its commencement of the co-ordination procedure, or where this is not applicable, the sending of its notices to the Board, until one hundred and fifty days after the date of the weekly circular containing the information listed in Appendix 1B on the relevant satellite network. However, in respect of those administrations with whom difficulties have been resolved or who have responded favourably, the co-ordination procedure, where applicable, may be commenced prior to the expiry of the one hundred and fifty days mentioned above.

639AI (9) An administration on behalf of which details of planned
Spa2 satellite networks in its system have been published, in accordance with the provisions of Nos. **639AA** to **639AC**, shall periodically inform the Board whether or not comments have been received and of the progress made, with other administrations, in resolving any difficulties. 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 inform all administrations by circular telegram.

Section II. Co-ordination Procedures to be applied in appropriate Cases

639AJ § 2. (1) Before an administration notifies to the Board or brings
Spa2 into use any frequency assignment to a space station on a geostationary satellite or to an earth station that is to communicate with a space station on a geostationary satellite, it shall effect co-ordination of the assignment with any other administration whose assignment in the same band for a space station on a geostationary satellite or for an earth station that communicates with a space station on a geostationary satellite is recorded in the Master Register, or has been co-ordinated or is being co-ordinated under the provisions of this paragraph. For this purpose, the administration requesting co-ordination shall send to any other such administration the information listed in Appendix 1A.

639AK (2) No co-ordination under No. **639AJ** is required:
Spa2

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

b) when an administration proposes to change the characteristics of an existing assignment in such a way as will, in respect of any service of another administration, meet the requirements of sub-paragraph *a)* above, or, where this assignment has previously been coordinated, will cause an increase in noise temperature not exceeding the value agreed during co-ordination.

639AL (3) An administration initiating the co-ordination procedure
Spa2 referred to in No. **639AJ** shall at the same time send to the Board a copy of the request for co-ordination, with the information listed in Appendix 1A and the name(s) of the administration(s) with which co-ordination is sought. The Board shall publish this information in a special section of its weekly circular, together with a reference to the weekly circular in which details of the satellite system were published in accordance with Section I of this Article. When the weekly circular contains such information, the Board shall so inform all administrations by circular telegram.

639AM (4) An administration believing that it should have been
Spa2 included in the co-ordination procedure under No. **639AJ** shall have the right to request that it be brought into the co-ordination procedure.

639AN§ 3. (1) Before an administration notifies to the Board or brings
Spa2 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 [1] radiocommunication services in the frequency spectrum above 1 GHz, it shall effect co-ordination of the assignment with any other administration whose territory lies wholly or partly within the co-ordination area [2] 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 [2] 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.

639AO (2) An administration with which co-ordination is sought
Spa2 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. **639AL**, 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,

---

639AN.1 [1] Appendix 28 contains criteria relating only to co-ordination between
Spa2 earth stations and stations in the fixed or mobile service. Until the C.C.I.R., in accordance with Recommendation No. Spa2 -9 provides criteria relating to other terrestrial radiocommunication services, the criteria to be employed in effecting co-ordination between earth stations and terrestrial radiocommunication stations, other than those of the fixed or mobile service, shall be agreed between the administrations concerned.

639AN.2 [2] Calculated, in relation to the fixed or mobile service, in accordance with
Spa2 the procedures described in Appendix 28.

promptly examine the matter with regard to interference [1] which would be caused to the service rendered by its stations in respect of which co-ordination is sought under No. **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.

639AP (3) An administration with which co-ordination is sought under
Spa2 No. **639AN** shall acknowledge receipt of the co-ordination data immediately by telegram. If no acknowledgement is received within fifteen days of dispatch of the co-ordination data, the administration seeking co-ordination shall dispatch a telegram requesting acknowledgement, to which the receiving administration shall reply within a further period of fifteen 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 both to:

a) interference [2] which would be caused to the service rendered by its terrestrial radiocommunication stations operating in accordance with the Convention and these Regulations, or to be so operated prior to the planned date of bringing the earth station assignment into service, or within the next three years, whichever is the longer; and to

---

639AO.1 [1] The criteria to be employed in evaluating interference levels shall be based
Spa2 upon relevant C.C.I.R. Recommendations or, in the absence of such Recommendations, shall be agreed between the administrations concerned.

639AP.1 [2] The criteria to be employed in evaluating interference levels shall be based
Spa2 upon relevant C.C.I.R. Recommendations or, in the absence of such Recommendations, shall be agreed between the administrations concerned.

b) interference [1] which would be caused to reception at the earth station by the service rendered by its terrestrial radiocommunication stations operating in accordance with the Convention and these Regulations, or to be so operated prior to the planned date of bringing the earth station assignment into service, or within the next three years, whichever is the longer.

The administration with which co-ordination is sought shall then, within sixty days from dispatch of the co-ordination data, 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 a copy of a diagram drawn to an appropriate scale showing the location of its terrestrial radiocommunication stations which are or will be within the co-ordination area of the earth transmitting or receiving station, as appropriate, together with all other relevant basic characteristics, and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.

639AQ Spa2 (4) When the administration with which co-ordination is sought sends to the administration seeking co-ordination the information mentioned in No. **639AP**, a copy thereof shall also be sent to the Board. The Board shall consider as notifications in accordance with Section I of Article 9, only that information relating to existing terrestrial radiocommunication stations or to those to be brought into use within the next three years.

639AR Spa2 (5) No co-ordination under No. **639AN** is required when an administration proposes:

639AP.1 Spa2 [1] The criteria to be employed in evaluating interference levels shall be based upon relevant C.C.I.R. Recommendations or, in the absence of such Recommendations, shall be agreed between the administrations concerned.

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 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;

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. **639AN**, includes any of the territory of another country, it shall be subject to prior 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 typical earth station.

639AS § 4. (1) An administration seeking co-ordination may request the **Spa2** Board to endeavour to effect co-ordination in those cases where:

a) an administration with which co-ordination is sought under No. **639AJ** fails to acknowledge receipt, under

No. **639AO**, within sixty days after the date of the weekly circular publishing the information relating to the request for co-ordination;

b) an administration with which co-ordination is sought under No. **639AN** fails to acknowledge receipt, under No. **639AP**, within thirty days of dispatch of the co-ordination data;

c) an administration has acknowledged receipt under No. **639AO**, but fails to give a decision within ninety days from the date of the relevant weekly circular;

d) an administration has acknowledged receipt under No. **639AP**, but fails to give a decision within sixty days from dispatch of the co-ordination data;

e) there is disagreement between the administration seeking co-ordination and an administration with which co-ordination is sought as to the acceptable level of interference;

f) co-ordination between administrations is not possible for any other reason.

In so doing, it shall furnish the Board with the necessary information to enable it to endeavour to effect such co-ordination.

639AT (2) Either the administration seeking co-ordination or an admin-
Spa2 istration with which co-ordination is sought, or the Board, may request additional information which they may require to assess the level of interference to the services concerned.

639AU (3) Where the Board receives a request under No. **639AS** *a)* **Spa2** or *b)*, it shall forthwith send a telegram to the administration concerned requesting immediate acknowledgement.

639AV (4) Where the Board receives an acknowledgement following **Spa2** its action under No. **639AU**, or where the Board receives a request under No. **639AS** *c)* or *d)*, it shall forthwith send a telegram to the administration concerned requesting an early decision in the matter.

639AW (5) Where the Board receives a request under No. **639AS** *f)*, **Spa2** it shall endeavour to effect co-ordination in accordance with the provisions of Nos. **639AJ** and **639AN**, as appropriate. The Board shall also, where appropriate, act in accordance with No. **639AL**. Where the Board receives no acknowledgement to its request for co-ordination within the periods specified in No. **639AO** or **639AP**, as appropriate, it shall act in accordance with No. **639AU**.

639AX (6) Where an administration fails to reply within thirty days **Spa2** of dispatch of the Board's telegram requesting an acknowledgement sent under No. **639AU**, or fails to give a decision in the matter within thirty days of dispatch of the Board's telegram of request under No. **639AV**, it shall be deemed that the administration with which co-ordination was sought has undertaken:

a) that no complaint will be made in respect of any harmful interference which may be caused to the services rendered by its space or terrestrial radiocommunication stations by the use of the assignment for which co-ordination was requested;

b) that its space or terrestrial radiocommunication stations will not cause harmful interference to the use

of the assignment for which co-ordination was requested.

639AY Spa2 (7) Where necessary, as part of the procedure under No. **639AS**, the Board shall assess the level of interference. In any case, the Board shall inform the administrations concerned of the results obtained.

639AZ Spa2 § 5. In the event of continuing disagreement between one administration seeking to effect co-ordination and one with which co-ordination has been sought, provided that the assistance of the Board has been requested, the administration seeking co-ordination may, after one hundred and fifty days from the date of the request for co-ordination, taking into consideration the provisions of No. **639BF**, send its notice concerning the proposed assignment to the Board.

Section III. Notification of Frequency Assignments

639BA Spa2 § 6. (1) Any frequency assignment to an earth or space station shall be notified to the Board:

a) if the use of the frequency concerned is capable of causing harmful interference to any service of another administration; or

b) if the frequency is to be used for international radiocommunications; or

c) if it is desired to obtain international recognition of the use of the frequency.

639BB Spa2 (2) Similar notice shall be given for any frequency to be used for the reception of transmissions from earth or space stations by a particular space or earth station in each case where one or more of the conditions specified in No. **639BA** are applicable.

639BC (3) Similar notice may be given for any frequency or frequency
Spa2 band to be used for reception by a particular radio astronomy station, if it is desired that such data should be included in the Master Register.

639BD (4) A notice submitted in accordance with No. **639BA** or
Spa2 **639BB** and relating to a frequency assignment to mobile earth stations in a satellite system shall include the technical characteristics either of each mobile earth station, or of a typical mobile earth station, and an indication of the service area within which these stations are to be operated.

639BE § 7. For any notification under No. **639BA**, **639BB**, **639BC**, or
Spa2 **639BD**, an individual notice for each frequency assignment shall be drawn up as prescribed in Appendix 1A, the various Sections of 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 Section A of that Appendix, together with such further data as it may consider appropriate.

639BF § 8. (1) For a frequency assignment to an earth or space station,
Spa2 each notice must reach the Board not earlier than three years before the date on which the assignment is to be brought into use. The notice must reach the Board in any case not later than ninety days [1] before this date, except in the case of assignments in the space research service in bands allocated exclusively to this service or in shared bands in which this service is the sole primary service. In the case of such an assignment in the space research service, the notice should, whenever practicable, reach the Board before the date on which the assignment is brought into use, but it must in any case reach the Board not later than thirty days after the date it is actually brought into use.

639BF.1 [1] The notifying administration shall take this limit into account when deciding, where appropriate, to initiate the co-ordination procedure(s).
Spa2

639BG Spa2 (2) Any frequency assignment to an earth or space station, the notice of which reaches the Board after the applicable period specified in No. **639BF**, shall, where it is to be recorded, bear a mark in the Master Register to indicate that it is not in conformity with No. **639BF**.

Section IV. Procedure for the Examination of Notices and the Recording of Frequency Assignments in the Master Register

639BH Spa2 § 9. Any notice which does not contain at least those basic characteristics specified in Appendix 1A shall be returned by the Board immediately, by airmail, to the notifying administration with the reasons therefor.

639BI Spa2 § 10. Upon receipt of a complete notice, the Board shall include the particulars thereof, with the date of receipt, in the weekly circular referred to in No. **497**, which shall contain the particulars of all such notices received since the publication of the previous circular.

639BJ Spa2 § 11. The circular shall constitute the acknowledgement to the notifying administration of the receipt of a complete notice.

639BK Spa2 § 12. Complete notices shall be considered by the Board in the order of their receipt. The Board shall not 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.

639BL Spa2 § 13. The Board shall examine each notice:

639BM Spa2 *a)* with respect to its conformity with the Convention, the Table of Frequency Allocations and the other pro-

visions of the Radio Regulations (with the exception of those relating to the co-ordination procedures and the probability of harmful interference);

639BN **Spa2**

b) where appropriate, with respect to its conformity with the provisions of No. **639AJ**, relating to the co-ordination of the use of the frequency assignment with the other administrations concerned vis-à-vis space radiocommunication stations;

639BO **Spa2**

c) where appropriate, with respect to its conformity with the provisions of No. **639AN** relating to the co-ordination of the use of the frequency assignment with the other administrations concerned vis-à-vis terrestrial radiocommunication stations;

639BP **Spa2**

d) where appropriate, with respect to the probability of harmful interference to the service rendered by a space radiocommunication station for which a frequency assignment already recorded in the Master Register is in conformity with the provisions of No. **639BM** if this frequency assignment has not in fact caused harmful interference to any frequency assignment in conformity with No. **639BM** previously recorded in the Master Register;

639BQ **Spa2**

e) where appropriate, with respect to the probability of harmful interference to the service rendered by a terrestrial radiocommunication station for which a frequency assignment already recorded in the Master Register is in conformity with the provisions of No. **501** or **570AB**, as appropriate, if this frequency assignment has not, in fact, caused harmful interference to any frequency assignment in conformity with No. **639BM** previously recorded in the Master Register;

639BR *f)* where appropriate, with respect to the probability of
Spa2 harmful interference caused to the receiving earth station by a terrestrial radiocommunication station for which a frequency assignment already recorded in the Master Register is in conformity with No. **501** or **570AB**, as appropriate.

639BS § 14. When, following an examination of a notice with respect
Spa2 to No. **639BP**, the Board reaches an unfavourable finding based upon the probability of harmful interference to a recorded assignment for a space station which the Board has reason to believe may not be in regular use, the Board shall forthwith consult the administration responsible for the registered assignment. If it is established, after such consultation and on the basis of the information available, that the recorded assignment has not been in use for two years, it shall not be taken into account for the purposes of the examination in progress or any other further examination under No. **639BP** conducted before the date on which the assignment is brought back into use. Before the assignment is brought back into use, it shall be subject to further co-ordination in accordance with the provisions of No. **639AJ** or further examination by the Board with respect to No. **639BP**, as appropriate. The date on which the assignment is brought back into use shall then be entered in the Master Register.

639BT § 15. Depending upon the findings of the Board subsequent to
Spa2 the examination prescribed in Nos. **639BM**, **639BN**, **639BO**, **639BP**, **639BQ** and **639BR**, as appropriate, further action shall be as follows:

639BU § 16. (1) *Finding favourable with respect to No.* **639BM** *in cases where*
Spa2 *the provisions of Nos.* **639BN** *and* **639BO** *are not applicable.*

639BV (2) The assignment shall be recorded in the Master Register.
Spa2 The date of receipt by the Board of the notice shall be entered in Column 2d.

639BW § 17. (1) *Finding unfavourable with respect to No.* **639BM**.
Spa2

639BX (2) Where the notice includes a specific reference to the fact
Spa2 that the station will be operated in accordance with the provisions of No. **115**, and the finding is favourable with respect to Nos. **639BN**, **639BO**, **639BP**, **639BQ** and **639BR**, 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.

639BY (3) Where the notice includes a specific reference to the fact
Spa2 that the station will be operated in accordance with the provisions of No. **115** and the finding is unfavourable with respect to No. **639BN**, **639BO**, **639BP**, **639BQ** or **639BR**, 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. 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.

639BZ (4) The period of one hundred and twenty days mentioned in
Spa2 Nos. **639BY** and **639CP** shall count:

— from the date when the assignment to the space radiocommunication station which received an unfavourable finding is brought into use, if the assignment to the station which was the basis for the unfavourable finding is then in use;

— otherwise, from the date when the assignment to the station which was the basis for the unfavourable finding is brought into use.

But if the assignment to the station which was the basis for the unfavourable finding has not been brought into use by the notified date, the period of one hundred and twenty days shall be counted from this date. Allowance shall, if necessary, be made for the additional period mentioned in No. **639CY**.

639CA (5) Where the notice does not include a specific reference to the
Spa2 fact that the station will be operated in accordance with the provisions of No. **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.

639CB (6) If the notifying administration resubmits the notice un-
Spa2 changed, it shall be treated in accordance with the provisions of No. **639CA**. If it is resubmitted with a specific reference to the fact that the station will be operated in accordance with the provisions of No. **115**, it shall be treated in accordance with the provisions of No. **639BX** or **639BY**, as appropriate. If it is resubmitted with modifications which, after re-examination, result in a favourable finding by the Board with respect to No. **639BM**, it shall be treated as a new notice.

639CC § 18. (1) *Finding favourable with respect to No.* **639BM** *in cases where*
Spa2 *the provisions of No.* **639BN** *or* **639BO** *are applicable.*

639CD (2) Where the Board finds that the co-ordination procedures
Spa2 mentioned in No. **639BN** or **639BO** have been successfully completed with all administrations whose space or terrestrial radiocommunication 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.

639CE (3) Where the Board finds that either of the co-ordination
Spa2 procedures mentioned in Nos. **639BN** and **639BO** has not been applied, and the notifying administration requests the Board to effect the required co-ordination, the Board shall take appropriate action and shall inform the administrations concerned of the results obtained. If the Board's efforts are successful, the notice shall be treated in accordance with No. **639CD**. If the Board's efforts are unsuccessful, the notice shall be examined by the Board with respect to the provisions of Nos. **639BP**, **639BQ** and **639BR**, as appropriate.

639CF (4) Where the Board finds that either of the co-ordination
Spa2 procedures mentioned in Nos. **639BN** and **639BO** has not been applied, and the notifying administration does not request the Board to effect the required co-ordination, the notice shall be returned immediately by airmail to the notifying administration with the reasons of the Board for this action and with such suggestions as the Board may be able to offer with a view to the satisfactory solution of the problem.

639CG (5) Where the notifying administration resubmits the notice
Spa2 and the Board finds that the co-ordination procedures mentioned in Nos. **639BN** and **639BO** have been successfully completed with all administrations whose space or terrestrial radiocommunication 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.

639CH (6) Where the notifying administration resubmits the notice
Spa2 with a request that the Board effect the required co-ordination under No. **639AJ** or **639AN**, it shall be treated in accordance with the provisions of No. **639CE**. 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.

639CI Spa2 (7) Where the notifying administration resubmits the notice and states it has been unsuccessful in effecting the co-ordination, the Board shall inform the administrations concerned thereof. The notice shall be examined by the Board with respect to the provisions of Nos. **639BP**, **639BQ** and **639BR**, as appropriate. 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.

639CJ Spa2 § 19. (1) *Finding favourable with respect to Nos.* **639BM**, **639BP**, **639BQ** *and* **639BR**, *as appropriate.*

639CK Spa2 (2) 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.

639CL Spa2 (3) However, should the examination show that the level of the interference noise and the percentage of time during which it is likely to occur have values slightly greater than those used for assessing the probability of harmful interference (extreme propagation conditions, abnormal atmospheric humidity, etc.), a remark shall be included in the Master Register to show that there may be a slight risk of harmful interference and hence additional precautions must be taken in the use of the assignment to avoid harmful interference to assignments already recorded in the Master Register.

639CM Spa2 § 20. (1) *Finding favourable with respect to No.* **639BM** *but unfavourable with respect to No.* **639BP**, **639BQ** *or* **639BR**, *as appropriate.*

639CN Spa2 (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.

639CO (3) Should the notifying administration resubmit the notice
Spa2 with modifications which result, after re-examination, in a favourable finding by the Board with respect to Nos. **639BP**, **639BQ** and **639BR**, as appropriate, 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.

639CP (4) Should the notifying administration resubmit the notice,
Spa2 either unchanged, or with modifications which decrease the probability of harmful interference, but not sufficiently to permit the provisions of No. **639CO** 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. **639BZ**.

639CQ § 21. (1) *Notices relating to radio astronomy stations.*
Spa2

639CR (2) A notice relating to a radio astronomy station shall not
Spa2 be examined by the Board with respect to Nos. **639BN**, **639BO**, **639BP**, **639BQ** and **639BR**. Whatever the finding, the assignment

shall be recorded in the Master Register with a date in Column 2c. The date of receipt by the Board of the notice shall be recorded in the Remarks Column.

639CS Spa2 § 22. (1) *Change in the basic characteristics of assignments already recorded in the Master Register.*

639CT Spa2 (2) A notice of a change in the basic characteristics of an assignment already recorded, as specified in Appendix 1A (except the name of the station or the name of the locality in which it is situated) shall be examined by the Board according to No. **639BM**, and, where appropriate, Nos. **639BN**, **639BO**, **639BP**, **639BQ** and **639BR**, and the provisions of Nos. **639BU** to **639CR** inclusive shall apply. Where the change should be recorded, the original assignment shall be amended according to the notice.

639CU Spa2 (3) However, in the case of a change in the characteristics of an assignment which is in conformity with No. **639BM**, should the Board reach a favourable finding with respect to Nos. **639BN**, **639BO**, **639BP**, **639BQ** and **639BR**, where appropriate, or find that the changes do not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date in Column 2d. The date of receipt by the Board of the notice relating to the change shall be entered in the Remarks Column.

639CV Spa2 § 23. In applying the provisions of this 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.

639CW Spa2 § 24. (1) *Recording of frequency assignments notified before being brought into use.*

639CX Spa2 (2) If a frequency assignment notified in advance of bringing into use has received a favourable finding by the Board with respect to No. **639BM** and, where appropriate, Nos. **639BN**, **639BO**, **639BP**, **639BQ** and **639BR**, it shall be entered provisionally in the Master Register with a special symbol in the Remarks Column indicating the provisional nature of that entry.

639CY Spa2 (3) If, within thirty days after the projected date of bringing into use, the Board receives confirmation from the notifying administration of the date of putting into use, the special symbol shall be deleted from the Remarks Column. In the case where the Board, in the light of a request from the notifying administration received before the end of the thirty-day period, finds that exceptional circumstances warrant an extension of this period, the extension shall in no case exceed one hundred and fifty days.

639CZ Spa2 (4) In the circumstances described in Nos. **639BY** and **639CP**, and as long as an assignment which received an unfavourable finding cannot be resubmitted as a consequence of the provisions of No. **639BZ**, 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. **639BY** or **639CP**, as appropriate, the information relating to the absence of complaint of harmful interference.

639DA Spa2 (5) If the Board does not receive this confirmation within the period referred to in No. **639CY** or at the end of the period referred to in No. **639BY** or **639CP**, as appropriate, the entry concerned shall be cancelled. The Board shall advise the administration concerned before taking such action.

Section V. Recording of Findings in the Master Register

639DB Spa2 § 25. 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.

Section VI. Categories of Frequency Assignments

639DC § 26. (1) The date in Column 2c shall be the date of putting into use
Spa2 notified by the administration concerned. It is given for information only.

639DD (2) If harmful interference is actually caused to the reception
Spa2 of any space radiocommunication station whose frequency assignment has been recorded in the Master Register as a result of a favourable finding with respect to Nos. **639BM**, **639BN**, **639BO**, **639BP**, **639BQ** and **639BR**, as appropriate, by the use of a frequency assignment to a space radiocommunication station subsequently recorded in the Master Register in accordance with the provisions of No. **639CP**, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.

639DE (3) If harmful interference to the reception of any station whose
Spa2 assignment is in accordance with No. **501**, **570AB** or **639BM**, as appropriate, is actually caused by the use of a frequency assignment which is not in conformity with No. **639BM**, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.

Section VII. Review of Findings

639DF § 27. (1) The review of a finding by the Board may be undertaken:
Spa2

— 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.

639DG Spa2 (2) The Board, in the light of all the data at its disposal shall review the matter, taking into account No. **639BM** and, where appropriate, Nos. **639BN**, **639BO**, **639BP**, **639BQ** and **639BR** and shall render an appropriate finding, informing the notifying administration prior either to the promulgation of its finding or to any recording action.

639DH Spa2 § 28. (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 No. **639BP**, **639BQ** or **639BR**, this administration may request the Board to review the finding. Thereupon, the Board shall review the matter, having first consulted the administrations concerned.

639DI Spa2 (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.

639DJ Spa2 (3) If the finding with regard to the probability of harmful interference remains unfavourable, no change shall be made in the original entry.

Section VIII. Modification, Cancellation and Review of Entries in the Master Register

639DK Spa2 § 29. (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.

639DL Spa2 (2) Whenever it appears to the Board, whether or not as a result of action under No. **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.

639DM Spa2 (3) If no reply is received within six months of action by the Board under No. **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. **639BS** as one which has been established as having been out of regular use for two years.

639DN Spa2 § 30. In case of permanent discontinuance of the use of any recorded frequency assignment, the notifying administration shall inform the Board within ninety days of such discontinuance, whereupon the entry shall be removed from the Master Register.

639DO Spa2 § 31. 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.

639DP Spa2 § 32. If, in connection with an inquiry by the Board under No. **639DO**, the notifying administration has failed to supply the

Board within forty-five days with the necessary or pertinent information, the Board shall make suitable entries in the Remarks Column of the Master Register to indicate the situation.

Section IX. Studies and Recommendations

639DQ § 33. (1) If it is requested by any administration, and if the circum-
Spa2 stances appear to warrant, the Board, using such means at its disposal as are appropriate in the circumstances, shall conduct a study of cases of alleged contravention or non-observance of these Regulations, or of harmful interference.

639DR (2) The Board shall thereupon prepare and forward to the
Spa2 administration concerned a report containing its findings and recommendations for the solution of the problem.

639DS § 34. In a case where, as a result of a study, the Board submits to
Spa2 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 ninety 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.

Section X. Miscellaneous Provisions

639DT § 35. (1) If it is requested by any administration, particularly by an
Spa2 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. **639AK**;

b) preparation of diagrams showing the co-ordination areas as in No. **639AN**;

c) any other assistance of a technical nature for completion of the procedures in this Article.

639DU Spa2 (2) In making a request to the Board under No. **639DT**, the administration shall furnish the Board with the necessary information.

639DV Spa2 § 36. 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 C.C.I.R., the state of the radio art and the development of new transmission techniques.

639DW Spa2 § 37. The Board shall promulgate to administrations its findings and reasons therefor, together with all changes made to the Master Register, through the weekly circular referred to in No. **497**.

639DX Spa2 § 38. 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.

Mar2

ARTICLE 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)

639DY § 1. (1) Before notifying to the International Frequency Registra-
Mar2 tion 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.

639DZ (2) The Board shall publish the information sent under No.
Mar2 **639DY** in a special section of the I.F.R.B. 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 indicate. The Board shall also indicate any information of a technical nature and make suggestions as it may be able to offer with a view to avoiding these incompatibilities.

---

[1] See Resolution No. 6.

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. **639EB**;

c) any other assistance of a technical nature for completion of the procedure in the present Article.

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.

639EC Mar2 (2) Any administration which, upon examining the information published by the I.F.R.B., considers that its existing services or services planned within the time limits mentioned in No. **639DY** would be affected, shall have the right to be brought into the procedure undertaken pursuant to No. **639EB**.

639ED Mar2 § 3. (1) An administration which receives a request under No. **639EB** shall acknowledge receipt thereof immediately by telegram. If no acknowledgement is received within thirty days after the date of the I.F.R.B. weekly circular containing the information published under No. **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.

639EE Mar2 (2) Upon receipt of the request under No. **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. **639EV**, or

c) to be brought into service within the time limit prescribed in No. **639EV**, in conformity with a proposed allotment for which the information has been submitted to the I.F.R.B. under No. **639DY** for publication under No. **639DZ**.

639EF Mar2 (3) Any administration which receives a request under No. **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. **639EE** shall, as soon as possible and not later than sixty days from the date of the relevant I.F.R.B. weekly circular, notify its agreement to the administration seeking agreement.

639EG Mar2 (4) Any administration which receives a request under No. **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. **639EE**, shall inform the administration concerned of

the reasons for its desagreement as soon as possible and not later than sixty days from the date of the relevant I.F.R.B. 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.

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.

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. **639EB** fails to acknowledge receipt of the request within fortyfive days from the date of the I.F.R.B. weekly circular containing the pertinent information;

b) an administration has acknowledged receipt under No. **639ED** but fails to give a decision within sixty days from the date of the I.F.R.B. 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.

639EJ (2) Either the administration seeking agreement or an ad-
Mar2 ministration with which agreement is sought, or the Board, may request additional information which it may require in studying any problem relating to this agreement.

639EK (3) Where the Board receives a request under No. **639EI** *a)*, it
Mar2 shall forthwith send a telegram to the administration concerned requesting immediate acknowledgement.

639EL (4) Where the Board receives an acknowledgement following its
Mar2 action under No. **639EK**, or where the Board receives a request under No. **639EI** *b)*, it shall forthwith send a telegram to the administration concerned requesting an early decision in the matter.

639EM (5) Where the Board receives a request under No. **639EI** *d)*, it
Mar2 shall endeavour to obtain agreement to which reference is made in No. **639EB**. Where the Board receives from an administration no acknowledgement to the request it made under the terms of No. **639EB** for agreement within the period specified in No. **639ED**, it shall act, in so far as this administration is concerned, in accordance with No. **639EK**.

639EN (6) Where an administration fails to reply within fifteen days of
Mar2 the Board's telegram requesting an acknowledgement sent under No. **639EK**, or fails to give a decision in the matter within thirty days of dispatch of the Board's telegram of request under No. **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. **607** of the Radio Regulations with respect to assignments of the administration seeking the agreement.

639EO (7) The Board shall examine the proposed allotment with
Mar2 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, it enters the proposed allotment in the Plan.

639EP (8) In the event of an unfavourable finding resulting, the Board
Mar2 informs 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, it enters the proposed allotment in the Plan.

639EQ (9) Where the Board receives a request under No. **639EI** *c)*, it
Mar2 shall assess the sharing possibilities and it shall inform the administrations concerned of the results obtained.

639ER (10) In the case of continuing disagreement the Board shall
Mar2 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 enters the proposed allotment in the Plan.

639ES (11) If, after the examination under No. **639ER**, the Board
Mar2 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.

639ET § 5. An administration seeking agreement for a proposed allot-
Mar2 ment shall inform the Board of the results of its consultations with the administrations concerned. When the Board finds that the procedure prescribed in the present Article has been applied with respect to each administration concerned the Board shall publish its finding in a special section of the I.F.R.B. weekly circular and, as the case may be, bring the Plan up to date.

639EU § 6. Notwithstanding the above provisions and if the cir-
Mar2 cumstances 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. It shall, however, begin forthwith the procedure prescribed in the present Article.

639EV § 7. When, within twelve months from the date of the inclusion
Mar2 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.

639EW § 8. Any administration in whose name an allotment is shown in
Mar2 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 the present 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.

639EX § 9. The Board shall maintain an up-to-date master copy of the
Mar2 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.

ARTICLE 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

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 G.M.T. 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.

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.

642 § 3. Two or more administrations may submit co-ordinated schedules containing their agreed projected frequency usage.

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.

644 § 5. The schedules shall be submitted in the form prescribed in Appendix 2, which specifies the data to be furnished for each assignment.

645 § 6. The frequencies included in the schedules shall be in conformity with No. **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

646 § 7. (1) Upon 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. **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.

647 (2) Upon 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.

648 (3) The Board shall begin the work outlined in No. **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

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 correct 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.

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.

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.

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.

653 (5) For changes notified in accordance with Nos. **651** and **652**, the Board shall apply the same procedure as that specified in Nos. **647, 649** and **650**. Such revisions to the Tentative Schedule as result from the application of the procedure in this Section shall be published in the weekly circulars of the Board in order that administrations can keep up to date their copies of the Tentative Schedule.

Section IV. Publication of the High Frequency Broadcasting Schedule

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

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

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. **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.

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.

658 § 13. In applying the provisions of Article 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 co-operation and by giving due consideration to all the relevant technical and operational factors involved.

ARTICLE 11

Internal Regulations of the International Frequency Registration Board

659 § 1. The Board shall meet as frequently as necessary to deal expeditiously with its work and, normally, at least once a week.

660 § 2. (1) 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.

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.

662 § 3. (1) Each member of the Board, including the Chairman, shall have one vote. Voting by proxy or by correspondence is not allowed.

663 (2) The minutes shall indicate whether a decision was unanimous or by a majority.

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.

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.

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.

CHAPTER IV

Measures against Interference

ARTICLE 12

Technical Characteristics of Equipment and Emissions

667 § 1. (1) The choice and performance of equipment to be used in a station and any emissions therefrom shall satisfy the provisions of these Regulations.

668 (2) Also, as far as is compatible with practical considerations, the choice of transmitting, receiving and measuring equipment shall be based on the most recent advances in the technique as indicated, inter alia, in the C.C.I.R. Recommendations.

669 § 2. Transmitting and receiving equipment intended to be used in a given part of the frequency spectrum should be designed to take into account the technical characteristics of equipment likely to be employed in neighbouring parts of the spectrum.

670 § 3. To the maximum extent possible, amplitude modulation systems should use single sideband emissions having characteristics in accordance with the relevant C.C.I.R. Recommendations.

671 § 4. (1) Transmitting stations shall conform to the frequency tolerances specified in Appendix 3.

672 (2) Transmitting stations shall conform to the tolerances specified for spurious emissions in Appendix 4.

673 (3) Moreover, every effort should be made to keep frequency tolerances and levels of spurious emissions at the lowest values which the state of the technique and the nature of the service permit.

674 § 5. The bandwidths of emissions also shall be kept at the lowest values which the state of the technique and the nature of the service permit. Appendix 5 is provided as a guide for the determination of the necessary bandwidth.

675 § 6. To ensure compliance with these Regulations, administrations shall arrange for frequent checks to be made of the emissions of stations under their jurisdiction, the technique of measurements being in accordance with the most recent Recommendations of the C.C.I.R.

676 § 7. Administrations shall co-operate in the detection and elimination of harmful interference, employing where appropriate the facilities described in Article 13 and the procedures detailed in Article 15.

677 § 8. The use of class B emissions is forbidden in all stations.
Mar

ARTICLE 13

International Monitoring

678 § 1. Administrations agree to continue the development of monitoring facilities to assist in the implementation of these Regulations and to co-operate, to the extent practicable, in the continued development of an international monitoring system.

679 § 2. Monitoring stations participating in the international monitoring system may be operated by an administration or by a public or private enterprise recognized by its administration or by a common monitoring service established by two or more countries or by an international organization.

680 § 3. Administrations will, as far as they consider practicable, conduct such monitoring of both a general and a specific nature as may be required of them by the International Frequency Registration Board or by other administrations. In requesting monitoring observations, the Board and administrations should take into account the monitoring facilities set forth in the List of International Monitoring Stations (see Article 20), and should clearly specify both the purpose for which the observations are requested and the parameters of the requested monitoring work (including appropriate schedules). The results of such monitoring forwarded to other administrations may also be sent to the Board, if appropriate.

681 § 4. Each administration or common monitoring service established by two or more countries, or international organization participating in the international monitoring system, shall designate a centralizing office to which all requests for monitoring information shall be addressed and through which monitoring information will be forwarded to the Board or to centralizing offices of other administrations.

682 § 5. Administrations agree that monitoring requests from international organizations not participating in the international monitoring system should be co-ordinated by the Board and, if appropriate, forwarded by it to administrations.

683 § 6. However, these provisions shall not affect private monitoring arrangements made for special purposes by administrations, international organizations, or public or private enterprises.

684 § 7. The technical standards recommended by the C.C.I.R. to be observed by monitoring stations shall be recognized by the Board as the optimum practicable technical standards for monitoring stations participating in the international monitoring system. However, to meet some needs for monitoring data, stations observing lower technical standards may participate in the international monitoring system at the discretion of their administrations.

685 § 8. Administrations or international organizations, having determined whether their monitoring stations meet adequate technical standards, shall notify to the Secretary General pertinent information of the centralizing office and of the stations which may participate in the international monitoring system, as prescribed in Article 20 and Appendix 9.

686 § 9. (1) Results of measurements forwarded to the Board or other administrations shall indicate the estimated accuracy obtained at the time the measurements were made.

687 (2) Where the results supplied by any monitoring station appear to be doubtful or insufficient for its purposes, the Board shall advise the administration or international organization concerned giving the appropriate details.

688 § 10. When rapid action is required, communications between the Board and centralizing offices should be transmitted by the most expeditious means available.

689 § 11. To ensure that published monitoring data are current and world-wide in nature, administrations having jurisdiction over monitoring stations listed in the List of International Monitoring Stations (see Article 20) shall make every effort, as practicable, to arrange for monitoring observations to be made by such stations and submitted to the Board as soon as possible after the date of observation.

690 § 12. Centralizing offices may request the help of other centralizing offices in order to implement the provisions of this Article and of Article 15.

691 § 13. The Board shall record the results supplied by the monitoring stations participating in the international monitoring system.

692 § 14. The Board shall prepare periodically, for publication by the Secretary General, summaries of the useful monitoring data received by it including a list of the stations contributing the data.

ARTICLE 14

Interference and Tests

Section I. General Interference

693 § 1. All stations are forbidden to carry out:

— unnecessary transmissions;

— the transmission of superfluous signals and correspondence;

— the transmission of signals without identification (see Article 19).[1]

694 § 2. All stations shall radiate only as much power as is necessary to ensure a satisfactory service.

695 § 3. In order to avoid interference:

Spa2

— locations of transmitting stations and, where the nature of the service permits, locations of receiving stations shall be selected with particular care;

— radiation in and reception from unnecessary directions shall be minimized, where the nature of the service permits, by taking the maximum practical advantage of the properties of directional antennae;

— the choice and use of transmitters and receivers shall be in accordance with the provisions of Article 12;

— the conditions specified under No. **470V** shall be fulfilled.

693·1 Spa * [1] In the present state of the technique, it is recognized nevertheless that the transmission of identifying signals for certain radio systems (e.g. radiodetermination, radio relay systems and space systems) is not always possible.

696 § 4. The class of emission to be employed by a station should be such as to achieve minimum interference and to assure efficient spectrum utilization. In selecting the class of emission to meet these objectives every effort shall be made to minimize the bandwidth occupied, taking into account the practical and technical considerations of the service to be performed.

697 § 5. If, while complying with the provisions of Article 12, a station causes harmful interference through its spurious emissions, special measures shall be taken to eliminate such interference.

Section II. Industrial Interference

698 § 6. Administrations shall take all practicable and necessary steps to ensure that the operation of electrical apparatus or installations of any kind, including power networks, does not cause harmful interference to a radio service operating in accordance with the provisions of these Regulations.

Section III. Special Cases of Interference

699 § 7. Administrations authorizing the use of frequencies below 10 kHz for special national purposes shall ensure that no harmful interference is caused thereby to the services to which the bands above 10 kHz are allocated.

Section IV. Tests

700 § 8. (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.

701 (2) A station making emissions for tests, adjustments, or experiments, shall transmit, at slow speed and at frequent intervals, its identification in accordance with the provisions of Article 19.

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.

703 (4) For testing stations in the mobile service see Nos. **1061**, **1062** and **1293** to **1295**.

ARTICLE 15*

Procedure in a Case of Harmful Interference

704 § 1. It is essential that Members and Associate Members exercise the utmost goodwill and mutual assistance in the application of the provisions of Article 35 of the Convention and of this Article to the settlement of problems of harmful interference.

705 § 2. In the settlement of these problems, due consideration shall be given to all factors involved, including the relevant technical and operating factors such as : adjustment of frequencies, characteristics of transmitting and receiving antennae, time sharing, change of channels within multichannel transmissions.

706 § 3. When a case of such interference is reported by a receiving station, it shall give to the transmitting station interfered with all possible information which will assist in determining the source and characteristics of the interference.

707 § 4. Where practicable, and subject to agreement by administrations concerned, such interference may be dealt with by direct co-ordination between their operating organizations.

708 § 5. If a case of interference so justifies, the administration having jurisdiction over the receiving station experiencing the interference shall notify the administration having jurisdiction over the transmitting station being interfered with, giving all possible information.

709 § 6. If further observations and measurements are necessary to determine the source and characteristics of and to establish the responsibility for the interference, the administration having jurisdiction over the transmitting station interfered with may seek the co-operation of other administrations, particularly of the administration having jurisdiction over the receiving station experiencing the interference, or of other organizations.

---

* For the purposes of this Article, the term "administration" includes the centralizing office, where appropriate.

710 § 7. Having determined the source and characteristics of the interference, the administration having jurisdiction over the transmitting station interfered with shall inform the administration having jurisdiction over the interfering station, giving all useful information in order that this administration may take such steps as may be necessary to eliminate the interference.

711 § 8. When a safety service suffers interference, or in other cases with the prior approval of the administration having jurisdiction over the transmitting station interfered with, the administration having jurisdiction over the receiving station experiencing the interference may also approach directly the administration having jurisdiction over the interfering station.

711A § 8A. **Spa** When the service rendered by an earth station suffers interference, the administration having jurisdiction over the receiving station experiencing the interference may also approach directly the administration having jurisdiction over the interfering station.

711B § 8B. **Spa** When cases of harmful interference occur as a result of emissions from space stations, the administrations concerned shall, upon request from the administration having jurisdiction over the station experiencing the interference, furnish current ephemeral data necessary to allow calculation of the positions of the space station.

712 § 9. In cases of interference where rapid action is required, communications between administrations shall be transmitted by the quickest means available.

713 § 10. Full particulars relating to interference shall, whenever possible, be given in the form indicated in Appendix 8.

714 § 11. If the interference persists in spite of actions taken in accordance with the procedures outlined above, the administration having jurisdiction over the transmitting station interfered with may address to the administration having jurisdiction over the interfering station a report of irregularity or infraction in accordance with the provisions of Article 16.

715 § 12. If there is a specialized international organization for a particular service, reports of irregularities and of infractions relating to interference caused by the stations in this service may be addressed to such organization at the same time as to the administration concerned.

716 § 13. (1) If it is considered necessary, and particularly if the steps taken in accordance with the procedures described above have not produced satisfactory results, the administration concerned shall forward details of the case to the International Frequency Registration Board for its information.

717 (2) In such a case, the administration concerned may also
Spa2 request the Board to act in accordance with the provisions of Sections VII and VIII of Article 9 and Sections IX and X of Article 9A; but it shall then supply the Board with the full facts of the case, including all the technical and operational details and copies of the correspondence.

718 (3) However, the Board shall not be required to deal with problems of harmful interference between stations operating in the same band and in conformity with the Table of Frequency Allocations, when at least one of these stations is in a class the frequency of which is not required to be notified according to Nos. **486** or **487** of these Regulations; or between stations in the band 535-1 605 kHz in Region 2. Such cases of interference shall be resolved by appropriate bilateral or multilateral arrangements in which administrations should particularly observe the provisions of No. **704**.

ARTICLE 16

Reports of Infringements

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.

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.

721 § 3. If an administration has information of an infringement of the Convention or Radio Regulations, committed by a station which it has authorized, it shall ascertain the facts, fix the responsibility and take the necessary action.

CHAPTER V

Administrative provisions for stations

ARTICLE 17

Secrecy

722 The administrations bind themselves to take the necessary measures to prohibit and prevent :

723 *a)* the unauthorized interception of radiocommunications not intended for the general use of the public ;

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. **723**.

ARTICLE 18

Licences

725 § 1. (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued by the government of the country to which the station in question is subject. (However, see Nos. **726** and **732**.)

726 (2) However, the government of a country may conclude with the government of a neighbouring country 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 the 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. **725** and shall be communicated to the Secretary General in order that it may be brought to the notice of administrations for their information.

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.

728 § 2. The holder of a licence is required to preserve the secrecy of telecommunication, as provided in Article 22 of the Convention. Moreover, the licence shall provide, 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.

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 a language widely used in international relations.

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 public correspondence category, as well as the general characteristics of the installation.

731 (2) For land mobile stations 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 which has issued the licence, except as may be provided by special agreement between the governments of the countries concerned.

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. **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.

733 (2) The administration issuing the certificate shall inform the administration responsible for issuing the licence of the action taken.

734 (3) The holder of the certificate shall comply with the provisions of these Regulations applicable to licence-holders.

ARTICLE 19

Identification of Stations

Section I. General Provisions

735 § 1. (1) Transmissions without identification or with false identification are prohibited. [1]

736 **Mar** (2) However, the requirements of identification need not apply to:

— survival craft stations when transmitting distress signals automatically,

— emergency position-indicating radiobeacons.

737 **Mar2** § 2. A station shall be identified by a call sign or other recognized means of identification. Such recognized means of identification may be one or more of the following necessary for complete identification: name of station, location of station, operating agency, official registration mark, flight identification number, selective call number or signal, selective call identification number or signal, characteristic signal, characteristic of emission or other clearly distinguishing features readily recognized internationally.

737A **Spa** § 2A. In the event that the transmission of identification signals by a space station is not possible, that station shall be identified by specifying the angle of inclination of the orbit, the period of the object in space and the altitudes of apogee and perigee of the space station in kilometres. In the case of a space station on board a stationary satellite, the mean geographical longitude of the projection of the satellite's position on the surface of the Earth shall be specified. (See Appendix 1A.)

735.1 **Spa** [1] In the present state of the technique, it is recognized nevertheless that the transmission of identifying signals for certain radio systems (e.g. radiodetermination, radio relay systems and space systems) is not always possible.

738 § 3. In order that stations may be readily identified, each station shall transmit its identification as frequently as practicable during the course of transmissions, including those made for tests, adjustments or experiments. During such transmissions, however, identification shall be transmitted at least hourly, preferably within the period from ten minutes before to ten minutes after the hour (G.M.T.), unless to do so would cause unreasonable interruption of traffic. To meet these identification requirements, administrations are urged to ensure that, wherever practicable, superimposed identification methods be employed in accordance with C.C.I.R. Recommendations.

739 § 4. (1) The identifying signal shall be transmitted by methods which, in accordance with C.C.I.R. Recommendations, do not require the use of special terminal equipment for reception.

740 (2) If a superimposed identifying signal is used, the identification shall be preceded by the signal QTT.

741 § 5. When a number of stations work simultaneously in a common circuit, either as relay stations, or in parallel on different frequencies, each station shall, as far as practicable, transmit its own identification or those of all the stations concerned.

742 § 6. Each Member or Associate Member reserves the right to establish its own measures for identifying its stations used for national defence. However, it shall use, as far as possible, call signs recognizable as such, and containing the distinctive letters of its nationality.

Section II. Allocation of International Series, and Assignment of Call Signs

743 § 7. (1) All stations open to the international public correspondence service, all amateur stations, and other stations which are capable of causing harmful interference beyond the boundaries of

the country to which they belong, shall have call signs from the international series allocated to each country as given in the Table of Allocation of Call Sign Series in No. **747**.

744 (2) However, it is not compulsory to assign call signs from the international series to stations which are easily identified by other means (see No. **737**) and whose signals of identification or characteristics of emission are published in international documents.

745 § 8. (1) The first character or the first two characters of the call signs given in the following table, show the nationality of the stations.

746 (2) The series of call signs preceded by an asterisk indicate the international organization to which they are allocated.

747 **Table of Allocation of International Call Sign Series**

Call Sign Series	Allocated to:	Call Sign Series	Allocated to:
AAA–ALZ	United States of America	EKA–EKZ	Union of Soviet Socialist Republics
AMA–AOZ	Spain		
APA–ASZ	Pakistan	ELA–ELZ	Liberia
ATA–AWZ	India (Republic of)	EMA–EOZ	Union of Soviet Socialist Republics
AXA–AXZ	Australia (Commonwealth of)	EPA–EQZ	Iran
AYA–AZZ	Argentine (Republic)	ERA–ERZ	Union of Soviet Socialist Republics
BAA–BZZ	China		
CAA–CEZ	Chile	ESA–ESZ	Estonia
CFA–CKZ	Canada	ETA–ETZ	Ethiopia
CLA–CMZ	Cuba	EUA–EWZ	Belorussian Soviet Socialist Republic
CNA–CNZ	Morocco (Kingdom of)		
COA–COZ	Cuba	EXA–EZZ	Union of Soviet Socialist Republics
CPA–CPZ	Bolivia		
CQA–CRZ	Portuguese Oversea Provinces	FAA–FZZ	France and Overseas States of the French Community and French Overseas Territories
CSA–CUZ	Portugal		
CVA–CXZ	Uruguay (Oriental Republic of)		
CYA–CZZ	Canada	GAA–GZZ	United Kingdom of Great Britain and Northern Ireland
DAA–DTZ	Germany		
DUA–DZZ	Philippines (Republic of the)	HAA–HAZ	Hungarian People's Republic
EAA–EHZ	Spain		
EIA–EJZ	Ireland		

Call Sign Series	Allocated to:	Call Sign Series	Allocated to:
HBA–HBZ	Switzerland (Confederation)	MAA–MZZ	United Kingdom of Great Britain and Northern Ireland
HCA–HDZ	Ecuador		
HEA–HEZ	Switzerland (Confederation)	NAA–NZZ	United States of America
		OAA–OCZ	Peru
HFA–HFZ	Poland (People's Republic of)	ODA–ODZ	Lebanon
		OEA–OEZ	Austria
HGA–HGZ	Hungarian People's Republic	OFA–OJZ	Finland
		OKA–OMZ	Czechoslovakia
HHA–HHZ	Haiti (Republic of)	ONA–OTZ	Belgium
HIA–HIZ	Dominican Republic	OUA–OZZ	Denmark
HJA–HKZ	Colombia (Republic of)	PAA–PIZ	Netherlands
HLA–HMZ	Korea (Republic of)	PJA–PJZ	Netherlands Antilles
HNA–HNZ	Iraq (Republic of)	PKA–POZ	Indonesia (Republic of)
HOA–HPZ	Panama	PPA–PYZ	Brazil
HQA–HRZ	Honduras (Republic of)	PZA–PZZ	Surinam
HSA–HSZ	Thailand	QAA–QZZ	(Service abbreviations)
HTA–HTZ	Nicaragua	RAA–RZZ	Union of Soviet Socialist Republics
HUA–HUZ	El Salvador (Republic of)		
HVA–HVZ	Vatican City State	SAA–SMZ	Sweden
HWA–HYZ	France and Overseas States of the French Community and French Overseas Territories	SNA–SRZ	Poland (People's Republic of)
		SSA–SSM	United Arab Republic (Egyptian Region)
		SSN–STZ	Sudan (Republic of the)
HZA–HZZ	Saudi Arabia (Kingdom of)	SUA–SUZ	United Arab Republic (Egyptian Region)
IAA–IZZ	Italy and Territories under mandate of U.N.	SVA–SZZ	Greece
		TAA–TCZ	Turkey
		TDA–TDZ	Guatemala
JAA–JSZ	Japan	TEA–TEZ	Costa Rica
JTA–JVZ	Mongolian People's Republic	TFA–TFZ	Iceland
		TGA–TGZ	Guatemala
JWA–JXZ	Norway	THA–THZ	France and Overseas States of the French Community and French Overseas Territories
JYA–JYZ	Jordan (Hashemite Kingdom of)		
JZA–JZZ	Netherlands New Guinea		
KAA–KZZ	United States of America		
LAA–LNZ	Norway	TIA–TIZ	Costa Rica
LOA–LWZ	Argentine Republic	TJA–TRZ	France and Overseas States of the French Community and French Overseas Territories
LXA–LXZ	Luxembourg		
LYA–LYZ	Lithuania		
LZA–LZZ	Bulgaria (People's Republic of)		

Call Sign Series	Allocated to:
TSA–TSM	Tunisia
TSN–TZZ	France and Overseas States of the French Community and French Overseas Territories
UAA–UQZ	Union of Soviet Socialist Republics
URA–UTZ	Ukrainian Soviet Socialist Republic
UUA–UZZ	Union of Soviet Socialist Republics
VAA–VGZ	Canada
VHA–VNZ	Australia (Commonwealth of)
VOA–VOZ	Canada
VPA–VSZ	Overseas Territories for the international relations of which the Government of the United Kingdom of Great Britain and Northern Ireland are responsible
VTA–VWZ	India (Republic of)
VXA–VYZ	Canada
VZA–VZZ	Australia (Commonwealth of)
WAA–WZZ	United States of America
XAA–XIZ	Mexico
XJA–XOZ	Canada
XPA–XPZ	Denmark
XQA–XRZ	Chile
XSA–XSZ	China
XTA–XTZ	France and Overseas States of the French Community and French Overseas Territories
XUA–XUZ	Cambodia (Kingdom of)
XVA–XVZ	Viet-Nam (Republic of)
XWA–XWZ	Laos (Kingdom of)
XXA–XXZ	Portuguese Oversea Provinces
XYA–XZZ	Burma (Union of)
YAA–YAZ	Afghanistan
YBA–YHZ	Indonesia (Republic of)
YIA–YIZ	Iraq (Republic of)
YJA–YJZ	New Hebrides (Anglo-French Condominium)
YKA–YKZ	United Arab Republic (Syrian Region)
YLA–YLZ	Latvia
YMA–YMZ	Turkey
YNA–YNZ	Nicaragua
YOA–YRZ	Roumanian People's Republic
YSA–YSZ	El Salvador (Republic of)
YTA–YUZ	Yugoslavia (Federal People's Republic of)
YVA–YYZ	Venezuela (Republic of)
YZA–YZZ	Yugoslavia (Federal People's Republic of)
ZAA–ZAZ	Albania (People's Republic of)
ZBA–ZJZ	Overseas Territories for the international relations of which the Government of the United Kingdom of Great Britain and Northern Ireland are responsible
ZKA–ZMZ	New Zealand
ZNA–ZOZ	Overseas Territories for the international relations of which the Government of the United Kingdom of Great Britain and Northern Ireland are responsible
ZPA–ZPZ	Paraguay
ZQA–ZQZ	Overseas Territories for the international relations of which the Government of the United Kingdom of Great Britain and Northern Ireland are responsible

Call Sign Series	Allocated to:	Call Sign Series	Allocated to:
ZRA–ZUZ	Union of South Africa and Territory of South West Africa	5RA–5VZ	France and Overseas States of the French Community and French Overseas Territories
ZVA–ZZZ	Brazil		
2AA-2ZZ	United Kingdom of Great Britain and Northern Ireland	5WA–5ZZ	(Not allocated)
		6AA–6BZ	United Arab Republic (Egyptian Region)
3AA–3AZ	Monaco		
3BA–3FZ	Canada	6CA–6CZ	United Arab Republic (Syrian Region)
3GA–3GZ	Chile		
3HA–3UZ	China	6DA–6JZ	Mexico
3VA–3VZ	Tunisia	6KA–6NZ	Korea (Republic of)
3WA–3WZ	Viet-Nam (Republic of)	6OA–6OZ	Somaliland (Italian Administration)
3XA–3XZ	Guinea (Republic of)		
3YA–3YZ	Norway	6PA–6SZ	Pakistan
3ZA–3ZZ	Poland (People's Republic of)	6TA–6UZ	Sudan (Republic of the)
		6VA–6ZZ	(Not allocated)
4AA–4CZ	Mexico	7AA–7IZ	Indonesia (Republic of)
4DA–4IZ	Philippines (Republic of the)	7JA–7NZ	Japan
		7OA–7RZ	(Not allocated)
4JA–4LZ	Union of Soviet Socialist Republics	7SA–7SZ	Sweden
		7TA–7YZ	(Not allocated)
4MA–4MZ	Venezuela (Republic of)	7ZA–7ZZ	Saudi Arabia (Kingdom of)
4NA–4OZ	Yugoslavia (Federal People's Republic of)	8AA–8IZ	Indonesia (Republic of)
4PA–4SZ	Ceylon	8JA–8NZ	Japan
4TA–4TZ	Peru	8OA–8RZ	(Not allocated)
* 4UA–4UZ	United Nations (U.N.)	8SA–8SZ	Sweden
4VA–4VZ	Haiti (Republic of)	8TA–8YZ	India (Republic of)
4WA–4WZ	Yemen	8ZA–8ZZ	Saudi Arabia (Kingdom of)
4XA–4XZ	Israel (State of)		
* 4YA–4YZ	International Civil Aviation Organization (ICAO)	9AA–9AZ	San Marino (Republic of)
		9BA–9DZ	Iran
		9EA–9FZ	Ethiopia
4ZA–4ZZ	Israel (State of)	9GA–9GZ	Ghana
5AA–5AZ	Libya (United Kingdom of)	9HA–9JZ	(Not allocated)
		9KA–9KZ	Kuwait
5BA–5BZ	(Not allocated)	9LA–9LZ	(Not allocated)
5CA–5GZ	Morocco (Kingdom of)	9MA–9MZ	Malaya (Federation of)
5HA–5IZ	(Not allocated)	9NA–9NZ	Nepal
5JA–5KZ	Colombia (Republic of)	9OA–9UZ	Belgian Congo and Territory of Ruanda-Urundi
5LA–5MZ	Liberia		
5NA–5OZ	(Not allocated)		
5PA–5QZ	Denmark	9VA–9ZZ	(Not allocated)

Note by the General Secretariat

Since 1959 and until 15 September 1975, the following call sign series have been allocated on a provisional basis under the terms of No. 749:

Call Sign Series	Allocated to:	Call Sign Series	Allocated to:
A2A-A2Z	Botswana (Republic of)	TJA-TJZ	Cameroon (United Republic of)
A3A-A3Z	Tonga (Kingdom of)		
A4A-A4Z	Oman (Sultanate of)	TLA-TLZ	Central African Republic
A5A-A5Z	Bhutan (Kingdom of)		
A6A-A6Z	United Arab Emirates	TNA-TNZ	Congo (People's Republic of the)
A7A-A7Z	Qatar (State of)		
A8A-A8Z	Liberia (Republic of)	TRA-TRZ	Gabon (Republic)
A9A-A9Z	Bahrain (State of)	TSN-TSZ	Tunisia
C2A-C2Z	Nauru (Republic of)	TTA-TTZ	Chad (Republic of the)
C3A-C3Z	Andorra (Principality of)	TUA-TUZ	Ivory Coast (Republic of the)
C4A-C4Z	Cyprus (Republic of)		
C5A-C5Z	Gambia (Republic of the)	TYA-TYZ	Dahomey (Republic of)
C6A-C6Z	Bahamas (Commonwealth of the)	TZA-TZZ	Mali (Republic of)
		XTA-XTZ	Upper Volta (Republic of)
C7A-C7Z	World Meteorological Organization	3BA-3BZ	Mauritius
		3CA-3CZ	Equatorial Guinea (Republic of)
C8A-C9Z	Mozambique		
D2A-D3Z	Angola	3DA-3DM	Swaziland (Kingdom of)
H3A-H3Z	Panama (Republic of)	3DN-3DZ	Fiji
L2A-L9Z	Argentine (Republic)	3EA-3FZ	Panama (Republic of)
P2A-P2Z	Papua New Guinea	5BA-5BZ	Cyprus (Republic of)
S2A-S3Z	Bangladesh (People's Republic of)	5HA-5IZ	Tanzania (United Republic of)
S6A-S6Z	Singapore (Republic of)	5NA-5OZ	Nigeria (Federal Republic of)

Call Sign Series	Allocated to:	Call Sign Series	Allocated to:
5RA-5SZ	Malagasy Republic	7TA-7YZ	Algeria (Algerian Democratic and Popular Republic)
5TA-5TZ	Mauritania (Islamic Republic of)	8OA-8OZ	Botswana (Republic of)
5UA-5UZ	Niger (Republic of the)	8PA-8PZ	Barbados
5VA-5VZ	Togolese Republic	8QA-8QZ	Maldives (Republic of)
5WA-5WZ	Western Samoa	8RA-8RZ	Guyana
5XA-5XZ	Uganda (Republic of)	9HA-9HZ	Malta (Republic of)
5YA-5ZZ	Kenya (Republic of)	9IA-9JZ	Zambia (Republic of)
6VA-6WZ	Senegal (Republic of the)	9LA-9LZ	Sierra Leone
6XA-6XZ	Malagasy Republic	9UA-9UZ	Burundi (Republic of)
6YA-6YZ	Jamaica	9VA-9VZ	Singapore (Republic of)
6ZA-6ZZ	Liberia (Republic of)	9WA-9WZ	Malaysia
7OA-7OZ	Yemen (People's Democratic Republic of)	9XA-9XZ	Rwanda (Republic of)
7PA-7PZ	Lesotho (Kingdom of)	9YA-9ZZ	Trinidad and Tobago
7QA-7QZ	Malawi		
7RA-7RZ	Algeria (Algerian Democratic and Popular Republic)		

748 § 9. Should the available call sign series in this table be exhausted, new call sign series may be allocated according to the principles set out in Resolution No. 8 Relating to the Formation of Call Signs and the Allocation of New International Series.

749 § 10. Between administrative radio Conferences, the Secretary General is authorized to deal with questions relating to changes in the allocation of series of call signs, on a provisional basis, and subject to confirmation by the following Conference. (See also No. **748**.)

749A **Mar** § 10A. As an interim procedure, the Secretary-General shall be responsible for supplying series of selective call numbers or signals (see No. **783H**) at the request of the administrations concerned.

750 **Mar** § 11. (1) Each country shall choose the call signs and, if the selective calling system used is in accordance with Appendix 20C, the ship station selective call number and the coast station identification number of its stations from the international series allocated or supplied to it; and shall, in accordance with Article 20, notify this information to the Secretary-General together with the information which is to appear in Lists I to VI inclusive. These notifications do not include call signs assigned to amateur and experimental stations.

751 **Mar** (2) The Secretary-General shall ensure that the same call sign, the same selective call number or the same identification number is not assigned more than once and that call signs which might be confused with distress signals, or with other signals of the same nature, are not assigned.

752 § 12. (1) When a *fixed station* uses more than one frequency in the international service, each frequency may be identified by a separate call sign used solely for this frequency.

753 (2) When a *broadcasting station* uses more than one frequency in the international service, each frequency may be identified by a separate call sign used solely for this frequency or by some other appropriate means, such as announcing the name of the place and frequency used.

754 (3) When a *land station* uses more than one frequency, each frequency may, if desired, be identified by a separate call sign.

755 (4) Where practicable, *coast stations* should use a common call sign for each frequency series [1].

Section III. Formation of Call Signs

756 § 13. (1) The twenty-six letters of the alphabet, as well as digits in the cases specified below, may be used to form call signs. Accented letters are excluded.

757 (2) However, the following combinations shall not be used as call signs :

758 *a)* combinations which might be confused with distress signals or with other signals of a similar nature ;

759 **Mar*** *b)* combinations reserved for the abbreviations to be used in the radiocommunication services (see Appendixes 13 and 13A);

760 SUP (Mar)

755.1 [1] By "frequency series" is meant a group of frequencies, each of which belongs to one of the different bands between 4000 and 27 500 kHz that are allocated exclusively to the maritime mobile service.

761 *d)* for amateur stations, combinations commencing with a digit when the second character is the letter O or the letter I.

762 § 14. Call signs in the international series are formed as indicated in Nos. **763** to **773**. The first letter in a particular series of letters may be replaced, in certain cases, by a digit (see Nos. **747** and **748**).

Land and fixed stations

763 § 15. (1) — three letters

or

— three letters followed by not more than three digits (other than the digits 0 and 1 in cases where they immediately follow a letter).

764 (2) However, it is recommended that, as far as possible,

a) the call signs of *coast and aeronautical stations* consist of :

— three letters

or

— three letters followed by one or two digits (other than the digits 0 and 1 in cases where they immediately follow a letter) ;

b) the call signs of *fixed stations* consist of :

— three letters followed by two digits (other than the digits 0 and 1 in cases where they immediately follow a letter).

Ship stations

765 § 16. (1) — four letters.

766 (2) However, *ship stations* employing radiotelephony may also use a call sign consisting of :

— two or three letters followed by four digits (other than the digits 0 and 1 in cases where they immediately follow a letter).

Aircraft stations

767 § 17. — five letters.

Ship's survival craft stations

768 § 18. — the call sign of the parent ship followed by two digits (other than the digits 0 or 1 in cases where they immediately follow a letter).

Emergency position-indicating radiobeacon stations

768A **Mar** § 18A. — the Morse letter B and/or the call sign of the parent ship to which the radiobeacon belongs.

Aircraft survival craft stations

769 § 19. — the complete call sign of the parent aircraft (see No. **767**), followed by a single digit other than 0 or 1.

Land mobile stations

770 § 20. (1) — four letters followed by a single digit other than 0 or 1.

771 (2) However, *land mobile stations* employing radiotelephony may also use a call sign consisting of :

— two or three letters followed by four digits (other than the digits 0 or 1 in cases where they immediately follow a letter).

Amateur and experimental stations

772 § 21. (1) — one or two letters and a single digit (other than 0 or 1), followed by a group of not more than three letters.

773 (2) However, the prohibition of the use of the digits 0 and 1 does not apply to *amateur stations*.

Stations in the Space Service

773A **Spa** § 21A. When call signs for stations in the space service are employed, it is recommended that they consist of:

— two letters followed by two or three digits (other than the digits 0 and 1 in cases where they immediately follow a letter). (See also No. **737A.**)

Section IV. Identification of Stations using Radiotelephony

774 § 22. Stations using radiotelephony shall be identified as indicated in Nos. **775** to **783**.

775 § 23. (1) *Coast stations*

— a call sign (see Nos. **763** and **764**) ; *or*

— the geographical name of the place as it appears in the List of Coast Stations, followed preferably by the word RADIO or by any other appropriate indication.

776 **Mar** (2) *Ship stations*

— a call sign (see Nos. **765** and **766**); *or*

— the official name of the ship preceded, if necessary, by the name of the owner on condition that there is no possible confusion with distress, urgency and safety signals; *or*

— its selective call number or signal.

777 (3) *Ship's survival craft stations*

— a call sign (see No. **768**) ; *or*

— a signal of identification consisting of the name of the parent ship followed by two digits.

777A Mar (4) *Emergency position-indicating radiobeacon stations:*

When speech transmission is used (see No. **1476G**)

— the name and/or the call sign of the parent ship to which the radiobeacon belongs.

778 § 24. (1) *Aeronautical stations*

— the name of the airport or geographical name of the place followed, if necessary, by a suitable word indicating the function of the station.

779 (2) *Aircraft stations*

— a call sign (see No. **767**), which may be preceded by a word designating the owner or the type of aircraft; *or*

— a combination of characters corresponding to the official registration mark assigned to the aircraft; *or*

— a word designating the airline, followed by the flight identification number.

780 (3) In the exclusive aeronautical mobile frequency bands, *aircraft stations* using radiotelephony may use other methods of identification, after special agreement between governments, and on condition that they are internationally known.

781 (4) *Aircraft survival craft stations*

— a call sign (see No. **769**):

782 § 25. (1) *Base stations*

— a call sign (see No. **763**); *or*

— the geographical name of the place followed, if necessary, by any other appropriate indication.

783 (2) *Land mobile stations*

— a call sign (see Nos. **770** and **771**) ; *or*

— the identity of the vehicle or any other appropriate indication.

Section IVA. Selective Call Numbers in the Maritime Mobile Service

783A **Mar2** § 25A. When stations of the maritime mobile service use selective calling devices in accordance with Appendix 20B and Appendix 20C, their call numbers shall be assigned by the responsible administrations in accordance with the provisions below.

Formation of ship station selective call numbers and coast station identification numbers

783B **Mar** § 25B. (1) The ten digits from 0 to 9 inclusive shall be used to form selective call numbers.

783C **Mar** (2) However, combinations of numbers commencing with the digits 00 (zero, zero) shall not be used when forming the identification numbers for coast stations.

783D **Mar** (3) Ship station selective call numbers and coast station identification numbers in the series are formed as indicated in Nos. **783E, 783F** and **783G.**

783E **Mar** (4) *Coast station identification numbers*

— four digits (see No. **783C**).

783F **Mar** (5) *Ship station selective call numbers*

— five digits.

783G **Mar** (6) *Predetermined groups of ship stations*

— five digits consisting of:

— the same digit repeated five times, *or*

— two different digits repeated alternately.

Assignment of ship station selective call numbers and coast station identification numbers

783H **Mar** § 25C. (1) In cases where selective call numbers for ship stations and identification numbers for coast stations are required for use in the maritime mobile service and the selective calling system is in accordance with Appendix 20C, as an interim procedure, the selective call numbers and identification numbers shall be supplied by the Secretary-General on request. Upon notification by an administration of the introduction of selective calling for use in the maritime mobile service:

— selective call numbers for ships will be supplied as required in blocks of 100 (one hundred);

— coast station identification numbers will be supplied in blocks of 10 (ten) to meet actual requirements;

— selective call numbers for selective calling of predetermined groups of ship stations in accordance with No. **783G** will be supplied as required as single numbers.

The final procedure shall be determined at a future competent World Administrative Radio Conference.

783I **Mar** (2) Each administration shall choose the selective call numbers to be assigned to its ship stations from the blocks of the series supplied to it.

783J **Mar** (3) Each administration shall choose the coast station identification numbers to be assigned to its coast stations from the blocks of the series supplied to it.

Section V. Special Provisions

784 § 26. (1) In the aeronautical mobile service, after communication has been established by means of the complete call sign, the aircraft station may use, if confusion is unlikely to arise, an abbreviated call sign or identification consisting of :

785 *a)* in radiotelegraphy, the first character and last two letters of the complete five-letter call sign ;

786 *b)* in radiotelephony :

— the first character of the complete five-letter call sign ; *or*

— the abbreviation of the name of the owner of the aircraft (company or individual) ; *or*

— the type of aircraft,

followed by the last two letters of the complete five-letter call sign or by the last two characters of the registration mark.

787 (2) The provisions of Nos. **784, 785** and **786** may be amplified or modified by agreement between administrations concerned.

788 § 27. The distinguishing signals allotted to ships for visual and aural signalling shall, in general, agree with the call signs of ship stations.

ARTICLE 20

Service Documents

789 § 1. The following documents shall be published by the Secretary General.

790 (I) *List I. The International Frequency List.*

This list shall contain :

791 *a)* particulars of frequency assignments recorded in the Master International Frequency Register. These particulars shall include the data enumerated in Appendix 9 ;

792 Mar2 *b)* the frequencies (e.g. 500 kHz or 2 182 kHz) prescribed by these Regulations for common use by certain services, including frequencies specified in Appendices 15, 15A, 15B, 15C, 15D, 17, 17 Rev. and 18;

793 Mar2 *c)* the allotments in the Allotment Plans included in Appendices 25 MOD, 25 Mar2 (see No. **457**), 26 and 27.

794 An indication of the use of the frequencies and allotments in Nos. **792** and **793** shall be included in the entries concerned.

795 Frequency assignments in the International Frequency List shall be arranged in numerical ascending order of the frequencies assigned.

796 The International Frequency List above 28 MHz shall be in four separate parts as follows :

797 *a)* frequency assignments in bands between 28 and 50 MHz, excluding broadcasting stations ;

798 *b)* frequency assignments in Region 1 in the bands between 50 and 40 000 MHz, and frequency assignments[1] to broadcasting stations in Region 1 in the bands between 28 and 50 MHz;

798.1 [1] In the case of television broadcasting stations in Region 1, separate entries shall be inserted for the carrier frequencies of the vision and sound channels.

799 *c)* frequency assignments in Region 2 in the bands between 50 and 40 000 MHz;

800 *d)* frequency assignments in Region 3 in the bands between 50 and 40 000 MHz, and frequency assignments to broadcasting stations in Region 3 in the bands between 28 and 50 MHz.

801 (II) *List II. List of Fixed Stations Operating International Circuits.*

This list shall contain the fixed stations operating international circuits, the frequencies of which appear in List I.

802 (III) *List III. List of Broadcasting Stations Operating in Bands below 26 100 kHz.*

The list shall be published in two volumes:

803 *a) List III A. List of Broadcasting Stations Operating in Bands below 5 950 kHz.*

This list shall contain those broadcasting stations the frequency assignments of which are shown in List I.

804 *b) List III B. List of Broadcasting Stations Operating in Bands between 5 950 and 26 100 kHz.*

This list shall contain those broadcasting stations the frequency assignments of which are shown in the Annual High Frequency Broadcasting Frequency List, published each year in accordance with the provisions of Section V of Article 10.

805 (IV) *List IV. List of Coast Stations.*
Mar2

There are annexed to this list a table and a chart showing the zones and hours of service of ships of the second and third categories (see Appendix 12) and a table of inland telegraph rates,

limitrophic rates, etc. This list shall also contain an annex giving any details of maritime mobile-satellite systems which may be forwarded to the Secretary-General by participating administrations.

806 (V) *List V. List of Ship Stations.*
Mar2

This list shall contain particulars of:

a) ship stations fitted with radiotelegraph installations;

b) ship stations fitted with radiotelegraph and radiotelephone installations;

c) ship stations fitted with radiotelephone installations only, which communicate with stations of the maritime mobile service other than those of their own nationality or make international voyages;

d) ship stations fitted with mobile earth stations.

This list shall contain a table and a chart showing the zones and hours of service of ships of the second and third categories (see Appendix 12) and an annex giving details of maritime mobile-satellite systems which may be forwarded to the Secretary-General by participating administrations.

807 (VI) *List VI. List of Radiodetermination and Special Service*
Mar2 *Stations.*

This list shall contain particulars of radio direction-finding stations and radiobeacon stations of the maritime radionavigation service, including radiobeacon stations of the aeronautical radionavigation service reliable for maritime navigation, and the particulars of radiodetermination-satellite systems available for maritime use, ocean-station vessels, direction-finder calibration stations as well as

stations transmitting time signals, regular meteorological bulletins, notices to navigators, medical advice, standard frequencies, epidemiological bulletins and ursigrams. In this list, each class of station shall occupy a special section.

808 **Spa** (VII) *List VII. Alphabetical List of Call Signs Assigned from the International Series to Stations Included in Lists I to VI and VIIIA.*

This list shall be published in two volumes :

809 **Mar** *a) List VIIA. Alphabetical List of Call Signs of Stations used by the Maritime Mobile Service (Coast, Ship, Radiodetermination and Special Service Stations), Ship Station Selective Call Numbers or Signals and Coast Station Identification Numbers or Signals.*

This list shall be preceded by the Table of Allocation of International Call Signs Series given in Article 19 and a table of signals characterizing the emissions of radiobeacons used in the maritime mobile service.

810 *b) List VII B. Alphabetical List of Call Signs of Stations other than Amateur Stations, Experimental Stations and Stations of the Maritime Mobile Service.*

This list shall be preceded by the Table of Allocation of International Call Signs Series given in Article 19 and by a Table indicating the form of call signs assigned by each administration to its amateur and experimental stations.

811 (VIII) *List VIII. List of International Monitoring Stations.*

This list shall contain particulars of earth and space stations and of radio astronomy stations. In this list, each class of station shall occupy a special section.

811A **Mar2** (VIII A) *List VIIIA. List of Stations in the Space Service and in the Radio Astronomy Service.*

This list shall contain particulars of earth and space stations and of radio astronomy stations. In this list, each class of station shall occupy a special section. However, mobile earth stations of the maritime mobile-satellite service shall not be listed. Instead a general reference to the List of Ship Stations shall be included in List VIIIA.

812 (IX) *Map of Coast Stations which are open to Public Correspondence or which Participate in the Port Operations Service.*

813 (X) *Chart in Colours showing Frequency Allocations* as specified in Article 5.

814 (XI) *Radiocommunication Statistics.*

815 **Mar2** § 2. (1) The Secretary-General shall publish the amendments to be made in the documents listed in Nos. **790** to **814** inclusive. Once a month administrations shall inform him, in the form shown for the lists themselves in Appendix 9, of the additions, modifications or deletions to be made in Lists IV, V and VI using for this purpose the appropriate symbols shown in Appendix 10. Furthermore, in order to make the necessary additions, modifications and deletions to Lists I, II, III and VIIIA, he shall use the data provided by the International Frequency Registration Board, obtained from the information received in application of the provisions of Articles 9, 9A and 10. He shall make the requisite amendments to List VII by using the data he has received for Lists I to VI and VIIIA. Lists IV and VI shall be co-ordinated with the information appearing in List I. The Secretary-General shall refer any discrepancies to the administrations concerned.

816 (2) For permanent changes affecting the operation of Radiodetermination stations (List VI), see No. **1578**.

817 § 3. (1) New editions of the International Frequency List shall be published at intervals to be determined by the Secretary General, but not exceeding two years. This list shall be kept up to date by quarterly recapitulative supplements published in the same form as the list itself. New or modified entries made in the Master International Frequency Register after the publication of the latest recapitulative supplement and which appear in a new recapitulative supplement or in a new edition of the list, shall be indicated therein in an appropriate manner.

818 (2) The recapitulative supplements shall be divided into two sections as follows :

819 — Section A shall contain new entries and modifications of entries already listed in the International Frequency List.

820 — Section B shall contain entries in the International Frequency List which have been deleted in their entirety.

821 § 4. The List of Fixed Stations Operating International Circuits (List II) shall be republished at intervals to be determined by the Secretary-General. The list shall be kept up to date by the publication of recapitulative supplements at intervals of three months.

822 § 5. (1) The List of Broadcasting Stations Operating in Bands below 5 950 kHz (List III A) shall be republished at intervals to be determined by the Secretary-General. Recapitulative supplements shall be published every six months.

823 (2) The List of Broadcasting Stations Operating in Bands between 5 950 and 26 100 kHz (List III B) shall be republished each year without supplements.

824 Mar § 6. The List of Coast Stations (List IV) shall be republished every two years and kept up to date by recapitulative supplements issued every six months.

825 Mar2 § 7. The List of Ship Stations (List V) shall be republished each year. It shall be kept up to date by means of a quarterly supplement in addition to a half-yearly recapitulative supplement.

826 § 8. The List of Radiodetermination and Special Service Stations (List VI) shall be republished at intervals to be determined by the Secretary General. Recapitulative supplements shall be published every six months.

827 § 9. (1) The Alphabetical List of Call Signs of Stations used by the Maritime Mobile Service (List VII A) shall be republished every two years and kept up to date by recapitulative supplements every three months.

828 (2) The Alphabetical List of Call Signs of Stations other than Amateur Stations, Experimental Stations and Stations of the Maritime Mobile Service (List VII B) shall be republished at intervals determined by the Secretary General, and kept up to date by recapitulative supplements issued every three months.

829 § 10. The List of International Monitoring Stations (List VIII) shall be published at intervals to be determined by the Secretary General. It shall be kept up to date by the publication of recapitulative supplements at intervals to be determined by the Secretary General.

829A **Spa** § 10A. The List of Stations in the Space Service and in the Radio Astronomy Service (List VIIIA) shall be republished at intervals to be determined by the Secretary-General. Recapitulative supplements shall be published every six months.

830 § 11. The Radiocommunication Statistics shall be republished at intervals to be determined by the Secretary General.

831 **Spa** § 12. (1) The forms in which Lists I to VI inclusive, Lists VIII and VIIIA and the Radiocommunication Statistics are to be prepared are given in Appendix 9. Information concerning the use of these documents shall be given in the Prefaces thereto. Each entry shall include the appropriate symbol, as shown in Appendix 10, to designate the category of station concerned. Additional symbols, where necessary, may be selected by the Secretary-General, any such new symbols being notified by the Secretary-General to administrations.

832 (2) In the service documents, the names of coast, radio direction-finding and radiobeacon stations are followed by the words:

833 — RADIO for coast stations ;

834 — GONIO for maritime radio direction-finding stations ;

835 — PHARE for maritime radiobeacon stations ;

836 — AEROPHARE for aeronautical radiobeacon stations.

837 § 13. For the purpose of the service documents, a country shall be understood to mean the territory within the limits of which the station is located ; a territory which does not have full responsibility for its international relations shall also be considered as a country for this purpose.

ARTICLE 21

Mar2 **Inspection of Mobile Stations and Mobile Earth Stations in the Maritime Mobile-Satellite Service**

838 Mar2 § 1. (1) The governments or appropriate administrations of countries which a mobile station or a mobile earth station in the maritime mobile-satellite service 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.

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 master or person responsible for the ship, aircraft or other vehicle carrying the mobile station or the mobile earth station in the maritime mobile-satellite service.

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.

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.

842 Mar2 § 2. (1) When a government or an administration has found it necessary to adopt the course indicated in No. **840**, or when the operators' certificates cannot be produced, the government or ad-

ministration to which the mobile station or mobile earth station in the maritime mobile-satellite service is subject shall be so informed without delay. In addition, the procedure specified in Article 16 is followed when necessary.

843 **Mar2** (2) Before leaving, the inspector shall report the result of his inspection to the master, or the person responsible for the ship, aircraft or other vehicle carrying the mobile station or mobile earth station in the maritime mobile-satellite service. If any breach of the conditions imposed by these Regulations is observed, the inspector shall make this report in writing.

844 **Mar2** § 3. The Members of the Union undertake not to impose upon foreign mobile stations or upon foreign mobile earth stations in the maritime mobile-satellite service which are temporarily within their territorial waters or 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 or air navigation, and which are therefore not covered by these Regulations.

CHAPTER VI

Mar2

Personnel of Stations in the Mobile Service and the Maritime Mobile-Satellite Service

ARTICLE 22

Authority of the Master

845 § 1. The service of a mobile station is placed under the supreme authority of the master or of the person responsible for the ship, aircraft, or other vehicle carrying the mobile station.

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.

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.

847A Mar2 § 4. The authority and obligations imposed by Nos. **845**, **846** and **847** shall also apply to personnel of mobile earth stations in the maritime mobile-satellite service.

ARTICLE 23

Mar2

Operators' Certificates for Ship and Aircraft Stations and Mobile Earth Stations in the Maritime Mobile-Satellite Service

Section I. General Provisions

848 § 1. (1) The service of every ship or aircraft radiotelegraph station shall be performed by an operator holding a certificate issued or recognized by the government to which the station is subject.

849 (2) The service of every ship or aircraft radiotelephone station shall be controlled by an operator holding a certificate issued or recognized by the government to which the station is subject. Provided the station is so controlled, other persons besides the holder of the certificate may use the radiotelephone equipment.

849A Mar2 (2A) The service of every mobile earth station in the maritime mobile-satellite service shall be controlled by a person holding a certificate issued or recognized by the government to which the station is subject. Provided the station is so controlled, other persons besides the holder of the certificate may use the equipment.

850 (3) The service of automatic communication devices[1] installed in ship or aircraft stations shall be controlled by an operator holding a certificate issued or recognized by the government to which the station is subject. Provided the devices are so controlled, they may be used by other persons. If such devices require for their basic function the use of Morse code signals specified in the Telegraph Regulations*), the service shall be performed by an operator holding a radiotelegraph certificate. However, this latter requirement does not apply to automatic devices which may use Morse code signals solely for identification purposes.

850.1 [1] The term "automatic communication devices" is intended to include such equipment as teleprinters, data transfer systems, etc.

*) *Note by the General Secretariat:* Transferred to the Instructions for the operation of the international public telegram service.

851 (4) Nevertheless, in the service of radiotelephone stations operating solely on frequencies above 30 MHz, each government shall decide for itself whether a certificate is necessary and, if so, shall define the conditions for obtaining it.

852 (5) The provisions of No. **851** shall not, however, apply to any ship or aircraft station working on frequencies assigned for international use.

853 § 2. (1) In the case of complete unavailability of the operator in the course of a sea passage, a flight or a journey, and solely as a temporary measure, the master or the person responsible for the station may authorize an operator holding a certificate issued by the government of another Member of the Union to perform the radiocommunication service.

854 (2) When it is necessary to employ a person without a certificate or an operator not holding an adequate certificate as a temporary operator, his performance as such must be limited solely to signals of distress, urgency and safety, messages relating thereto, messages relating directly to the safety of life, urgent messages relating to the movement of the ship and essential messages relating to the navigation and safe movement of the aircraft. Persons employed in these cases are bound by the provisions of No. **858** regarding the secrecy of correspondence.

855 (3) In all cases, such temporary operators must be replaced as soon as possible by operators holding the certificate prescribed in § 1 of this Article.

856 § 3. (1) Each administration shall take the necessary steps to prevent, to the maximum extent possible, the fraudulent use of certificates. For this purpose, such certificates shall bear the holder's signature and shall be authenticated by the issuing administration. Administrations may employ, if they wish, other means of identification such as photographs, fingerprints, etc.

856A **Mar2** (1A) However, in the maritime mobile service the certificates issued after 1 January 1978 shall bear the photograph of the holder and the holder's date of birth.

857 (2) To facilitate verification of certificates, these may carry, if necessary, in addition to the text in the national language, a translation of this text in a working language of the Union.

857A Mar2 (3) However, in the maritime mobile service all certificates not in one of the working languages of the Union and issued after 1 January 1978 shall carry at least the following information in one of these working languages:

- the name and date of birth of the holder,
- the title of the certificate and its date of issue,
- if applicable, the number and period of validity of the certificate,
- the issuing administration.

858 § 4. Each administration shall take the necessary steps to place operators under the obligation to preserve the secrecy of correspondence as provided for in No. **728**.

Mar2

Section II. Classes and Categories of Certificates except for the Operators of Ship Stations

859 § 5. (1) There are two classes of certificates, as well as a special certificate, for radiotelegraph operators.[1]

860 (2) There are two categories of radiotelephone operators' certificates, general and restricted.[1]

860A SUP **(Mar2)**

861 Mar2 § 6. (1) The holder of a first or second class radiotelegraph operator's certificate may carry out the radiotelegraph or radiotelephone service of any aircraft station.

859.1 [1] As regards the employment of operators holding the different certificates, see Article 24.

862 (2) The holder of a radiotelephone operator's general certificate may carry out the radiotelephone service of any aircraft station.
Mar2

863 (3) The holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any aircraft station, when working on frequencies of the maritime mobile service, provided that:
Mar

— the peak envelope power of the transmitter does not exceed 200 watts, or

— the operation of the transmitter requires only the use of simple external switching devices, excluding all manual adjustment of frequency determining elements, with the stability of the frequencies maintained by the transmitter itself within the limits of tolerance specified by Appendix 3, and the peak envelope power of the transmitter does not exceed 1 kilowatt.

863A SUP **(Mar2)**

864 (4) The holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any aircraft station operating on frequencies allocated exclusively to the aeronautical mobile service, provided that the operation of the transmitter requires only the use of simple external switching devices, excluding all manual adjustment of frequency determining elements, and that the stability of the frequencies is maintained by the transmitter itself within the limits of tolerance specified by Appendix 3.
Mar2

865 (5) The radiotelephone service of aircraft stations for which only a restricted radiotelephone operator's certificate is required may be carried out by an operator holding a radiotelegraph operator's special certificate.
Mar2

866 § 7. Exceptionally, the second class radiotelegraph operator's certificate as well as the radiotelegraph operator's special certificate may be limited exclusively to the radiotelegraph service. In such cases the certificate shall be suitably endorsed.

Mar2

Section IIA. Categories of Certificates for Ship Station Operators

866A Mar2 § 7A. (1) There are four categories of certificates for radiotelegraph operators,[1] namely:

- the radiocommunication operator's general certificate,
- the first class radiotelegraph operator's certificate,
- the second class radiotelegraph operator's certificate,
- the radiotelegraph operator's special certificate.

866B Mar2 (2) There are two categories of radiotelephone operator's[2] certificates, general and restricted.

866C Mar2 § 7B. (1) The holder of a radiocommunication operator's general certificate, or of a first class or second class radiotelegraph operator's certificate, may carry out the radiotelegraph or radiotelephone service of any ship station.

866D Mar2 (2) The holder of a radiotelephone operator's general certificate may carry out the radiotelephone service of any ship station.

866A.1 Mar2 [1] As regards the employment of operators holding the different certificates, see Article 24.

866B.1 Mar2 [2] As regards the employment of operators holding the different certificates, see Article 24.

866E Mar2 (3) The holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any ship station, provided that the operation of the transmitter requires only the use of simple external controls, and excludes all manual adjustment of frequency determining elements, with the stability of the frequencies maintained by the transmitter itself within the limits of tolerance specified by Appendix 3, and the peak envelope power of the transmitter does not exceed 1,5 kilowatt.

866F Mar2 (4) The radiotelephone operator's restricted certificate may be limited exclusively to one or more of the maritime mobile frequency bands. In such cases the certificate shall be suitably endorsed.

866G Mar2 (5) The radiotelegraph service of ships for which a radiotelegraph installation is not made compulsory by international agreements, as well as the radiotelephone service of ship stations for which only a radiotelephone operator's restricted certificate is required, may be carried out by the holder of a radiotelegraph operator's special certificate.

866H Mar2 (6) However, where the conditions specified in No. **893A** are satisfied, the radiotelegraph service of ships for which a radiotelegraph installation is not made compulsory by international agreements, as well as the radiotelephone service of any ship station, may be carried out by the holder of a radiotelegraph operator's special certificate.

866I Mar2 § 7C. Exceptionally, the second class radiotelegraph operator's certificate as well as the radiotelegraph operator's special certificate may be limited exclusively to the radiotelegraph service. In such cases the certificate shall be suitably endorsed.

Section III. Conditions for the Issue of Operators' Certificates

867 § 8. (1) The conditions to be imposed for obtaining the various certificates are contained in the following paragraphs and represent the minimum requirements.

868 (2) Each administration is free to fix the number of examinations necessary to obtain each certificate.

869 § 9. (1) The administration which issues a certificate may, before authorizing an operator to carry out the service on board a ship or aircraft, require the fulfilment of other conditions (for example: experience with automatic communication devices; further technical and professional knowledge relating particularly to navigation; physical fitness; for an operator of the aeronautical mobile service, the completion as an operator of a certain number of flying hours, etc.).

870 (2) Administrations should take whatever steps they consider necessary to ensure the continued proficiency of operators after prolonged absences from operational duties.

870A (3) However, with respect to the maritime mobile service, ad-
Mar2 ministrations should also take whatever steps they consider necessary to ensure the continued proficiency of operators while in service.

Mar2 *A. Radiocommunication Operator's General Certificate for the Maritime Mobile Service*

870B § 9A. The radiocommunication operator's general certificate for
Mar2 the maritime mobile service is issued to candidates who have given proof of the technical and professional knowledge and qualifications enumerated below:

870C *a)* Knowledge of the principles of electricity and the theory of
Mar2 radio and of electronics sufficient to meet the requirements specified in Nos. **870D**, **870E** and **870F**.

870D
Mar2

b) Theoretical knowledge of modern radiocommunication equipment, including marine radiotelegraph and radiotelephone transmitters and receivers, marine antenna systems, automatic alarm devices, radio equipment for lifeboats and other survival craft, direction-finding equipment, together with all auxiliary items including power supply (such as motors, alternators, generators, inverters, rectifiers and accumulators), as well as a general knowledge of the principles of other apparatus generally used for radionavigation, with particular reference to maintaining the equipment in service.

870E
Mar2

c) Practical knowledge of the operation, adjustment and maintenance of the apparatus mentioned in No. **870D**, including the taking of direction-finding bearings and knowledge of the principles of the calibration of radio direction-finding apparatus.

870F
Mar2

d) Practical knowledge necessary for the location and remedying (using appropriate testing equipment and tools) of faults in the apparatus mentioned in No. **870D** which may occur during a voyage.

870G
Mar2

e) Ability to send correctly by hand and to receive correctly by ear, in the Morse code, code groups (mixed letters, figures and punctuation marks) at a speed of 16 groups a minute, and a plain language text at a speed of 20 words a minute. Each code group shall comprise five characters, each figure or punctuation mark counting as two characters. The average word of the text in plain language shall contain five characters. The duration of each test of sending and receiving shall be, as a rule, five minutes.

870H
Mar2

f) Ability to send correctly and to receive correctly by radiotelephone.

870I Mar2 *g)* Knowledge of the Regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of the provisions of the Convention for the Safety of Life at Sea which relate to radio.

870J Mar2 *h)* A sufficient knowledge of world geography, especially the principal shipping routes and the most important telecommunication routes.

870K Mar2 *i)* Knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required.

Mar2 *B. First Class Radiotelegraph Operator's Certificate*

871 § 10. The first class certificate is issued to candidates who have given proof of the technical and professional knowledge and qualifications enumerated below :

872 *a)* Knowledge both of the general principles of electricity and of the theory of radio, knowledge of the adjustment and practical working of various types of radiotelegraph and radiotelephone apparatus used in the mobile service, including apparatus used for radio direction-finding and the taking of direction-finding bearings, as well as a general knowledge of the principles of operation of other apparatus generally used for radionavigation.

873 *b)* Theoretical and practical knowledge of the operation and maintenance of apparatus, such as motor-generators, storage batteries, etc., used in the operation

and adjustment of the radiotelegraph, radiotelephone and radio direction-finding apparatus mentioned in No. **872**.

874 *c)* Practical knowledge necessary to repair, with the means available on board, damage which may occur to the radiotelegraph, radiotelephone and radio direction-finding apparatus during a voyage.

875 *d)* Ability to send correctly by hand and to receive correctly by ear, in the Morse code, code groups (mixed letters, figures and punctuation marks), at a speed of twenty groups a minute, and a plain language text at a speed of twenty-five words a minute. Each code group shall comprise five characters, each figure or punctuation mark counting as two characters. The average word of the text in plain language shall contain five characters. The duration of each test of sending and of receiving shall be, as a rule, five minutes.

876 *e)* Ability to send correctly and to receive correctly by telephone.

877 *f)* Detailed knowledge of the Regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications, knowledge of the provisions of the Convention for the Safety of Life at Sea which relate to radio, and, in the case of air navigation, knowledge of the special provisions governing the aeronautical fixed, mobile, and radionavigation services. In the latter case, the certificate states that the holder has successfully passed the tests relating to these special provisions.

878 *g)* A sufficient knowledge of world geography, especially the principal shipping and air routes and the most important telecommunication routes.

879 *h)* Sufficient knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required.

Mar2 *C. Second Class Radiotelegraph Operator's Certificate*

880 § 11. The second class certificate is issued to candidates who have given proof of the technical and professional knowledge and qualifications enumerated below :

881 *a)* Elementary theoretical and practical knowledge of electricity and of radio, knowledge of the adjustment and practical working of the various types of radiotelegraph and radiotelephone apparatus used in the mobile service, including apparatus used for radio direction-finding and the taking of direction-finding bearings, as well as elementary knowledge of the principles of operation of other apparatus in general use for radionavigation.

882 *b)* Elementary theoretical and practical knowledge of the operation and maintenance of apparatus, such as motor-generators, storage batteries, etc., used in the operation and adjustment of the radiotelegraph, radiotelephone and radio direction-finding apparatus mentioned in No. **881**.

883 *c)* Practical knowledge sufficient for effecting repairs in the case of minor damage which may occur to the radiotelegraph, radiotelephone and radio direction-finding apparatus during a voyage.

884 *d)* Ability to send correctly by hand and to receive correctly by ear in the Morse code, code groups (mixed letters, figures and punctuation marks) at a speed of sixteen groups a minute, and a plain language text at a speed of twenty words a minute. Each code group

shall comprise five characters, each figure or punctuation mark counting as two characters. The average word of the text in plain language shall contain five characters. The duration of each test of sending and of receiving shall, as a rule, be five minutes.

885 *e)* Ability to send correctly and to receive correctly by telephone, except in the case provided for in No. **866**.

886 *f)* Knowledge of the Regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications, knowledge of the provisions of the Convention for the Safety of Life at Sea which relate to radio, and, in the case of air navigation, knowledge of the special provisions governing the aeronautical fixed, mobile, and radionavigation services. In the latter case, the certificate states that the holder has successfully passed the tests relating to these special provisions.

887 *g)* A sufficient knowledge of world geography, especially the principal shipping and air routes and the most important telecommunication routes.

888 *h)* If necessary, an elementary knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required.

Mar2 *D. Radiotelegraph Operator's Special Certificate*

889 § 12. (1) The radiotelegraph operator's special certificate is issued to candidates who have given proof of the knowledge and professional qualifications enumerated below :

890 *a)* Ability to send correctly by hand and receive correctly by ear in the Morse code, code groups (mixed letters,

figures, and punctuation marks) at a speed of sixteen groups a minute, and a plain language text at a speed of twenty words a minute. Each code group shall comprise five characters, each figure or punctuation mark counting as two characters. The average word of the text in plain language shall contain five characters.

891 *b)* Knowledge of the practical operation and adjustment of radiotelegraph apparatus.

892 *c)* Knowledge of the Regulations applying to radiotelegraph communications and specifically of that part of those Regulations relating to safety of life at sea.

893 (2) Each administration concerned shall fix the other conditions for obtaining this certificate. However, except as provided for in No. **866**, the conditions specified in Nos. **899**, **900**, **901** and **902** or **903**, as the case may be, shall be satisfied.

893A Mar2 (3) In the maritime mobile service each administration concerned shall fix the other conditions for obtaining this certificate. However, except as provided for in No. **866I**, the conditions specified in Nos. **894**, **895**, **896**, **897** and **898** shall be satisfied for such a certificate issued to ship station operators after 1 January 1976.

Mar2 *E. Radiotelephone Operator's Certificate*

894 Mar2 § 13. The radiotelephone operator's general certificate is issued to candidates who have given proof of the knowledge and professional qualifications enumerated below (see also Nos. **861**, **862**, **866C**, **866D**, **866G** and **866H**):

895 *a)* A knowledge of the elementary principles of radiotelephony.

896 *b)* Detailed knowledge of the practical operation and adjustment of radiotelephone apparatus.

897 *c)* Ability to send correctly and to receive correctly by telephone.

898 *d)* Detailed knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.

899 § 14. (1) The restricted radiotelephone operator's certificate is issued to candidates who have given proof of the knowledge and professional qualifications enumerated below :

900 *a)* Practical knowledge of radiotelephone operation and procedure.

901 *b)* Ability to send correctly and to receive correctly by telephone.

902 *c)* General knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.

903 (2) For ship radiotelephone stations where the peak envelope
Mar power of the transmitter does not exceed 400 watts and for aircraft radiotelephone stations operating on frequencies allocated exclusively to the aeronautical mobile service, each administration may itself fix the conditions for obtaining a restricted radiotelephone operator's certificate, provided that the operation of the transmitter requires only the use of simple external switching devices, excluding all manual adjustment of frequency determining elements, and that the stability of the frequencies is maintained by the transmitter itself within the limits of tolerance specified in Appendix 3. However, in fixing the conditions, administrations shall ensure that the operator has an adequate knowledge of radiotelephone operation and procedure particularly as far as distress, urgency and safety are concerned. This in no way contravenes the provisions of No. **906.**

904 (3) Administrations in Region 1 do not issue certificates under No. **903**.

905 § 15. A radiotelephone operator's certificate shall show whether it is a general certificate or a restricted certificate and, in the latter case, if it has been issued in conformity with the provisions of No. **903**.

905A **Mar2** § 15A. However, in the maritime mobile service a radiotelephone operator's restricted certificate shall show whether it is also limited as provided for in No. **866F**.

906 § 16. In order to meet special needs, special agreements between administrations may fix the conditions to be fulfilled in order to obtain a radiotelephone operator's certificate, intended to be used in radiotelephone stations complying with certain technical conditions and certain operating conditions. These agreements, if made, shall be on the condition that harmful interference to international services shall not result therefrom. These conditions and agreements shall be mentioned in the certificates issued to such operators.

Section IV. Qualifying Service

907 **Mar2** § 17. (1) The holder of a radiocommunication operator's general certificate or a first or second class radiotelegraph operator's certificate is authorized to embark as chief operator of a ship station of the fourth category (see No. **932**).

907A **Mar2** (2) However, before becoming chief or sole operator of a ship station of the fourth category (see No. **932**) which is required by international agreements to carry a radiotelegraph operator, the holder of a radiocommunication operator's general certificate or a first or second class radiotelegraph operator's certificate shall have had adequate experience as operator on board ship at sea.

908 (3) Before becoming chief operator of a ship station of the
Mar2 second or third category (see Nos. **931** and **931A**), the holder of a radiocommunication operator's general certificate or a first or second class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least six months' experience of which at least three months shall have been on board ship.

909 (4) Before becoming chief operator of a ship station of the first
Mar2 category (see No. **930**), the holder of a radiocommunication operator's general certificate or a first class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least one year's experience of which at least six months shall have been on board ship.

910-911 SUP (Mar)

ARTICLE 24

Mar2 **Class and Minimum Number of Operators for Stations on Board Ships and Aircraft**

912 Mar2 § 1. In the public correspondence service, each government shall take the necessary steps to ensure that stations on board ships and aircraft of its own nationality have personnel adequate to perform efficient service.

913 Mar2 § 2. The personnel of ship and aircraft stations in the public correspondence service shall, having regard to the provisions of Article 23, include at least:

914 Mar2 *a)* ship stations of the first category, except in the case provided for in No. **918**: a chief operator holding a radiocommunication operator's general certificate or a first class radiotelegraph operator's certificate;

915 Mar2 *b)* ship stations of the second and third categories, except in the case provided for in No. **918**: a chief operator holding a radiocommunication operator's general certificate or a first or second class radiotelegraph operator's certificate;

916 Mar2 *c)* ship stations of the fourth category, except in the cases provided for in Nos. **917** and **918**: one operator holding a radiocommunication operator's general certificate or a first or second class radiotelegraph operator's certificate;

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;

918 **Mar** *e)* ship stations equipped with radiotelephone installation only: one operator holding either a radiotelephone operator's certificate or a radiotelegraph operator's certificate;

919 *f)* aircraft stations except in the cases provided for in No. **920**: one operator holding a first or second class radiotelegraph operator's certificate, according to the internal regulations of the governments to which the stations are subject;

920 *g)* aircraft stations equipped with a radiotelephone installation but not equipped for telegraphy: one operator holding, as the case may be, a radiotelephone operator's certificate or a radiotelegraph operator's certificate according to the internal regulations of the governments to which the stations are subject [1].

920.1 [1] See also Nos. **899** to **904** inclusive.

ARTICLE 25

Working Hours of Stations in the Maritime and Aeronautical Mobile Services

Section I. Preamble

921 § 1. In order to permit the application of the following rules on the subject of hours of watch, every station of the maritime and aeronautical mobile services shall have an accurate clock correctly regulated to Greenwich Mean Time (G.M.T.).

922 § 2. Greenwich Mean Time (G.M.T.) (reckoned from 0001 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.

Section II. Coast Stations

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.

924 (2) These hours of service shall be notified to the Secretary General who shall publish them in the List of Coast Stations.

925 § 4. Coast stations whose service is not continuous shall not close before :

926 *a)* finishing all operations resulting from a distress call, urgency or safety signal ;

927 *b)* exchanging all traffic originating in or destined for mobile stations which are situated within their service area and have indicated their presence before the actual cessation of work.

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.

Section III. Aeronautical Stations

928 § 5. 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.

Section IV. Ship Stations

929 Mar § 6. (1) For the international public correspondence service, ship stations are divided into four categories:

930 — Stations of the first category: these stations maintain a continuous service.

931 Mar — Stations of the second category: these stations maintain a service for 16 hours a day.

931A Mar — Stations of the third category: these stations maintain a service for 8 hours a day.

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.

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.

934 **Mar2** § 7. (1) Ship stations of the second category shall maintain the following hours of service:

0000 - 0400 0800 - 1200 1600 - 1800 2000 - 2200	Ship's time or zone time

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.

934A **Mar2** (1A) 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.

934B **Mar2** (1B) Each administration will determine whether ship's time observed by its ships is to be zone time as shown in Appendix 12 (see Nos. **934** and **934A**).

935 (2) In case of short voyages, these stations shall provide service during the hours fixed by the administrations to which they are subject.

935A **Mar2** § 7A. Ship stations of the fourth category are encouraged to provide service from 0830 to 0930 hours, ship's time or zone time.

936-938 SUP (Mar)

939 § 11. (1) Ship stations whose service is not continuous shall not close before :

940 *a)* finishing all operations resulting from a distress call, urgency or safety signal ;

941 *b)* exchanging, so far as practicable, all traffic originating in or destined for coast stations situated within their service area and for mobile stations which, being within their service area, have indicated their presence before the actual cessation of work.

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.

943 § 12. (1) Any mobile station arriving in port, and whose service is therefore about to close, shall :

944 *a)* notify accordingly the nearest coast station and, if appropriate, the other coast stations with which it generally communicates ;

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.

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.

Section V. Aircraft Stations

947 § 13. 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.

ARTICLE 26

Personnel of Coast and Aeronautical Stations

948 Administrations shall ensure that the staff on duty in coast and aeronautical stations shall be adequately qualified to operate the stations efficiently.

CHAPTER VII

Mar2 **Working Conditions in the Mobile Services and in the Maritime Mobile-Satellite Service**

ARTICLE 27

Mar2 **Aeronautical Stations and Stations on Board Aircraft**

949 § 1. Except as otherwise provided in these Regulations, the aeronautical mobile service may be regulated by special agreements between governments concerned (see Article 31 of the Convention).

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.

951 Spa2 § 3. (1) 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.

952 Mar2 (2) For this purpose stations on board aircraft should use the frequencies allocated to the maritime mobile or maritime mobile-satellite services. However, having regard to interference which may be caused by aircraft stations at high altitudes, frequencies in the maritime mobile bands above 30 MHz shall not be used by aircraft stations, with the exception of those frequencies between 156 and 174 MHz specified in Appendix 18 which may be used provided that the following conditions are observed:

952A Mar2 *a)* the altitude of aircraft stations shall not exceed 300 metres (1000 feet), except for reconnaissance aircraft participating in ice-breaking operations where an altitude of 450 metres (1500 feet) is allowed;

952B Mar2 *b)* the mean power of aircraft station transmitters shall not exceed five watts; however, a power of one watt or less shall be used to the maximum extent possible;

952C Mar2 *c)* aircraft stations shall use the channels designated for this purpose in Appendix 18;

952D Mar2 *d)* except as provided in No. **952B**, aircraft station transmitters shall comply with the technical characteristics given in Appendix 19;

952E Mar2 *e)* the communications of an aircraft station shall be brief and limited to operations in which stations of the maritime mobile service are primarily involved and where direct communication between the aircraft and the ship or coast station is required.

953 Mar2 (3) The frequencies 156·3 MHz and 156·8 MHz may be used by aircraft stations for safety purposes only.

954 Mar2* (4) Stations on board aircraft when handling public correspondence with stations of the maritime mobile service or of the maritime mobile-satellite service shall comply with all the provisions applicable to the handling of public correspondence in the maritime mobile or maritime mobile-satellite services (see particularly Articles 37A, 38, 39 and 40A).

ARTICLE 28

Conditions to be Observed by Mobile Stations

Section I. General Provisions

955 **Mar** § 1. Mobile stations shall be established in such a way as to conform to the provisions of Chapter II as regards frequencies and classes of emission.

956 SUP (Mar)

957 § 2. The frequencies of emission of mobile stations shall be checked as often as possible by the inspection service to which these stations are subject.

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.

959 § 4. Administrations shall take all practicable steps necessary to ensure that the operation of any electrical or electronic apparatus installed in 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.

960 § 5. (1) Changes of frequency in the sending and receiving apparatus of any mobile station shall be capable of being made as rapidly as possible.

961 (2) Installations of any mobile station shall be capable, once communication is established, of changing from transmission to reception and vice versa in as short a time as possible.

962 § 6. The operation of a broadcasting service (see No. **28**) by mobile stations at sea and over the sea is prohibited.

963 § 7. Mobile stations other than survival craft stations shall be provided with the documents enumerated in the appropriate section of Appendix 11.

964 § 8. When any ship station transmitter itself cannot be controlled in such a way that its frequency satisfies the tolerance specified in Appendix 3, the ship station shall be provided with a device, having a precision equal to at least one-half of this tolerance, for measuring the frequency of the emission.

964A SUP **(Mar2)**
Mar

Section II. Special Provisions regarding Safety

965 § 9. (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.

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.

967 § 10. The applicable provisions of the present Regulations shall, however, be observed in the use of all such installations.

968 § 11. (1) Mobile stations of the maritime mobile service may communicate, for safety purposes, with stations of the aeronautical mobile service.

969 (2) For these purposes only, they may use the aeronautical
Mar2 emergency frequency 121·5 MHz and the aeronautical auxiliary frequency 123·1 MHz, using class A3 emissions for both frequencies. They shall then comply with any special arrangements between the governments concerned by which the aeronautical mobile service is regulated.

969A Mar2 (3) The aeronautical frequencies 3 023·5 kHz and 5 680 kHz may be used by mobile stations for search and rescue scene-of-action coordination purposes, including communication between these stations and participating land stations, in accordance with any special arrangements by which the aeronautical mobile service is regulated (see Nos. **1326C** and **1353B**).

Section III. Ship Stations using Radiotelegraphy

970 Mar2 § 12. Ship stations equipped with radiotelegraph apparatus intended to be used for normal traffic by Morse telegraphy shall be provided with devices permitting changeover from transmission to reception and vice versa without manual switching. In addition these stations should be able to listen on the reception frequency during the course of periods of transmission.

971 SUP (Mar)

Bands between 405 and 535 kHz

972 § 14. Transmitters used in ship stations working in the authorized bands between 405 and 535 kHz shall be provided with devices readily permitting a material reduction of power.

973 § 15. All ship stations equipped with radiotelegraph apparatus to work in the authorized bands between 405 and 535 kHz shall be able to :

974 **Mar** *a)* send class A2 or A2H emissions and receive class A2 and A2H emissions with a carrier frequency of 500 kHz;

975 **Mar** *b)* send, in addition, class A1 and either A2 or A2H emissions on at least two working frequencies;

976 **Mar** *c)* receive, in addition, class A1, A2 and A2H emissions on all the other frequencies necessary for their service.

977 § 16. The provisions of Nos. **975** and **976** do not apply to apparatus provided solely for distress, urgency and safety purposes.

Bands between 1 605 and 2 850 kHz

978 **Mar** § 17. In Region 2, any radiotelegraph station installed on board a ship which uses frequencies in the band 2 089·5-2 092·5 kHz for call and reply shall be provided with at least one other frequency in the authorized bands between 1 605 and 2 850 kHz.

Bands between 4 000 and 27 500 kHz

979 § 18. In ship stations, all apparatus using class A1 emissions on frequencies in the authorized bands between 4 000 and 27 500 kHz shall satisfy the following conditions :

980 **Mar2*** *a)* in each of the bands necessary to carry on the station's service, it shall have at least two working frequencies in addition to one in the calling band (see No. **1200**);

981 **Mar** *b)* changes of frequency in transmitting apparatus shall be effected as quickly as practicable, but within fifteen seconds in any event;

982 *c)* in the matter of frequency changing, receiving apparatus shall be capable of a performance equal to that of the transmitting apparatus.

Section IV. Ship Stations using Radiotelephony

Bands between 1 605 and 4 000 kHz

983 § 19. All ship stations equipped with radiotelephony apparatus to work in the authorized bands between 1 605 and 2 850 kHz shall be able to :

984 **Mar** *a)* send class A3 or A3H emissions with a carrier frequency of 2 182 kHz and receive class A3 and A3H emissions on a carrier frequency of 2 182 kHz However, after 1 January 1982, it is no longer authorized to send class A3 emissions, except for such apparatus as is referred to in No. 987.

985 **Mar** *b)* send, in addition:

1) class A3 or

2) class A3H, A3A and A3J [1]

emissions on at least two working frequencies. [2] However, after 1 January 1982 class A3 and A3H emissions are no longer authorized on working frequencies;

985.1 **Mar** [1] Up to 1 January 1982 administrations may, in certain areas, reduce this requirement to class A3H and A3J emissions on working frequencies.

985.2 **Mar** [2] In certain areas, administrations may reduce this requirement to one working frequency.

986 **Mar** *c)* receive, in addition:

1) class A3 and A3H or

2) class A3, A3H, A3A and A3J

emissions on all other frequencies necessary for their service. However, after 1 January 1982, the ability to receive class A3 and A3H emissions is no longer required.

987 § 20. **The provisions of Nos. 985 and 986 do not apply to apparatus provided solely for distress, urgency and safety purposes.**

Mar2 *Bands between 4 000 and 23 000 kHz*

987A **Mar2** § 20A. In the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, all ship stations equipped with radiotelephony to work in the authorized bands between 4 000 and 23 000 kHz should be able to send and receive on the carrier frequencies 4 136·3 kHz and 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz respectively) (see Nos. **1351E** and **1351F**).

Bands between 156 and 174 MHz

988 **Mar2*** § 21. All ship stations equipped with radiotelephony to work in the authorized bands between 156 and 174 MHz (see No. **287** and Appendix 18) shall be able to send and receive class F3 emissions (see Resolution No. Mar2—14) on:

989 Mar2 *a)* the distress, safety and calling frequency 156·8 MHz;

990 *b)* the primary intership frequency 156·30 MHz; and

991 *c)* all the frequencies necessary for their service.

Section V. Aircraft Stations

992 Mar2 § 22. (1) 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 A2 or A2H and receiving preferably class A2 and A2H emissions on the carrier frequency 500 kHz or, on the carrier frequency 2 182 kHz, transmitting class A3 or A3H and receiving class A3 and A3H emissions, or on the frequency 156·8 MHz transmitting and receiving class F3 emissions.

993 (2) Aircraft stations, when communicating with stations of the maritime mobile service on frequencies allocated to that service, shall comply as far as possible with the provisions of this Article.

Section VI. Survival Craft Stations

994 § 23. Equipment provided for use in survival craft stations shall, if capable of operating on any frequency :

995 **Mar** — *in the bands between 405 and 535 kHz,* be able to transmit with a carrier frequency of 500 kHz using class A2 or A2H emissions. If a receiver is provided for any of these bands, it shall be able to receive class A2 and A2H emissions on a carrier frequency of 500 kHz;

996 **Mar** — *in the bands between 1 605 and 2 850 kHz,* be able to transmit with a carrier frequency of 2 182 kHz using class A3 or A3H emissions. If a receiver is provided for any of these bands, it shall be able to receive class A3 and A3H emissions on a carrier frequency of 2 182 kHz;

997 **Mar** — *in the bands between 4 000 and 27 500 kHz,* be able to transmit with a carrier frequency of 8 364 kHz using class A2 or A2H emissions. If a receiver is provided for any of these bands, it shall be able to receive class A1, A2 and A2H emissions throughout the band 8 341·75 to 8 728·5 kHz;

998 — *in the bands between 118 and 132 MHz,* be able to transmit on 121·5 MHz, preferably using amplitude modulated emission. If a receiver is provided for any of these bands, it shall be able to receive class A3 emissions on 121·5 MHz;

998A **Mar2** — *in the bands between 156 and 174 MHz,* be able to transmit on 156·8 MHz using class F3 emission. If a receiver is provided for any of these bands it shall be able to receive class F3 emission on 156·8 MHz;

999 — *in the bands between 235 and 328·6 MHz,* be able to transmit on the frequency 243 MHz.

ARTICLE 28A

International Usage of Selective Calling in the Maritime Mobile Service

Mar2 **Section I. Sequential Single-Frequency Code System**

999A Mar § 1. The characteristics of the sequential single-frequency code international selective calling system shall be in accordance with Appendix 20C.

Method of Calling

999B Mar2 § 2. (1) The call shall consist of:

- the selective call number or identification number or signal of the station called, followed by:
- the selective call number or identification number or signal of the station calling.

However, in the case of a coast station calling on VHF, the number of the channel to be used for the reply and for traffic may replace the identification number or signal of the coast station.

The call shall be transmitted twice.

999C Mar2 (2) When a station called does not reply, the call should not normally be repeated until after an interval of at least five minutes and should not then normally be renewed until after a further interval of fifteen minutes.

999CA Mar2 (3) The use of an "all ships call" shall be confined to distress and urgency in the MF and HF bands and the announcement of vital navigational warnings in those bands; additionally it may be used for

safety purposes in the VHF band. This call may only be used to supplement, if required, the distress procedure specified in Nos. **1402**, **1403**, **1416** and **1417** and shall in no circumstances be used in place of such procedures, in particular the alarm signals mentioned in Nos. **1463** and **1465**.

Reply to Calls

999D **Mar** * § 3. The reply to calls should be made in accordance with the provisions of

— Nos. **1022A** and **1023** when using radiotelegraphy;

— Nos. **1241** to **1253** when using radiotelephony.

Frequencies to be used

999E **Mar2** § 4. Selective calls should be sent on one or more of the following calling carrier frequencies:

500	kHz
2 182	kHz
2 170·5	kHz [1]
4 136·3	kHz
4 434·9	kHz
6 518·6	kHz
8 802·4	kHz
13 182·5	kHz
17 328·5	kHz
22 699	kHz
156·8	MHz [2]

999E.1 **Mar2** [1] This frequency will replace 2 182 kHz for selective calling not later than 1 April 1977, except as provided in No. **1325A**.

999E.2 **Mar2** [2] Selective calling on this frequency should normally be only in the direction coast station to ship or intership. Selective calls from ship to coast stations should whenever possible be sent on other frequencies of Appendix 18, as appropriate.

As from 1 January 1978, the above-indicated carrier frequencies will be replaced by the following carrier frequencies

500	kHz
2 170·5	kHz [1]
4 125	kHz
4 419·4	kHz
6 521·9	kHz
8 780·9	kHz
13 162·8	kHz
17 294·9	kHz
22 658	kHz
156·8	MHz [2]

Mar2 **Section II. Digital Selective Calling System**

999F Mar2 § 5. A digital selective calling system may be used if it is in full conformity with the relevant C.C.I.R. Recommendations in which all operational, technical and compatibility aspects which might be involved have been taken into account.

999E.1 Mar2 [1] This frequency will replace 2 182 kHz for selective calling not later than 1 April 1977, except as provided in No. **1325A**.

999E.2 Mar2 [2] Selective calling on this frequency should normally be only in the direction coast station to ship or intership. Selective calls from ship to coast stations should whenever possible be sent on other frequencies of Appendix 18, as appropriate.

Mar2

ARTICLE 28B

Narrow-Band Direct-Printing Telegraphy

Section I. General Provisions

999G Mar2 § 1. The characteristics of the narrow-band direct-printing equipment shall be in accordance with Appendix 20B.

999H Mar2 § 2. Frequencies assigned to coast stations shall be indicated in the List of Coast Stations (List IV). This list shall also indicate any other useful information concerning the service performed by each coast station.

Section II. Bands between 405 and 535 kHz

999I Mar2 § 3. (1) All ship stations equipped with narrow-band direct-printing telegraph apparatus to work in the authorized bands between 405 and 535 kHz shall be able to send and receive class F1 emissions on at least two working frequencies (see No. **1123**).[1]

999J Mar2 (2) Narrow-band direct-printing telegraphy is forbidden in the band 490-510 kHz.

999I.1 Mar2 [1] In the European Maritime Area usage of these class F1 emissions is subject to special arrangements between interested and affected administrations.

Section III. Bands between 1 605 and 4 000 kHz

999K Mar2 § 4. (1) All ship stations equipped with narrow-band direct-printing telegraph apparatus to work in the authorized bands between 1 605 and 4 000 kHz shall be able to send and receive class F1 emissions on at least two working frequencies.

999L Mar2 (2) Narrow-band direct-printing telegraphy is forbidden in the band 2 170-2 194 kHz.

Section IV. Bands between 4 000 and 27 500 kHz

999M Mar2 § 5. All ship stations equipped with narrow-band direct-printing telegraph apparatus to work in the authorized bands between 4 000 and 27 500 kHz shall be able to send and receive class F1 emissions on at least two frequencies in each band as required by their service. The assignable frequencies are indicated in Appendices 15A and 15B.

Section V. Bands between 156 and 174 MHz

999N Mar2 § 6. All ship stations equipped with narrow-band direct-printing telegraph apparatus may work in the authorized bands between 156 and 174 MHz and shall conform to the provisions of Appendix 18.

ARTICLE 29

General Radiotelegraph Procedure in the Maritime Mobile and Aeronautical Mobile Services

Section I. General Provisions

1000 § 1. (1) In the maritime mobile and aeronautical mobile services the procedure detailed in this Article is obligatory, except in cases of distress, urgency or safety, to which the provisions of Article 36 are applicable.

1001 (2) However, in the aeronautical mobile service the procedure specified in Sections III, IV and V of the present Article is applicable only in the absence of special arrangements to the contrary concluded between the governments concerned.

1002 (3) Aircraft stations when communicating with stations of the maritime mobile service shall use the procedure specified in this Article.

1003 § 2. The use of the Morse code signals specified in the Telegraph Regulations*) shall be obligatory in the maritime and aeronautical mobile services. However, for radiocommunications of a special character, the use of other signals is not precluded.

1004 **Mar** § 3. (1) In order to facilitate radiocommunications, stations of the mobile service, other than the maritime mobile service, shall use the service abbreviations given in Appendix 13.

1005 **Mar** (2) In the maritime mobile service, only the service abbreviations given in Appendix 13A are to be used.

Section II. Preliminary Operations

1006 SUP (Mar)

---

*) *Note by the General Secretariat:* Transferred to the Instructions for the Operation of the International Public Telegram Service.

1007 § 5. (1) Before transmitting, a station shall take precautions to en-
Mar2 sure that its emissions will not interfere with transmissions already in progress; if such interference is likely, the station shall await an appropriate break in the communications in progress. This obligation does not apply to stations where unattended operation is possible through automatic means (see No. **850**) on frequencies dedicated to narrow-band direct-printing.

1008 (2) If, these precautions having been taken, the emissions of the station should, nevertheless, interfere with a transmission already in progress, the following rules shall be applied :

1009 *a)* The mobile station whose emission causes interference to the correspondence of a mobile station with a coast or aeronautical station, shall cease sending at the first request of the coast or aeronautical station.

1010 *b)* The mobile station whose emission causes interference to communications already in progress between mobile stations shall cease sending at the first request of one of the other stations.

1011 *c)* The station which requests this cessation shall indicate the approximate waiting time imposed on the station whose emission it suspends.

Section III. Calls, Reply to Calls and Signals Preparatory to Traffic

Method of Calling

1012 § 6. (1) The call consists of :

— the call sign of the station called, not more than three times ;

— the word DE ;

— the call sign of the calling station, not more than three times.

1013 (2) However, in the bands between 4 000 and 27 500 kHz, when the conditions of establishing contact are difficult, the call signs may be transmitted more than three times, but not more than ten times each. In this case, the call signs of the called and the calling station shall be transmitted in alternate sequence up to a total of twenty call signs altogether (e.g. ABC ABC de WXYZ WXYZ . . . *or* ABC ABC ABC de WXYZ WXYZ WXYZ . . .). This call may be sent three times at intervals of two minutes; thereafter it shall not be repeated until an interval of fifteen minutes has elapsed.

Note by the General Secretariat: *The provisions of the following No.* **1013A Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1013A Mar2 (3) The procedure described in Nos. **1012** and **1013** is not applicable to the maritime mobile service.

1013AA Mar2 (4) When selective calling in accordance with Article 28A, Section I, is used in the maritime mobile service, the procedures prescribed in Nos. **999B, 999C** and **999D** shall be observed.

1013AB Mar2 (5) When digital selective calling is used in the maritime mobile service, the procedures described in No. **999F** shall be observed.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

Method of Calling in the Maritime Mobile Service Bands between 4 000 kHz and 27 500 kHz

1013B Mar § 6A (1) The call consists of:

— the call sign of the station called, not more than three times;

— the word DE;

— the call sign of the calling station, not more than three times;

— the signal — --- — (separation sign);

— the call sign of the station called, once only;

— the letter K.

Mar2 *Method of Calling in the Maritime Mobile Service – Morse Telegraphy*

Note by the General Secretariat: *The provisions of the following No.* **1013B Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1013B Mar2 § 6A. (1) The call consists of:

— the call sign of the station called, not more than twice;

— the word DE;

— the call sign of the calling station, not more than twice;

— the information required by No. **1016A** and, as appropriate, by Nos. **1020A** and **1021**;

— the letter K.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1013C Mar (2) For normal calling, when the requirements of No. **1162** have been met, the call specified in No. **1013B** may be repeated at intervals of not less than one minute for a period not exceeding five minutes and shall not be renewed until after an interval of ten minutes.

Note by the General Secretariat: *The provisions of the following No.* **1013C Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1013C Mar2 (2) For normal calling, when the requirements of No. **1162** have been met, the call specified in No. **1013B** may be transmitted twice at an interval of not less than one minute; thereafter it shall not be repeated until after an interval of three minutes.

Note by the General Secretariat: *These provisions will completely cease to apply as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1013D **Mar** (3) When, however, the conditions of establishing contact are difficult, the call sign may be transmitted not more than ten times in succession. The call shall consist of:

— the call sign of the station called, not more than ten times;

— the word DE;

— the call sign of the calling station, not more than three times;

— the signal — - - - - — (separation sign);

— the call sign of the station called, once only;

— the letter K.

If necessary, this call may be transmitted a second time (see No. **1079**). The call or group of two consecutive calls may be repeated three times at intervals of two minutes; thereafter it shall not be repeated until an interval of ten minutes has elapsed.

1013E **Mar** (4) When calling a coast station which has indicated a watch[1] on the special calling frequencies 4 186·5, 6 279·75, 8 373, 12 559·5, 16 746 and 22 262·5 **kHz**, ship stations do not apply the calling method contained in Nos. **1013B, 1013C** and **1013D.** In these circumstances the call consists of:

— the call sign of the station called, not more than once;

— the word DE;

— the call sign of the calling station, not more than once.

This call may be transmitted three times at intervals of one minute; thereafter it shall not be repeated until after an interval of three minutes.

1013E.1 **Mar*** [1] Administrations whose coast stations keep watch on the special calling frequencies provided for the study of the new calling procedure, shall ensure that watch is also maintained on normal calling bands (see No. **1174 Mar**) which they have indicated in accordance with No. **1168.**

1013D 1013E 1013E.1 SUP (Mar2)

Frequency to be used for Calling and for Preparatory Signals

1014 § 7. (1) For making the call and for transmitting preparatory signals, the calling station shall use a frequency on which the station called keeps watch.

1015 (2) A ship station calling a coast station in any of the frequency bands allocated to the maritime mobile service between 4 000 and 27 500 kHz shall use a frequency in the calling band specially reserved for this purpose.

1015A Mar2 (3) However, when using direct-printing telegraphy or similar systems in any of the frequency bands allocated to the maritime mobile service, the call may, by prior arrangement, be made on a working frequency available for such systems.

Indication of the Frequency to be used for Traffic

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1016 Mar* § 8. (1) The call, as described in Nos. **1012, 1013, 1013B, 1013D** and **1013E**, shall be followed by the service abbreviation indicating the working frequency and, if useful, the class of emission which the calling station proposes to use for the transmission of its traffic.

Note by the General Secretariat: *The provisions of the following No.* **1016 Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1016 Mar2 § 8. (1) Except in the maritime mobile service, the call, as described in Nos. **1012** and **1013**, shall be followed by the service abbreviation indicating the working frequency and, if useful, the class of emission which the calling station proposes to use for the transmission of its traffic.

Note by the General Secretariat: *The provisions of the following No.* **1016A Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1016A Mar2 (1A) In the maritime mobile service, the call, as described in No. **1013B Mar2**, shall contain the service abbreviation indicating the working frequency and, if useful, the class of emission which the calling station proposes to use for the transmission of its traffic.

1017 Mar (2) When, in the aeronautical mobile service, as an exception to this rule, the call is not followed by an indication of the frequency to be used for the traffic, this indicates:

1018 Mar *a)* where the calling station is a land station, that it proposes to use for traffic its normal working frequency shown in the appropriate document;

1019 *b)* where the calling station is a mobile station, that the frequency to be used for traffic is to be chosen by the station called from the frequencies on which the calling station can transmit.

1019A Mar2 (3) When, in the maritime mobile service, the call by a coast station does not contain an indication of the frequency to be used for the traffic, this indicates that the coast station proposes to use for traffic its normal working frequency shown in the List of Coast Stations.

Indication of the Number of Radiotelegrams or of Transmission in Series

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1020 § 9. (1) When the calling station has more than one radiotelegram to transmit to the station called, the above-mentioned preparatory signals shall be followed by the service abbreviation and the figure giving the number of such radiotelegrams.

Mar2 *Indication of Priority, of the Reason for the Call, and of Transmission of Radiotelegrams in Series*

1020 § 9. (1) Except in the maritime mobile service, when the calling sta-
Mar2 tion has more than one radiotelegram to transmit to the station called, the above-mentioned preparatory signals shall be followed by the service abbreviation and the figure giving the number of such radiotelegrams.

Note by the General Secretariat: *The provisions of the following No.* **1020A Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1020A (1A) In the maritime mobile service the calling station shall
Mar2 transmit the service abbreviation after the above-mentioned preparatory signals to indicate a priority message other than a distress, urgency or safety message (see No. **1496A**) and to indicate the reason for the call.

1021 (2) Moreover, when the calling station wishes to send its radiotelegrams in series, it shall indicate this by adding the service abbreviation for requesting the consent of the station called.

Form of Reply to Calls

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1022 § 10. The reply to calls consists of:

— the call sign of the calling station, not more than three times;

— the word DE;

— the call sign of the station called.

1022 § 10. Except in the maritime mobile service, the reply to calls
Mar2 consists of:

– the call sign of the calling station, not more than three times;

– the word DE;

– the call sign of the station called.

Note by the General Secretariat: *The provisions of the following No.* **1022A Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1022A **Mar2** § 10A. In the maritime mobile service the reply to calls consists of:

– the call sign of the calling station, not more than twice;

– the word DE;

– the call sign of the station called, once only.

Frequency for Reply

1023 **Mar** § 11. (1) Except as otherwise provided in these Regulations, for transmitting the reply to calls and to preparatory signals, the station called shall use the frequency on which the calling station keeps watch, unless the calling station has specified a frequency for the reply.

1024 - 1026 **SUP** (Mar)

Agreement on the Frequency to be used for Traffic

1027 § 12. (1) If the station called is in agreement with the calling station, it shall transmit :

1028 *a)* the reply to the call ;

1029 *b)* the service abbreviation indicating that from that moment onwards it will listen on the working frequency announced by the calling station ;

1030 *c)* if necessary, the indications referred to in No. **1038** ;

1031 **Mar2** *d)* if useful, the service abbreviation and figure indicating the strength and/or intelligibility of the signals received (see Appendix 13 for Aeronautical Mobile Service and Appendix 13A for the Maritime Mobile Service).

1032 **Mar2** *e)* the letter K if the station called is ready to receive the traffic of the calling station.

1033 (2) If the station called is not in agreement with the calling station on the working frequency to be used, it shall transmit :

1034 *a)* the reply to the call ;

1035 *b)* the service abbreviation indicating the working frequency to be used by the calling station and, if necessary, the class of emission ;

1036 *c)* if necessary, the indications specified in No. **1038**.

1037 (3) When agreement is reached regarding the working frequency which the calling station shall use for its traffic, the station called shall transmit the letter K after the indications contained in its reply.

Reply to the Request for Transmission by Series

1038 § 13. The station called, in replying to a calling station which has proposed to transmit its radiotelegrams by series (see No. **1021**), shall indicate, by means of the service abbreviation, its acceptance or refusal. In the former case it shall specify, if necessary, the number of radiotelegrams which it is ready to receive in one series.

Difficulties in Reception

1039 § 14 (1) If the station called is unable to accept traffic immediately, it shall reply to the call as indicated in Nos. **1027** to **1032**, but it shall replace the letter K by the signal · — · · · (wait), followed by a number indicating in minutes the probable duration of the waiting time. If the probable duration exceeds ten minutes (five minutes in the case of an aircraft station communicating with a station of the maritime mobile service), the reason for the delay shall be given.

1040 (2) When a station receives a call without being certain that such a call is intended for it, it shall not reply until the call has been repeated and understood. When, on the other hand, a station receives a call which is intended for it but is uncertain of the call sign of the calling station, it shall reply immediately using the service abbreviation in place of the call sign of this latter station.

Section IV. Forwarding (Routing) of Traffic

Traffic Frequency

1041 § 15. (1) As a general rule a station of the mobile service shall transmit its traffic on one of its working frequencies in that band in which the call has been made.

1042 (2) In addition to its normal working frequency, printed in heavy type in the List of Coast Stations, a coast station may use one or more supplementary frequencies in the same band, in accordance with the provisions of Article 32.

1043 (3) The use of frequencies reserved for calling shall be forbidden for traffic, except distress traffic (see Article 32).

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1044 (4) If the transmission of a radiotelegram is to take place on a frequency and/or with a class of emission other than those used for the call, the transmission of the radiotelegram shall be preceded by :

— the call sign of the station called, not more than three times ;

— the word DE ;

— the call sign of the calling station, not more than three times.

Note by the General Secretariat: *The provisions of the following No.* **1044 Mar2** *are to be fully applied as from 1 June 1977 (see Resolutions Nos. Mar2 – 5 and Mar2 – 2).*

1044 Mar2 (4) If the transmission of a radiotelegram is to take place on a frequency and/or with a class of emission other than those used for the call, the transmission of the radiotelegram shall be preceded by:

– the call sign of the station called, not more than twice;

– the word DE;

– the call sign of the calling station, once only.

1045 (5) If the transmission is to be made on the same frequency and with the same class of emission as the call, the transmission of the radiotelegram shall be preceded, if necessary, by :

— the call sign of the station called ;

— the word DE ;

— the call sign of the calling station.

Numbering in Daily Series

1046 § 16. (1) As a general rule, radiotelegrams of all kinds transmitted by ship stations, and radiotelegrams in the public correspondence service transmitted by aircraft stations, shall be numbered in a daily series ; number 1 shall be given to the first radiotelegram sent each day to each separate station.

1047 (2) A series of numbers which has begun in radiotelegraphy should be continued in radiotelephony and vice versa.

Long Radiotelegrams

1048 § 17. (1) In cases where both stations are able to change from sending to receiving without manual switching, the transmitting station may continue to send until completion of the message or until the receiving station breaks in on the transmission with the service abbreviation BK. Before commencing, both stations normally agree on such a method of working by means of the abbreviation QSK.

1049 (2) If this method of working cannot be employed, long radiotelegrams, whether in plain language or in secret language shall, as a general rule, be transmitted in sections, each section containing fifty words in the case of plain language and twenty words or groups if secret language is used.

1050 (3) At the end of each section the signal - - — — - - (?) meaning " Have you received the radiotelegram correctly up to this point ? " shall be transmitted. If the section has been correctly received, the receiving station shall reply by sending the letter K and the transmission of the radiotelegram shall be continued.

Suspension of Traffic

1051 § 18. When a mobile station transmits on a working frequency of a land station and causes interference with the transmission of such land station, it shall suspend working at the first request of the latter.

Section V. End of Traffic and Work

Signal for the End of Transmission

1052 § 19. (1) The transmission of a radiotelegram shall be terminated by the signal - — - — - (end of transmission), followed by the letter K.

1053 (2) In the case of transmission by series, the end of each radiotelegram shall be indicated by the signal - — - — - (end of transmission) and the end of the series by the letter K.

Acknowledgment of Receipt

1054 § 20. (1) The acknowledgment of receipt of a radiotelegram or a series of radiotelegrams shall be given by the receiving station in the following manner :

— the call sign of the sending station ;
— the word DE ;
— the call sign of the receiving station ;
— the letter R followed by the number of the radiotelegram ;

or

— the letter R followed by the number of the last radiotelegram of a series.

1055 (2) The acknowledgment of receipt shall be transmitted by the receiving station on the traffic frequency (see Nos. **1041** and **1042**).

End of Work

1056 § 21. (1) The end of work between two stations shall be indicated by each of them by means of the signal - - - — - — (end of work).

1057 (2) The signal - - - — - — (end of work) shall also be used :

— when the transmission of radiotelegrams of general information, meteorological information and general safety notices is finished, and

— when transmission is ended in long-distance radiocommunication services with deferred acknowledgment of receipt or without acknowledgment of receipt.

Section VI. Control of Working

1058 § 22. The provisions of this section are not applicable in cases of distress, urgency or safety (see No. **1000**).

1059 § 23. In communication between land stations and mobile stations, the mobile station shall comply with the instructions given by the land station, in all questions relating to the order and time of transmission, to the choice of frequency and class of emission, and to the duration and suspension of work.

1060 § 24. In communication between mobile stations, the station called shall control the working in the manner indicated in No. **1059**. However, if a land station finds it necessary to intervene, these stations shall comply with the instructions given by the land station.

Section VII. Tests

1061 § 25. When it is necessary for a mobile station to send signals for testing or adjustment which are liable to interfere with the working of neighbouring coast or aeronautical stations, the consent of these stations shall be obtained before such signals are sent.

1062 § 26. When it is necessary for a station in the mobile service to make test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, such signals shall not be continued for more than ten seconds and shall be composed of a series of VVV followed by the call sign of the station emitting the test signals.

Mar2

ARTICLE 29A

Procedures for Narrow-Band Direct-Printing Telegraphy in the Maritime Mobile Service[1]

Section I. General

1062AA § 1. Stations using narrow-band direct-printing telegraphy shall Mar2 comply with the provisions of Article 28B.

1062AB § 2. The procedures specified in the present Article should be Mar2 employed, except in cases of distress, urgency or safety.

1062AC § 3.(1) The traffic may be exchanged with or without the use of Mar2 error-correcting equipment.

1062AD (2) For communication between two stations the ARQ mode Mar2 should be used when available.

1062AE (3) For transmissions from one coast or ship station to two or Mar2 more other stations the forward-error-correcting mode should be used when available.

1062AF § 4. The services provided by each station open to public cor- Mar2 respondence shall be indicated in the List of Coast Stations and in the List of Ship Stations, together with information on charging.

1062AG § 5. Where transmission over the general network of telecom- Mar2 munication channels is involved, the provisions of the Telegraph Regulations and the relevant C.C.I.T.T. Recommendations should be taken into account.

---

[1] Reference may also be made to the relevant C.C.I.R. Recommendations.

Section II. Procedures for Manual Operation

A. Ship to Coast Station

1062AH § 6.(1) The operator of the ship station establishes communication
Mar2 with the coast station by A1 Morse telegraphy, telephony or by other means using normal calling procedures. The operator then requests direct-printing communication, exchanges information regarding the frequencies to be used and, when applicable, gives the ship station direct-printing selective call number assigned in accordance with Appendix 20B.

1062AI (2) The operator of the coast station then establishes direct-
Mar2 printing communication on the frequency agreed using the appropriate identification of the ship.

1062AJ § 7. (1) Alternatively the operator of the ship station, using the
Mar2 direct-printing equipment, calls the coast station on a predetermined coast station receive frequency using the identification of the coast station assigned in accordance with Appendix 20B.

1062AK (2) The operator of the coast station then establishes direct-
Mar2 printing communication on the corresponding coast station transmit frequency.

B. Coast Station to Ship

1062AL § 8.(1) The operator of the coast station calls the ship station by
Mar2 A1 Morse telegraphy, telephony or other means using normal calling procedures.

1062AM (2) The operator of the ship station then applies the procedures
Mar2 of No. **1062AH** or No. **1062AJ**.

C. Intership

1062AN § 9.(1) The operator of the calling ship station establishes com-
Mar2 munication with the called ship station by A1 Morse telegraphy, telephony or by other means using normal calling procedures. The operator then requests direct-printing communication, exchanges information regarding the frequencies to be used and, when applicable, gives the direct-printing selective call number of the calling ship station assigned in accordance with Appendix 20B.

1062AO (2) The operator of the called ship station then establishes
Mar2 direct-printing communication on the frequency agreed using the appropriate identification of the calling ship.

Section III. Procedures for Automatic Operation

A. Ship to Coast Station

1062AP § 10. (1) The ship station calls the coast station on a predetermined
Mar2 coast station receive frequency using the direct-printing equipment and the identification signal of the coast station assigned in accordance with Appendix 20B.

1062AQ (2) The coast station's direct-printing equipment detects the
Mar2 call and the coast station responds directly on the corresponding coast station transmit frequency either automatically or under manual control.

B. Coast Station to Ship

1062AR § 11. (1) The coast station calls the ship on a predetermined coast
Mar2 station transmit frequency using the direct-printing equipment and the ship station direct-printing selective call number assigned in accordance with Appendix 20B.

1062AS Mar2 (2) The ship station's direct-printing equipment tuned to receive the predetermined coast station transmit frequency detects the call, whereupon the reply is given in one of the following ways:

1062AT Mar2 *a)* the ship station replies either immediately on the corresponding coast station receive frequency or at a later stage using the procedure of No. **1062AJ**; or

1062AU Mar2 *b)* the ship station's transmitter is automatically started on the corresponding coast station receive frequency and the direct-printing equipment responds by sending appropriate signals to indicate readiness to receive traffic automatically.

Section IV. Message Format

1062AV Mar2 § 12. Where the appropriate facilities are provided by the coast station, traffic may be exchanged with the telex network:

1062AW Mar2 *a)* in a conversational mode where the stations concerned are connected directly either automatically or under manual control; or

1062AX Mar2 *b)* in a store-and-forward mode where traffic is stored at the coast station until the circuit to the called station can be set up, either automatically or under manual control.

1062AY Mar2 § 13. In the shore-to-ship direction the message format should conform to normal telex network practice.

1062AZ Mar2 § 14. In the ship-to-shore direction the message format should conform to normal telex network practice with the addition of a preamble as follows:

1062BA Mar2 *a)* in the conversational mode the preamble shall consist of the characters DIRTLXyz+ transmitted in sequence and preceded by at least one carriage return and a line feed, where "y" is the telex destination code in accordance with relevant C.C.I.T.T. Recommendations, "z" is the land subscriber's telex number and "+" indicates end of sequence;

1062BB Mar2 *b)* in the store-and-forward mode the preamble shall consist of the characters TLXyz+ transmitted in sequence preceded by at least one carriage return and a line feed, where "y" is the telex destination code in accordance with relevant C.C.I.T.T. Recommendations, "z" is the land subscriber's telex number and "+" indicates end of sequence.

Section V. Procedures for Operation in the Forward-Error-Correcting Mode

1062BC Mar2 § 15. Messages in the forward-error-correcting mode may be sent, by prior arrangement, from a coast station or a ship station to one or more ship stations in the following cases:

1062BD Mar2 *a)* where a receiving ship station is not able to use its transmitter or is not permitted to do so;

1062BE Mar2 *b)* where the message is intended for more than one ship;

1062BF Mar2 *c)* where unattended reception of a message in the forward-error-correcting mode is necessary and automatic acknowledgement is not required.

1062BG Mar2 § 16. All messages in the forward-error-correcting mode should be preceded by at least one carriage return and a line feed signal.

1062BH Mar2 § 17. Ship stations may acknowledge the reception of messages in the forward-error-correcting mode by A1 Morse telegraphy, telephony or by other means.

ARTICLE 30

Calls by Radiotelegraphy

1063 § 1. (1) The provisions of this Article are not applicable to the aeronautical mobile service when special agreements exist between the governments concerned.

1064 (2) Aircraft stations when communicating with stations of the maritime mobile service shall use the procedure specified in this Article.

1064A **Mar2** (3) The provisions of this Article are not applicable to the maritime mobile-satellite service.

1065 § 2. (1) As a general rule, it rests with the mobile station to establish communication with the land station. For this purpose, the 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 mobile station can be heard by the land station.

1066 (2) However, a land station having traffic for a mobile station may call this station if it has reason to believe that the mobile station is keeping watch and is within the service area of the land station.

1067 § 3. (1) In addition, each coast station shall, so far as practicable, transmit its calls in the form of " traffic lists " consisting of the call signs in alphabetical order of all mobile stations for which it has traffic on hand. These calls are made at specified times fixed by agreement between the administrations concerned and at intervals of at least two hours and not more than four hours during the working hours of the coast station.

1067A **Mar2** (1A) In the bands between 4 000 and 27 500 kHz, however, traffic lists may be transmitted at intervals of not less than one hour.

1068 (2) Continuous or frequently repeated emissions of its call sign or of the enquiry signal CQ by a coast station should be avoided (see No. **693**).

1068A **Mar** (2A) However, in the bands between 4 000 and 27 500 kHz, a coast station may transmit its call sign at intervals, using Type 1 transmission, to enable mobile stations to select the calling band with the most favourable propagation characteristics for reliable communication (see No. **1162**).

1069 **Mar** (3) Coast stations shall transmit their traffic lists on their normal working frequencies in the appropriate bands. This transmission shall be preceded by a general call to all stations (CQ).

1070 **Mar** (4) The call to all stations announcing the traffic list may be sent on a calling frequency in the following form:

— CQ, not more than three times;

— the word DE;

— the call sign of the calling station, not more than three times;

— QSW followed by the indication of the working frequency or frequencies on which the traffic list is about to be sent.

In no case may this preamble be repeated.

1071 **Mar** (5) The provisions of No. **1070**:

1071A **Mar** *a)* are obligatory when 500 kHz is used;

1072 **Mar** *b)* do not apply when frequencies in the bands between 4 000 and 27 500 kHz are used.

1073 (6) The hours at which coast stations transmit their traffic lists and the frequencies and classes of emission which they use for this purpose shall be stated in the List of Coast Stations.

1074 (7) Mobile stations should, as far as possible, listen to the traffic lists transmitted by coast stations. On hearing their call sign in such a list they shall reply as soon as they can do so.

1075 (8) When the traffic cannot be sent immediately, the coast station shall inform each mobile station concerned of the probable time at which working can begin, and also, if necessary, the frequency and class of emission which will be used.

1076 § 4. When a land station receives calls from several mobile
Mar2* stations at practically the same time, it decides the order in which these stations may transmit their traffic. Its decision shall be based on the priority (see Nos. **1496** and **1496A**) of the radiotelegrams or radiotelephone calls that mobile stations have on hand and on the need for allowing each calling station to clear the greatest possible number of communications.

1077 § 5. (1) When a station called does not reply to a call sent three times at intervals of two minutes, the calling shall cease and shall not be renewed until after an interval of fifteen minutes.

1078 (2) However, in the case of a communication between a station of the maritime mobile service and an aircraft station, calling may be renewed after an interval of five minutes.

1079 (3) Before renewing the call, the calling station shall ascertain that the station called is not in communication with another station.

1080 (4) If there is no reason to believe that harmful interference will be caused to other communications in progress, the provisions of Nos. **1077** and **1078** are not applicable. In such cases the call, sent three times at intervals of two minutes, may be repeated after an interval of less than fifteen minutes but not less than three minutes.

1081 § 6. Mobile stations shall not radiate a carrier wave between calls.

1082 § 7. When the name and address of the administration or private operating agency controlling a mobile station are not given in the appropriate list of stations or are no longer in agreement with the particulars given therein, it is the duty of the mobile station to furnish as a matter of regular procedure, to the land station to which it transmits traffic, all the necessary information in this respect.

1083 § 8. (1) The land station may, by means of the abbreviation TR, ask the mobile station to furnish it with the following information :

1084 *a)* position and, whenever possible, course and speed ;

1085 *b)* next port of call.

1086 **Mar** (2) The information referred to in Nos. **1083** to **1085**, preceded by the abbreviation TR, should be furnished by mobile stations, whenever this seems appropriate, without prior request from the coast station. The provision of this information is authorized only by the master or person responsible for the ship, aircraft or other vehicle carrying the mobile station.

1087 SUP (**Mar**)

ARTICLE 31

Radiotelegraphic Call to Several Stations

1087A § 0. Mar2 The provisions of this Article are not applicable to the maritime mobile-satellite service.

1088 § 1. Two types of calling signal "to all stations" are recognized :

1089 *a)* call CQ followed by the letter K (see Nos. **1091** and **1092**) ;

1090 *b)* call CQ not followed by the letter K (see No. **1093**).

1091 § 2. Stations desiring to enter into communication with stations of the mobile service without, however, knowing the names of any such stations within their service area may use the enquiry signal CQ in place of the call sign of the station called in the calling formula, the call being followed by the letter K (general call to all stations in the mobile service with request for reply).

1092 § 3. In the maritime mobile service, in regions where traffic is congested, the use of the call CQ followed by the letter K is forbidden. As an exception it may be used with signals denoting urgency.

1093 § 4. The call CQ not followed by the letter K (general call to all stations without request for reply) is used before the transmission of information of any kind intended to be read or used by anyone who can intercept it.

1094 § 5. The call CP followed by two or more call signs or by a code word (call to certain receiving stations without request for reply) is used only for the transmission of information of any nature intended to be read or used by the persons authorized.

ARTICLE 32

Use of Frequencies for Radiotelegraphy in the Maritime Mobile and Aeronautical Mobile Services

Section I. General

1094A § 1 Whenever the class of emission A2 or A2H is mentioned
Mar in the present Regulations for use in the maritime mobile service, the type of transmission shall, except for selective calling purposes, be telegraphy by on-off keying of the modulated emission, to the exclusion of on-off keying of the modulating audio frequencies only.

1095-1105 SUP (Mar)

Section II. Bands between 405 and 535 kHz

1106 § 5. The provisions of this Section are also applicable to aircraft stations when communicating with stations of the maritime mobile service.

A. Distress

1107 § 6. (1) The frequency 500 kHz is the international distress frequency for radiotelegraphy ; it shall be used for this purpose by ship, aircraft and survival craft stations using frequencies in the bands between 405 and 535 kHz when requesting assistance from the maritime services. It shall be used for the distress call and distress traffic, for the urgency signal and urgency messages, and for the safety signal and, outside regions of heavy traffic, short safety messages. When practicable, safety messages shall be transmitted on the working frequency after a preliminary announcement on 500 kHz (see also No. **1122**).

1108 (2) However, ship and aircraft stations which cannot transmit on 500 kHz should use any other available frequency on which attention might be attracted.

1109 (3) In addition, 500 kHz may be used only :

1110 *a)* for call and reply (see Nos. **1114** and **1116**) ;

1111 Mar *b)* by coast stations to announce the transmission of their traffic lists under the conditions provided for in Nos. **1070, 1071** and **1071A.**

1112 (4) Apart from the transmissions authorized on 500 kHz, and taking account of No. **1115**, all transmissions on the frequencies included between 490 and 510 kHz are forbidden.

1113 Mar (5) In order to facilitate the reception of distress calls, other transmissions on the frequency 500 kHz shall be reduced to a minimum, and in any case shall not exceed one minute.

1113A Mar (6) Before transmitting on 500 kHz, stations in the mobile service must listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see No. **1007**).

1113B Mar (7) The provisions of No. **1113A** do not apply to stations in distress.

B. Call and Reply

1114 Mar2 § 7. (1) The general calling frequency which, except as provided under No. **1015A**, shall be used by any ship station or coast station engaged in radiotelegraphy in the authorized bands between 405 and 535 kHz, and by aircraft desiring to enter into communication with a station of the maritime mobile service using frequencies in these bands, is the frequency 500 kHz.

1115 (2) However, in order to reduce interference in regions of heavy traffic, administrations may consider the requirements of No. **1114** as satisfied when the calling frequencies assigned to coast

stations open to public correspondence are not separated by more than 3 kHz from the general calling frequency 500 kHz.

1115A Mar § 7A.(1) A ship station calling a coast station shall, wherever possible and particularly in regions of heavy traffic, indicate to the coast station that it is ready to receive on the working frequency of that station.

1115B Mar (2) The ship station should make sure beforehand that this frequency is not already being used by the coast station.

1116 Mar § 8. (1) The frequency for replying to a call sent on the general calling frequency (see No. **1114**) shall be as follows:

— either 500 kHz,

— or the frequency specified by the calling station (see Nos. **1023** and **1115A**).

1117 Mar (2) In regions of heavy traffic, coast stations may answer calls made by ship stations of their own nationality in accordance with special arrangements made by the administration concerned (see No. **1023**).

1117A Mar2 § 8A. Selective calling under the provisions of Article 28A may be carried out on the frequency of 500 kHz in the shore-to-ship, ship-to-shore and ship-to-ship directions.

C. Traffic

1118 § 9. (1) Coast stations working in the authorized bands between 405 and 535 kHz shall be able to use at least one frequency in addition to 500 kHz. One of these additional frequencies, which is printed in heavy type in the List of Coast Stations, is the normal working frequency of the station.

1119 (2) In addition to their normal working frequency, coast stations may use, in the authorized bands, additional frequencies which are shown in ordinary type in the List of Coast Stations. The band 405 to 415 kHz, however, is assigned to radio direction-finding; it may not be used by the mobile service except on the conditions fixed by Chapter II.

1120 (3) The working frequencies of coast stations shall be chosen so as to avoid interference with neighbouring stations.

1121 **Mar** (4) In regions of heavy traffic, coast stations and ship stations should use class A1 emission on their working frequencies.

1122 **Mar** § 10. As an exception to the provisions of Nos. **1107, 1109, 1110** and **1111** and on condition that signals of distress, urgency and safety, and calls and replies are not interfered with, 500 kHz may be used outside regions of heavy traffic for direction-finding but with discretion.

1123 **Mar** § 11. (1) Ship stations operating in the authorized bands between 405 and 535 kHz shall use working frequencies chosen from the following: 425, 454, 468, 480 and 512 kHz, except as permitted by No. **418.**

1124 **Mar** (2) Coast stations are prohibited from transmitting on the working frequencies designated for the use of ship stations on a world-wide basis.

1125 **Mar** (3) The frequency 512 kHz may be used by ship stations as a supplementary calling frequency when 500 kHz is being used for distress.

1126 (4) During these periods coast stations may :

1127 *a)* use 512 kHz as a supplementary frequency for call and reply, *or*

1128 *b)* make use of other arrangements for call and reply which shall have been specified in the List of Coast Stations.

1129 (5) When 500 kHz is in use for distress, ship stations shall not use 512 kHz as a working frequency in those areas where it is in use as a supplementary calling frequency.

1122.1 SUP (**Mar**)

D. Watch

1130 § 12. (1) In order to increase the safety of life at sea and over the sea, all stations of the maritime mobile service normally keeping watch on frequencies in the authorized bands between 405 and 535 kHz shall, during their hours of service, take the necessary measures to ensure watch on the international distress frequency 500 kHz for three minutes twice an hour beginning at *x* h. 15 and *x* h. 45 Greenwich Mean Time (G.M.T.) by an operator using headphones or a loud-speaker.

1131 (2) During the periods mentioned above, except for the emissions provided for in Article 36 :

1132 *a)* transmissions shall cease in the bands between 485 and 515 kHz ;

1133 *b)* outside these bands, transmissions of stations of the mobile service may continue ; stations of the maritime mobile service may listen to these transmissions on the express condition that they first ensure watch on the distress frequency as required by No. **1130**.

1134 **Mar** § 13. (1) Stations of the maritime mobile service open to public correspondence and using frequencies in the authorized bands between 405 and 535 kHz shall, during their hours of service, remain on watch on 500 kHz. This watch is obligatory only for class A2 and A2H emissions.

1135 (2) These stations, while observing the requirements of No. **1130**, are authorized to relinquish this watch only when they are engaged in communications on other frequencies.

1136 (3) When they are engaged in such communications :

— Ship stations may maintain this watch on 500 kHz by means of an operator using headphones or a loud-speaker or by some appropriate means such as an automatic alarm receiver.

— Coast stations may maintain this watch on 500 kHz by means of an operator using headphones or a loudspeaker; in the latter case an indication may be inserted in the List of Coast Stations.

Section III. Bands between 1 605 and 4 000 kHz

1137 SUP (Mar)

1138 **Mar** § 15. In Region 2, the frequencies in the band 2 068·5 to 2 078·5 kHz are assigned to ship stations using wide-band telegraphy, facsimile and special transmission systems. The provisions of No. **1146** are applicable.

Section IV. Additional Provisions Applicable in Region 3 Areas North of the Equator Only

1139 **Mar** § 16. (1) The band 2 089·5-2 092·5 kHz is the calling and safety band for the maritime mobile service of radiotelegraphy in those parts of the bands between 1 605 and 2 850 kHz in which radiotelegraphy is authorized.

1140 **Mar** (2) Frequencies in the band 2 089·5-2 092·5 kHz may be used for calls, replies and safety. These frequencies may also be used for messages preceded by the urgency or safety signals.

1141 **Mar** (3) Each coast station using the calling band 2 089·5-2 092·5 kHz shall, as far as possible, maintain watch on this band during its working hours.

1142 **Mar** (4) Coast stations which use frequencies in the band 2 089·5-2 092·5 kHz for calling shall be able to use at least one other frequency in those parts of the bands between 1 605 and 2 850 kHz in which the maritime mobile service of radiotelegraphy is authorized.

1143 (5) One of these frequencies is printed in heavy type in the List of Coast Stations to indicate that it is the normal working frequency of the station. Supplementary frequencies, if any, are shown in ordinary type.

1144 (6) Working frequencies of coast stations shall be chosen in such a manner as to avoid interference with other stations.

Section V. Bands between 4 000 and 27 500 kHz

A. General Provisions

1145 **Mar2** § 17. (1) Mobile radiotelegraph stations equipped to operate in the bands specified in Nos. **1174** and **1196** shall employ only class A1 Morse telegraphy emissions at speeds not exceeding 40 bauds. Survival craft stations may use class A2 or A2H emissions in these bands (see Nos. **994** and **997**).

1146 **Mar2** (2) Mobile stations equipped for wide-band telegraphy, facsimile and special transmission systems may, in the frequency bands reserved for such use, employ any class of emission provided that such emissions can be contained within the wide-band channels indicated in Appendix 15. However, A1 Morse telegraphy and telephony are excluded, except for circuit alignment purposes.

1147 **Mar** (3) Except as provided for in No. **1352A.1**, coast radiotelegraph stations operating in the maritime mobile exclusive bands between 4 000 and 27 500 kHz shall not use Type 2 emissions. (See No. **1094A**.)

1148 **Mar** (4) Coast radiotelegraph stations employing single-channel class A1 or F1 emissions and operating in the maritime mobile exclusive bands between 4 000 and 27 500 kHz shall at no time use a mean power in excess of the following:

Band	*Maximum mean power*
4 MHz	5 kW
6 MHz	5 kW
8 MHz	10 kW
12 MHz	15 kW
16 MHz	15 kW
22 MHz	15 kW

1148A (5) Coast radiotelegraph stations employing multichannel tele-
Mar graph emissions and operating in the maritime mobile exclusive bands between 4 000 and 27 500 kHz shall at no time use a mean power in excess of 2·5 kW per 500 Hz bandwidth.

1149 § 18. Nos. **451** to **453** and the corresponding columns of Appen-
Mar2 dix 15 show those parts of the bands between 4 000 and 27 500 kHz exclusively allocated to the maritime mobile service which are to be used by coast stations and ship stations for radiotelegraphy.

1150-1154 SUP **(Mar2)**

1155 SUP **(Mar)**

1156 SUP (Mar2)

1157 SUP **(Mar)**

1158 SUP **(Mar2)**

1159 § 21. For the exchange of radiotelegraph communications with stations of the maritime mobile service, aircraft stations may utilize the frequencies of the bands allocated to that service for radiotelegraphy between 4 000 and 27 500 kHz. When using these frequencies, aircraft stations shall comply with the provisions of this Section.

B. Call and Reply

1160 § 22. (1) In order to establish communication with a station in the
Mar2 maritime mobile service, each ship and aircraft station shall use an appropriate calling frequency in one of the bands listed in No. **1174**.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1161 (2) Frequencies in the calling bands are assigned to each mobile station in accordance with the provisions of Nos. **1175** to **1179** inclusive.

Note by the General Secretariat: *The provisions of the following No.* **1161 Mar2** *may be applied as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1161 (2) Frequencies in the A1 Morse telegraphy calling bands are
Mar2 assigned to each mobile station in accordance with the provisions of Nos. **1176A** to **1179**.

1162 § 23. In order to reduce interference, mobile 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, a mobile 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.

Note by the General Secretariat: *The provisions of the following No.* **1162A Mar2** *may be applied as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1162A § 23A. In order to reduce interference on the common calling
Mar2 channels, they shall be used only when a ship cannot use a calling frequency within the group indicated as a coast station receiving channel of the station with which it desires to communicate or when the coast station has indicated that it is keeping watch only on the common calling channels.

1163 § 24. (1) The calling frequency to be used by a coast station, in each of the bands for which it is equipped, is its normal working frequency as shown in heavy type in the List of Coast Stations (see No. **1173**).

1164 (2) So far as is practicable, a coast station shall transmit its calls at specified times in the form of traffic lists on the frequency or frequencies indicated in the List of Coast Stations (see Nos. **1067** and **1069**).

Note by the General Secretariat: *The bands mentioned in the following No.* **1164A Mar2** *may be used only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1164A § 24A.(1) The frequencies assignable to coast stations using the
Mar2 bands between 4 000 and 27 500 kHz for digital selective calling are included within the following band limits (see also No. **1238D**):

4 356·75	4 357·4	kHz
6 505·75	6 506·4	kHz
8 718·25	8 718·9	kHz
13 099·75	13 100·8	kHz
17 231·75	17 232·9	kHz
22 594·75	22 596	kHz

1164B (2) The exclusive digital selective calling frequencies within the
Mar2 bands indicated in No. **1164A** (see No. **1238D**) may be assigned to any coast station for use in accordance with No. **999F**.

1165 § 25. Unless the calling station specifies otherwise, the frequency for reply to a call made in any maritime mobile band is as follows :

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1166 *a)* for a mobile station, its assigned calling frequency in the same band as that used by the calling station ;

Note by the General Secretariat: *The provisions of the following No.* **1166 Mar2** *may be applied as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1166 Mar2 *a)* for a mobile station, one of its assigned calling frequencies in the same band, with due regard to No. **1162A.**

1167 *b)* for a coast station, its normal working frequency in the same band as that used by the calling station.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1168 § 26. When notifying the transmitting frequencies of a coast station, administrations shall indicate on which of the ship calling bands the station keeps watch and, as far as possible, the approximate hours of watchkeeping in Greenwich Mean Time (G.M.T.). This information shall be published in the List of Coast Stations.

Note by the General Secretariat: *The provisions of the following Nos.* **1168 Mar2, 1168A Mar2** *and* **1168B Mar2** *may begin to be applied as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1168 Mar2 § 26. Administrations shall indicate, in respect of each coast station, in which of the ship calling bands and on which coast station receiving channels that coast station keeps watch and, as far as possible, the approximate hours of watchkeeping in Greenwich Mean Time (G.M.T.). This information shall be published in the List of Coast Stations.

1168A Mar2 § 26A. Exceptionally, a coast station may indicate that it is keeping watch on calling frequencies other than those specified as its own receiving frequencies.

1168B § 26B. In order to reduce interference on calling frequencies, a
Mar2 coast station shall take adequate steps to ensure, under normal conditions, the prompt receipt of calls (see No. **1013B**).

C. Traffic

1169 § 27. (1) A mobile station, after establishing communication on a calling frequency (see No. **1160**) shall change to a working frequency for the transmission of traffic. The use of frequencies in the calling bands for any purpose other than calling shall be prohibited.

1170 (2) Working frequencies shall be assigned to mobile stations in accordance with the provisions of Nos. **1180** to **1200** inclusive.

1171 § 28. (1) A coast station shall transmit its traffic on its normal working frequency or on other working frequencies assigned to it.

1172 (2) Countries which share a channel in one of the exclusive maritime mobile bands between 4 000 and 27 500 kHz should give special consideration to the countries among them which have no other channel in the same band and should endeavour to use their primary channel to the greatest extent possible, in order to permit the latter countries to satisfy their minimum communication requirements.

Note by the General Secretariat: *As from 2 June 1976, the bands indicated in No.* **1173A Mar2** *will be used simultaneously with those mentioned in No.* **1173 Mar**; *they will replace the latter as from 1 August 1976 (see Resolution No. Mar2 – 2).*

1173
Mar (3) Working frequencies assignable to coast stations using the bands between 4 000 and 27 500 kHz are included within the following band limits:

4 231	-	4 361	kHz
6 345·5	-	6 514	kHz
8 459·5	-	8 728·5	kHz
12 689	-	13 107·5	kHz
16 917·5	-	17 255	kHz
22 374	-	22 624·5	kHz

(See also No. **453A.**)

1173 (3) Working frequencies assignable to coast stations using the
Mar2 bands between 4 000 and 27 500 kHz are included within the following band limits:

1173A *a)* for wide-band and A1 Morse telegraphy, facsimile, special
Mar2 and data transmission systems and direct-printing telegraph systems:

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

(see also No. **453A**)

Note by the General Secretariat: *The bands mentioned in the following No.* **1173B Mar2** *may be used only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1173B *b)* for narrow-band direct-printing telegraph and data
Mar2 transmission systems, at speeds not exceeding 100 bauds (frequencies paired with those in No. **451B**):

4 349·4	- 4 356·75	kHz
6 493·9	- 6 505·75	kHz
8 704·4	- 8 718·25	kHz
13 070·8	- 13 099·75	kHz
17 196·9	- 17 231·75	kHz
22 561	- 22 594·75	kHz

D. Assignment of Frequencies to Mobile Stations

1. Calling Frequencies of Ship Stations

Note by the General Secretariat: *As from 2 June 1976, the bands indicated in No.* **1174 Mar2** *will be used simultaneously with those mentioned in No.* **1174 Mar**; *they will replace the latter as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1174 Mar § 29. (1) The calling frequencies assignable to ship stations are included within the following band limits:

4 178	-	4 187	kHz
6 267	-	6 280·5	kHz
8 356	-	8 374	kHz
12 534	-	12 561	kHz
16 712	-	16 748	kHz
22 222·5	-	22 267·5	kHz
25 070	-	25 082·5	kHz

1174 Mar2 § 29. The frequencies assignable to ship stations for A1 Morse telegraphy calling are included within the following band limits:

4 179·75	-	4 187·2	kHz
6 269·75	-	6 280·8	kHz
8 359·75	-	8 374·4	kHz
12 539·6	-	12 561·6	kHz
16 719·8	-	16 748·8	kHz
22 227	-	22 247	kHz
25 070	-	25 076	kHz

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolution No. Mar2 - 2).*

1175 Mar (2) In the band 4 178 to 4 187 kHz, the calling frequencies are spaced 0·5 kHz apart. The extreme frequencies assignable are 4 178·5 and 4 186·5 kHz as indicated in Appendix 15.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1176 Mar (3) In each of the other maritime mobile service bands between 4 000 and 18 000 kHz, the calling frequencies shall be in harmonic relationship with those in the band 4 178 to 4 187 kHz. In the bands 22 222·5 to 22 267·5 kHz and 25 070 to 25 082·5 kHz the spacing of calling frequencies is 2·5 kHz and 1·5 kHz respectively. The extreme frequencies assignable are 22 225 and 22 265 kHz, and 25 073·5 and 25 081 kHz respectively.

1175 - 1176 SUP **(Mar2)**

Note by the General Secretariat: *The provisions of the following Nos.* **1176A Mar2, 1176B Mar2** *and* **1176C Mar2** *may be applied as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1176A Mar2* Each calling band between 4 000 and 23 000 kHz indicated in No. **1174 Mar2** is divided into four groups of channels and two common channels. The 25 MHz band is divided into three channels of which one is a common channel (see Appendix 15C).

1176B Mar2 § 29B. (1) Coast stations shall, when providing international service as published in the List of Coast Stations, keep watch on the common calling channels in each band throughout their hours of service in the bands concerned, and on the appropriate group channel or channels during busy periods. The times during which watch will be kept on the group channel or channels shall be published for each country in the List of Coast Stations.

1176C Mar2 (2) If necessary, an indication of the channels on which watch is kept may be included in the coast station transmissions.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1177 Mar § 30. The administration to which a ship station is subject shall assign to it a series of calling frequencies including one frequency in each of the bands in which the station is equipped to transmit. Administrations may, however, assign a supplementary series of calling frequencies for use in the event of interference. In the bands

between 4 000 and 18 000 kHz, the frequencies assigned to each ship station shall be in harmonic relationship. Each administration shall take the necessary steps to assign such harmonic series of calling frequencies to ships in accordance with an orderly system of rotation so as to distribute these frequencies uniformly throughout the calling bands. The same system of uniform distribution shall be applied in the assignment of calling frequencies in the bands 22 222·5 to 22 267·5 kHz, and 25 070 to 25 082·5 kHz. Administrations may also assign to their ship stations the special calling frequencies appearing in the footnote indicated by *d)* in Appendix 15.

Note by the General Secretariat: *The provisions of the following No.* **1177 Mar2** *may be applied as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1177 Mar2 § 30. In the bands between 4 000 and 23 000 kHz, the administration to which a ship station is subject shall assign to it at least two calling frequencies in each band in which the station is equipped to transmit.[1] One of the calling frequencies in each band shall be within one of the common coast station receiving channels contained in Appendix 15C; another in each band shall be selected from within the other channels in Appendix 15C, taking account of the receiving channel or channels of the coast station with which the ship station most frequently communicates. In the 25 MHz band, administrations shall assign to ship stations under their control a frequency within the common channel. Another calling frequency in this band shall be selected from within Channel A or B of Appendix 15C, taking account of the receiving channel of the coast station with which the ship station most frequently communicates.

1177.1 Mar2 [1] Up to 1 January 1980 ship stations whose transmitters are capable of using only three frequencies in each of the bands between 4 000 and 23 000 kHz may, exceptionally, be assigned a single calling frequency in each of the frequency bands in which they can transmit. This exception may be made only if the administration concerned considers that the assignment of a minimum of two working frequencies in each band is necessary for the ship's service.

Note by the General Secretariat: *The provisions of the following Nos.* **1177A Mar2** *to* **1177E Mar2** *may begin to be applied as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1177A § 30A. A ship station should, wherever possible, be assigned
Mar2 additional calling frequencies (see No. **1162A**).

1177B § 30B. If it is not intended to maintain watch on all the receiving
Mar2 channels within a group, the administration concerned, in order to ensure an even distribution of calls, shall determine the channel or channels on which watch will be maintained but only after coordination as far as possible with administrations sharing the same group (see Resolution No. Mar2 – 5).

1177C § 30C. Administrations which assign to their ships frequencies in
Mar2 two or more calling channels within their group shall take the necessary steps to distribute such assignments uniformly throughout the channels taken into use.

1177D § 30D. In order to ensure an even distribution of calls on the com-
Mar2 mon calling channels, administrations should, as far as practicable, assign frequencies in each of the two channels to an equal number of their ships.

1177E § 30E. Administrations shall ensure, as far as possible, that ship
Mar2 stations under their jurisdiction are capable of keeping their transmission within the limits of the assigned channels (see Appendix 3).

1178 SUP **(Mar2)**

1179 § 31. The frequency 8 364 kHz is designated for use by survival
Mar2 craft stations if they are equipped to transmit on frequencies in the bands between 4 000 and 27 500 kHz and if they desire to establish communications relating to search and rescue operations with stations of the maritime and aeronautical mobile services.

Note by the General Secretariat: *The bands indicated in the following No.* **1179A Mar2** *may be used only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1179A Mar2 § 31A. (1) The frequencies assignable for digital selective calling to ship stations using the bands between 4 000 and 27 500 kHz are included within the following band limits:

4 187·2	- 4 188	kHz
6 280·8	- 6 282	kHz
8 374·4	- 8 376	kHz
12 561·6	- 12 564	kHz
16 748·8	- 16 752	kHz
22 247	- 22 250	kHz

Note by the General Secretariat: *The provisions of the following No.* **1179B Mar2** *may begin to be applied only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1179B Mar2 (2) The exclusive digital selective calling frequencies within the bands indicated in No. **1179A** (see No. **1238C**) may be assigned to any ship station for use in accordance with No. **999F**.

2. Working Frequencies of Mobile Stations

a) Channel Spacing and Assignment of Frequencies

1180 Mar2 § 32. In all bands the working frequencies for ship stations equipped to use wide-band telegraphy, facsimile and special transmission systems are spaced 4 kHz apart. The frequencies assignable are shown in Appendix 15.

1180A Mar § 32A. In all bands, the frequencies assignable for oceanographic data transmissions are spaced 0·3 kHz apart. The frequencies assignable are shown in Appendix 15.

Note by the General Secretariat: *This provision will completely cease to apply as from 30 June 1977 (see Resolution No. Mar2 – 2).*

1180B § 32B. The working frequencies for ship stations using narrow-band direct-printing telegraph and data transmission systems are spaced 0·5 kHz apart in the 4, 6 and 8 MHz bands and 1·0 kHz apart in the 12, 16 and 22 MHz bands. The frequencies assignable are shown in Appendix 15.
Mar

Note by the General Secretariat: *The provisions of the following No.* **1180B Mar2** *may begin to be applied only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1180B § 32B. In all bands, the working frequencies for ship stations using narrow-band direct-printing telegraph and data transmission systems, at speeds not exceeding 100 bauds, including those paired with the working frequencies assignable to coast stations (see No. **452C**) are spaced 0·5 kHz apart. The frequencies assignable to ship stations which are paired with those used by the coast stations are shown in Appendix 15A (see also No. **1191D**). The frequencies assignable to ship stations which are not paired with those used by the coast stations are shown in Appendix 15B (see also No. **1191F**).
Mar2

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1181 § 33. (1) The working frequencies for high traffic ships in the band 4 172·25 to 4 178 kHz are spaced 0·5 kHz apart, the extreme frequencies assignable being 4 172·5 and 4 177·5 kHz as shown in Appendix 15.
Mar

1181 SUP **(Mar2)**

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1182 (2) In the band 4 187 to 4 231 kHz, the working frequencies for low traffic ships are spaced 0·5 kHz apart, the extreme frequencies assignable being 4 187·5 and 4 229 kHz as shown in Appendix 15.
Mar

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1183 Mar § 34. The working frequencies assigned to each ship station in the 6, 8, 12 and 16 MHz bands shall be harmonically related to those assigned in the 4 MHz band in all cases where such a relationship is provided in Appendix 15.

Note by the General Secretariat: *The provisions of the following Nos.* **1182 Mar2** *and* **1183 Mar2** *will become fully applicable as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1182 Mar2 § 33. In all bands, except the 6 MHz band, the working frequencies for ship stations using A1 Morse telegraphy, at speeds not exceeding 40 bauds, are spaced 0·5 kHz apart; in the 6 MHz band they are spaced 0·75 kHz apart (see also Note *e)* to Appendix 15). The extreme frequencies assignable in each of these bands are shown in Appendix 15.

1183 Mar2 § 34. In the 4, 6, 8, 12 and 16 MHz bands, certain frequencies are harmonically related as shown in Appendix 15D.

Note by the General Secretariat: *These provisions will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1184 Mar § 35. In the 22 MHz band, which is not in harmonic relationship with the other bands, the frequencies are spaced as follows, as shown in Appendix 15:

1185 Mar *a)* in the high traffic band, the working frequencies are spaced 2 kHz apart, the extreme frequencies assignable being 22 187 and 22 221 kHz;

1186 Mar *b)* in the low traffic band, the working frequencies are spaced 2·5 kHz apart, the extreme frequencies assignable being 22 270 and 22 370 kHz.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 - 2).*

1187 Mar § 36. In the 25 MHz band, the working frequencies are spaced 1·5 kHz apart. The extreme frequencies assignable are 25 084 and 25 106·5 kHz, as shown in Appendix 15.

1184-1187 SUP **(Mar2)**

b) Working Frequencies for Ship Stations using Wide-Band Telegraphy, Facsimile and Special Transmission Systems

Note by the General Secretariat: *As from 1 July 1977, the bands indicated in No.* **1188 Mar2** *will be used simultaneously with those mentioned in No.* **1188 Mar;** *they will replace the latter as from 16 July 1977 (see Resolution No. Mar2 – 2).*

1188 Mar § 37. The working frequencies assignable for ship stations using wide-band telegraphy, facsimile and special transmission systems are included within the following band limits:

4 142·5	-	4 162·5	kHz
6 216·5	-	6 244·5	kHz
8 288	-	8 328	kHz
12 431·5	-	12 479·5	kHz
16 576	-	16 636·5	kHz
22 112	-	22 160·5	kHz

1188 Mar2 § 37. The working frequencies assignable to ship stations using wide-band telegraphy, facsimile and special transmission systems are included within the following band limits:

4 146·6	-	4 162·5	kHz
4 166	-	4 170	kHz
6 224·6	-	6 244·5	kHz
6 248	-	6 256	kHz

(see overleaf)

8 300	-	8 328	kHz
8 331·5	-	8 343·5	kHz
12 439·5	-	12 479·5	kHz
12 483	-	12 491	kHz
16 596·4	-	16 636·5	kHz
16 640	-	16 660	kHz
22 139·5	-	22 160·5	kHz
22 164	-	22 192	kHz

1189 **Mar** § 38. (1) Each administration shall assign to each ship station under its jurisdiction and employing wide-band telegraphy, facsimile and special transmission systems, one or more series of the working frequencies reserved for this purpose and shown in Appendix 15. The total number of series assigned to each ship shall be determined by traffic requirements.

1190 (2) When ship stations employing wide-band telegraphy, facsimile and special transmission systems are assigned less than the total number of working frequencies in a band, the administration concerned shall assign working frequencies to such ships in accordance with an orderly system of rotation that will ensure approximately the same number of assignments on any one working frequency.

1191 **Mar2*** (3) However, within the limits of the bands given in No. **1188** **Mar2**, administrations may, to meet the needs of specific systems, assign frequencies in a different manner from that shown in Appendix 15 Mar2. Nevertheless administrations shall take into account, as far as possible, the provisions of Appendix 15 Mar2 concerning channelling and 4 kHz spacing.

c) Working Frequencies for Oceanographic Data Stations

1191A **Mar** § 38A. The working frequencies assignable to ship stations for oceanographic data transmissions are included within the following band limits:

4 162·5	-	4 166	kHz
6 244·5	-	6 248	kHz
8 328	-	8 331·5	kHz
12 479·5	-	12 483	kHz
16 636·5	-	16 640	kHz
22 160·5	-	22 164	kHz

1191B Mar § 38B. The frequency bands in No. **1191A** may also be used by buoy stations for oceanographic data transmission and by stations interrogating these buoys.

1191C Mar § 38C. Each administration may assign to each station under its jurisdiction of a type specified in Nos. **1191A** and **1191B** one or more of the assignable frequencies designated in Appendix 15.

Note by the General Secretariat: *These bands are to be vacated between 1 and 30 June 1977 (see Resolution No. Mar2 – 2).*

d) Working Frequencies for Ship Stations using Narrow-Band Direct-Printing Telegraph and Data Transmission Systems

1191D Mar § 38D. Working frequencies assignable to ship stations using narrow-band direct-printing telegraph and data transmission systems are included within the following band limits:

4 166	-	4 172·25	kHz
6 248	-	6 258·25	kHz
8 331·5	-	8 341·75	kHz
12 483	-	12 503·25	kHz
16 640	-	16 660·5	kHz
22 164	-	22 184·5	kHz

Mar2 *d) Working Frequencies (paired with those in No.* **452C***) for Ship Stations using Narrow-Band Direct-Printing Telegraph and Data Transmission Systems, at Speeds not exceeding 100 Bauds*

Note by the General Secretariat: *The bands mentioned in the following No.* **1191D Mar2** *may be used only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1191D Mar2 § 38D. (1) Working frequencies assignable to ship stations using narrow-band direct-printing telegraph and data transmission systems are included within the following band limits:

4 170	-	4 177·25	kHz
6 256	-	6 267·75	kHz
8 343·5	-	8 357·25	kHz
12 491	-	12 519·75	kHz
16 660	-	16 694·75	kHz
22 192	-	22 225·75	kHz

Note by the General Secretariat: *The provisions of the following No.* **1191DA Mar2** *may be applied only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1191DA Mar2 (2) The frequency pairs assignable to coast stations and ship stations using narrow-band direct-printing telegraph and data transmission systems are indicated in Appendix 15A.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1191E Mar § 38E. When assigning frequencies listed in Appendix 15 for narrow-band direct-printing telegraph and data transmission systems, administrations shall take due account of the information entries in the Master Register resulting from the notification procedure contained in Resolution No. Mar 8.

Note by the General Secretariat: *The provisions of the following No.* **1191E Mar2** *may be applied only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1191E § 38E. When assigning frequencies listed in Appendix 15A for
Mar2 narrow-band direct-printing telegraph and data transmission systems, administrations shall apply the procedure described in Resolution No. Mar2 – 7.

Mar2 *da) Working Frequencies (Non-Paired) for Ship Stations using Narrow-Band Direct-Printing Telegraph and Data Transmission Systems, at Speeds not exceeding 100 Bauds*

Note by the General Secretariat: *In the following No.* **1191F Mar2** *the bands 4 177·25-4 179·75; 6 267·75-6 269·75; 12 519·75-12 526·75; 16 694·75-16 705·8 and 22 225·75-22 227 kHz may be used only as from 1 June 1977. The bands 8 297·3-8 300 and 8 357·25-8 357·75 kHz may be used only as from 16 July 1977 and the band 25 076-25 090·1 kHz may be used as from 2 June 1976 (see Resolution No. Mar2 – 2).*

1191F § 38F. Working frequencies assignable to ship stations using
Mar2 narrow-band direct-printing telegraph and data transmission systems are included within the following band limits:

4 177·25	- 4 179·75	kHz
6 267·75	- 6 269·75	kHz
8 297·3	- 8 300	kHz
8 357·25	- 8 357·75	kHz
12 519·75	- 12 526·75	kHz
16 694·75	- 16 705·8	kHz
22 225·75	- 22 227	kHz
25 076	- 25 090·1	kHz

Note by the General Secretariat: *The provisions of the following No.* **1191G Mar2** *may be applied only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1191G Mar2 § 38G. When assigning frequencies listed in Appendix 15B for narrow-band direct-printing telegraph and data transmission systems, administrations shall take due account of the information entries in the Master Register resulting from the notification procedure contained in Resolution No. Mar2 – 8.

Note by the General Secretariat: *These provisions will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

e) Working Frequencies for High Traffic Ship Stations

1192 Mar § 39. The working frequencies assignable to high traffic ship stations are included within the following band limits:

4 172·25	-	4 178	kHz
6 258·25	-	6 267	kHz
8 341·75	-	8 356	kHz
12 503·25	-	12 534	kHz
16 660·5	-	16 712	kHz
22 184·5	-	22 222·5	kHz

1193 Mar § 40. (1) Each administration shall assign to each high traffic ship station under its jurisdiction two or more of the series of working frequencies shown in Appendix 15 for vessels of this class. The total number of series of frequencies assigned to each ship station should be determined by the traffic requirements.

1194 (2) When high traffic ships are assigned less than the total number of working frequencies in a band, the administration concerned shall assign working frequencies to such ships in accordance with an orderly system of rotation which will ensure approximately the same number of assignments on any one frequency.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 –2).*

1195 § 41. For the exclusive purpose of communication with stations of the maritime mobile service an aircraft station may be assigned one or more series of working frequencies in the high traffic bands. These frequencies shall be assigned in accordance with the same system of uniform distribution provided for high traffic ships.

1192-1195 SUP **(Mar2)**

Note by the General Secretariat: *These bands may no longer be used as from 1 June 1976 (see Resolution No. Mar2 – 2).*

f) Working Frequencies for Low Traffic Ship Stations

1196 **Mar** § 42. Working frequencies assigned to low traffic ship stations shall be included within the following band limits:

4 187	-	4 231	kHz
6 280·5	-	6 345·5	kHz
8 374	-	8 459·5	kHz
12 561	-	12 689	kHz
16 748	-	16 917·5	kHz
22 267·5	-	22 374	kHz

Mar2 *f) Working Frequencies for Ship Stations using A1 Morse Telegraphy*

Note by the General Secretariat: *The bands mentioned in the following No.* **1196 Mar2** *may be used as from 1 January 1976, except for the bands 8 357·75-8 359·75; 12 526·75-12 359·6; 16 705·8-16 719·8 and 22 250-22 310·5 kHz which may be used only as from 1 June 1977 (see Resolution No. Mar2 – 2).*

1196 **Mar2** § 42. Working frequencies assignable to ship stations using A1 Morse telegraphy are included within the following band limits:

4 188	-	4 219·4	kHz
6 282	-	6 325·4	kHz
8 357·75	-	8 359·75	kHz
8 376	-	8 435·4	kHz
12 526·75	-	12 539·6	kHz
12 564	-	12 652·3	kHz
16 705·8	-	16 719·8	kHz
16 752	-	16 859·4	kHz
22 250	-	22 310·5	kHz
25 090·1	-	25 110	kHz

1197-1199 SUP **(Mar2)**

Note by the General Secretariat: *These provisions will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1197 Mar § 43. (1) In each of the low traffic bands, the assignable frequencies are divided into two equal Groups A and B, Group A comprising the frequencies in the lower half of the band and Group B the frequencies in the upper half (see Appendix 15).

1198 Mar (2) Each administration shall assign to each of the low traffic ship stations under its jurisdiction two series of working frequencies, one in Group A and the other in Group B. In each band, the two working frequencies of each station are separated, as far as practicable, by half the width of the assignable band.

1199 Mar (3) For example, if one of the frequencies assigned to a ship station is the lowest frequency assignable in Group A, the other should be the lowest frequency assignable in Group B. If one of the frequencies assigned is the second frequency from the low frequency end of Group A, then the other frequency assigned should be the second frequency from the low frequency end of Group B, etc.

1200 (4) Each administration shall assign successively one such pair of frequencies to each of its ship stations commencing at either end of the band. When all available working frequencies in a band have been assigned in this manner, the process shall be repeated as often as is necessary to satisfy all its requirements and to ensure a uniform distribution of assignments throughout the band.

Note by the General Secretariat: *The provisions of the following No.* **1200 Mar2** *will become fully applicable as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1200 § 43. Each administration shall assign to each ship station under
Mar2 its jurisdiction a sufficient number of working frequencies, in any of the 4, 6, 8, 12, 16, 22 and 25 MHz bands, to meet the traffic needs of the ship. In each band used, preferably not less than two working frequencies should be assigned to each ship. Administrations shall ensure a uniform distribution of assignments throughout the bands.

1200A § 43A. For the exclusive purpose of communication with stations
Mar2 of the maritime mobile service, an aircraft station may be assigned one or more working frequencies in the bands shown in No. **1196**. These frequencies shall be assigned in accordance with the same principles of uniform distribution as for ship stations.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1201 (5) Administrations shall try to ensure that Group A and Group B frequencies are equally used for traffic, and to this end should arrange for half their ship stations to operate generally on Group A frequencies, and for the other half to operate generally on Group B frequencies.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

g) Working Frequencies Available for Use by Ships of all Categories

1202 Mar § 44. The working frequencies in the bands specified in No. **1191D** for narrow-band direct-printing telegraph and data transmission systems, and also those in the band 25 082·5 to 25 110 kHz, may be assigned to ships of all categories.

1201-1202 SUP **(Mar2)**

Mar2* *g) Abbreviations for the Indication of Working Frequencies*

1203 Mar2 § 45. In the bands between 4 000 and 27 500 kHz the following abbreviations may be used to designate a working frequency:

1204 Mar2 *a)* if the frequency expressed in kHz has no decimal value, the last three figures shall be transmitted;

1204A Mar2 *b)* if the frequency expressed in kHz has a decimal value, the last three figures before the decimal point and the first decimal figure shall be transmitted.

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1205 *b)* when the calling station does not know the working frequencies of a low traffic ship station, it may request the ship station to reply on its working frequency in Group A or on its working frequency in Group B by transmitting QSW A or QSW B as the case may be;

Note by the General Secretariat: *This provision will completely cease to apply as from 1 June 1976 (see Resolution No. Mar2 – 2).*

1206 *c)* in case of poor receiving conditions on the working frequency stated by the low traffic ship according to No. **1205**, the coast station may request the ship to change to transmissions on its supplementary working frequency in the same frequency band. This request is made by the transmission of QSY B or QSY A as the case may be.

1205-1206 SUP **(Mar2)**

Section VI. Aeronautical Mobile Service

1207 § 46. Governments may, by agreement, decide the frequencies to be used for call and reply in the aeronautical mobile service.

1208 § 47. Any aircraft in distress shall transmit the distress call on the frequency on which watch is kept by the land or mobile stations capable of helping it. When the call is intended for stations in the maritime mobile service, the provisions of Nos. **1107** and **1108** shall apply.

ARTICLE 33

General Radiotelephone Procedure in the Maritime Mobile Service

Section I. General Provisions

1209 § 1. (1) The procedure detailed in this Article is applicable to radiotelephone stations of the maritime mobile service, except in cases of distress, urgency or safety, to which the provisions of Article 36 are applicable.

1210 (2) Aircraft stations may enter into radiotelephone communication with stations of the maritime mobile service on frequencies allocated to that service for radiotelephony. They shall then comply with the provisions of this Article and of Article 27.

1211 § 2. (1) The service of ship radiotelephone stations shall be performed by an operator satisfying the conditions specified in Article 23.

1212 (2) For the call signs or other means of identification for coast or ship radiotelephone stations see Article 19.

1213 § 3. The radiotelephone public correspondence service provided on ships should, if possible, be operated on a duplex basis.

1214 § 4. (1) Devices providing for the emission of a signal to indicate
Mar2 that a call is in progress on a channel may be used in this service on a non-interference basis to the service provided by coast stations.

1214A (1A) The use of devices for continuous or repetitive calling or
Mar2 identification is not permitted.

1214B (1B) A station may not transmit identical information
Mar2 simultaneously on two or more frequencies when communicating with only one other station.

1214C (1C) A station shall not emit any carrier between calls.
Mar2

1215 (2) Radiotelephone stations of the maritime mobile service should, as far as possible, be equipped with devices for instantaneous switching from transmission to reception and vice versa. This equipment is necessary for all stations participating in communication between ships or aircraft and subscribers of the land telephone system.

1216 § 5. (1) Stations of the maritime mobile service equipped for
Mar2 radiotelephony may transmit and receive radiotelegrams by means of radiotelephony. Coast stations providing such service and open for public correspondence shall be indicated in the List of Coast Stations.

1216A (2) To facilitate radiocommunications the service abbreviations
Mar given in Appendix 13A may be used.

1216B (3) When it is necessary to spell out certain expressions, difficult
Mar words, service abbreviations, figures, etc., the phonetic spelling tables in Appendix 16 shall be used.

Section II. Preliminary Operations

1217 § 6. (1) Before transmitting, a station shall take precautions to ensure that its emissions will not interfere with transmissions already in progress ; if such interference is likely, the station shall await an appropriate break in the working.

1218 (2) If, these precautions having been taken, the emissions of the station should nevertheless interfere with a transmission already in progress, the following rules shall be applied :

1219 *a)* The mobile station whose emission causes interference to the correspondence of a mobile station with a coast

or aeronautical station shall cease sending at the first request of the coast station or the aeronautical station.

1220 *b)* The mobile station whose emission causes interference to communications already in progress between mobile stations, shall cease sending at the first request of one of the other stations.

1221 *c)* The station which requests this cessation shall indicate the approximate waiting time imposed on the station whose emission it suspends.

Section III. Calls, Reply to Calls and Signals Preparatory to Traffic

Method of Calling

1222 **Mar** § 7. (1) The call consists of:

— the call sign or other identification of the station called, not more than 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 calling station, not more than three times.

1222A **Mar2** (1A) However, in the bands between 156 and 174 MHz when the conditions for establishing contact are good, the call described in No. **1222** may be replaced by:

— the call sign of the station called, once;

— the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);

— the call sign or other identification of the calling station, twice.

1222B **Mar2** (1B) When calling a VHF coast station operating on more than one channel, a ship station calling on a working channel should include the number of that channel in the call.

1223 (2) When contact is established, the call sign or other identification may thereafter be transmitted once only.

1224 **Mar** (3) When the coast station is fitted with equipment for selective calling and the ship station is fitted with equipment for receiving selective calls, the coast station shall call the ship by transmitting the appropriate code signals. The ship station shall call the coast station by speech in the manner given in No. **1222.** (See also Article 28A.)

1224A **Mar** § 7A. Calls for internal communications on board ship when in territorial waters shall consist of:

1224B **Mar** *a)* From the master station:

— the name of the ship followed by a single letter (ALFA, BRAVO, CHARLIE, etc.) indicating the sub-station not more than three times;

— the words THIS IS;

— the name of the ship followed by the word CONTROL;

1224C **Mar** *b)* From the sub-station:

— the name of the ship followed by the word CONTROL not more than three times;

— the words THIS IS;

— the name of the ship followed by a single letter (ALFA, BRAVO, CHARLIE etc.) indicating the sub-station.

Frequency to be Used for Calling and for Preparatory Signals

A. Bands between 1 605 and 4 000 kHz

1225 **Mar2** § 8. (1) A radiotelephone ship station calling a coast station should use for the call, in order of preference:

1226 Mar2 *a)* a working frequency on which the coast station is keeping watch;

1227 Mar2 *b)* the carrier frequency 2 182 kHz;

1227A Mar *c)* in Regions 1 and 3 and in Greenland, the carrier frequency 2 191·0 kHz (assigned frequency 2 192·4 kHz when a carrier frequency of 2 182 kHz is being used for distress.

1228 SUP **(Mar2)**

1229 (3) A radiotelephone ship station calling another ship station should use for the call :

1230 Mar *a)* the carrier frequency 2 182 kHz;

1231 *b)* an inter-ship frequency, whenever and wherever traffic density is high and prior arrangements can be made.

1232 Mar (4) An aircraft station calling a coast station or a ship station may use the carrier frequency 2 182 kHz.

1233 Mar (5) Subject to the provisions of No. **1235A**, coast stations shall, in accordance with the requirements of their own country, call ship stations of their own nationality either on a working frequency, or, when calls to individual ships are made, on the carrier frequency 2 182 kHz.

1234 Mar (6) However, a ship station which keeps watch simultaneously on the carrier frequency 2 182 kHz and a working frequency should be called on the working frequency.

1235 Mar (7) As a general rule, coast stations should call radiotelephone ship stations of another nationality on the carrier frequency 2 182 kHz.

1235A Mar (8) Coast stations may call ship stations equipped to receive selective calls in accordance with the provisions of Article 28A.

1235B Mar2 (9) Selective calling under the provisions of Article 28A may be carried out on appropriate radiotelephone working frequencies in the shore-to-ship, ship-to-shore and ship-to-ship directions in the band 1 605-4 000 kHz.

B. Bands between 4 000 and 23 000 kHz

1236 Mar2 § 9. (1) A ship station calling a coast station by radiotelephony shall use either one of the calling frequencies mentioned in No. **1352** or the working frequency associated with that of the coast station:

- until 1 January 1978, in accordance with Appendix 17, Sections A and B, or
- as from 1 January 1978, in accordance with Appendix 17 Rev., Section A.

1237 Mar2 (2) A coast station calling a ship station by radiotelephony shall use one of the calling frequencies mentioned in No. **1352A**, one of its working frequencies shown in the List of Coast Stations, or the carrier frequency 4 136·3 kHz or 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz respectively) in accordance with the provisions of Nos. **1352.2** and **1352.3**.

1238 (3) The preliminary operations for the establishment of radiotelephone communications may also be carried out by radiotelegraphy using the procedure appropriate to radiotelegraphy (see Nos. **1014** and **1015**).

1238A Mar2 (4) The provisions of Nos. **1236** and **1237** do not apply to communication between ship stations and coast stations using the simplex frequencies specified in Appendix 17, Section C, or in Appendix 17 Rev., Section B.

1238B § 9A. The frequencies assignable to ship and coast stations for
Mar2 digital selective calling as specified in No. **999F** are as follows:

Note by the General Secretariat: *The frequencies mentioned in the following Nos.* **1238C Mar2** *and* **1238D Mar2** *may be used only from 1 June 1977 onwards (see Resolution No. Mar2 – 2).*

1238C *a) Ship stations*
Mar2

4 187·6 kHz
6 281·4 kHz
8 375·2 kHz
12 562·3 kHz
12 562·8 kHz
16 749·9 kHz
16 750·4 kHz
22 248 kHz
22 248·5 kHz

1238D *b) Coast stations*
Mar2

4 357 kHz
6 506 kHz
8 718·5 kHz
13 100 kHz
13 100·5 kHz
17 232 kHz
17 232·5 kHz
22 595 kHz
22 595·5 kHz

C. Bands between 156 and 174 MHz

1239 § 10. (1) In the bands between 156 and 174 MHz used by the
Mar2 maritime mobile service, intership and coast station to ship calling should, as a general rule, be made on 156·8 MHz. However, coast station to ship calling may be conducted on a working channel or on a two-frequency calling channel which has been implemented in accord-

ance with No. **1361**. Except for distress, urgency or safety communications, when 156·8 MHz should be used, ship to coast station calling should, whenever possible, be made on a working channel or on a two-frequency calling channel which has been implemented in accordance with No. **1361**. Ships wishing to participate in a port operations service or ship movement service should call on a port operations or ship movement working frequency, indicated in heavy type in the List of Coast Stations.

1239A Mar2 (1A) Selective calling under the provisions of Article 28A may be carried out on 156·8 MHz and on appropriate radiotelephone working frequencies in the shore-to-ship, ship-to-shore and ship-to-ship directions.

1240 (2) When 156·80 MHz is being used for distress, urgency or safety communications, a ship station desiring to participate in the port operations service may establish contact on 156·60 MHz or another port operations frequency, indicated in heavy type in the List of Coast Stations.

Mar2

D. Procedure for Calling a Station Providing Pilot Service

1240A Mar2 § 10A. A radiotelephone ship station calling a station providing pilot service should use for the call, in order of preference:

1240B Mar2 *a)* an appropriate channel in the bands between 156 and 174 MHz;

1240C *b)* a working frequency in the bands between 1 605 and 4 000
Mar2 kHz;

1240D *c)* the carrier frequency 2 182 kHz, and then only to deter-
Mar2 mine the working frequency to be used.

Form of Reply to Calls

1241 § 11. The reply to calls consists of:
Mar

— the call sign or other identification of the calling station, not more than 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 called, not more than three times.

Frequency for Reply

A. Bands between 1 605 and 4 000 kHz

1242 § 12. (1) When a ship station is called on the carrier frequency 2 182
Mar kHz it should reply on the same carrier frequency unless another frequency is indicated by the calling station.

1242A (1A) When a ship station is called by selective calling it shall
Mar reply on a frequency on which the coast station keeps watch.

1243 (2) When a ship station is called on a working frequency by a coast station of the same nationality, it shall reply on the working frequency normally associated with the frequency used by the coast station for the call.

1244 **Mar** (3) When calling a coast station or another ship station, a ship station shall indicate the frequency on which a reply is required if this frequency is not the normal one associated with the frequency used for the call.

1245 (4) A ship station which frequently exchanges traffic with a coast station of another nationality may use the same procedure for reply as ships of the nationality of the coast station, where this has been agreed by the administrations concerned.

1246 (5) As a general rule a coast station shall reply :

1247 **Mar** *a)* on the carrier frequency 2 182 kHz to calls made on the carrier frequency 2 182 kHz, unless another frequency is indicated by the calling station;

1248 *b)* on a working frequency to calls made on a working frequency;

1248A **Mar** *c)* on a working frequency to calls made in Regions 1 and 3 and in Greenland on the carrier frequency 2 191·0 kHz (assigned frequency 2 192·4 kHz).

B. Bands between 4 000 and 23 000 kHz

1249 **Mar2** § 13. (1) A ship station called by a coast station shall reply on either one of the calling frequencies mentioned in No. **1352** or on the working frequency associated with that of the coast station:

- until 1 January 1978 in accordance with Appendix 17, Sections A and B, or
- as from 1 January 1978 in accordance with Appendix 17 Rev., Section A.

1250 (2) A coast station called by a ship station shall reply on one
Mar of the calling frequencies mentioned in No. **1352A,** or on one of its working frequencies shown in the List of Coast Stations.

1250A (2A) In the zone of Regions 1 and 2 south of latitude 15° N, in-
Mar2 cluding Mexico, and in the zone of Region 3 south of latitude 25° N, when a station is called on the carrier frequency 4 136·3 kHz (as from 1 January 1978 to be replaced by the carrier frequency 4 125 kHz) it should reply on the same frequency unless another frequency is indicated by the calling station.

1251 (3) In the zone of Region 3 south of latitude 25°N, when a sta-
Mar2 tion is called on the carrier frequency 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequency 6 215·5 kHz) it should reply on the same frequency unless another frequency is indicated by the calling station.

1251A (4) The provisions of Nos. **1249** and **1250** do not apply to
Mar2 communication between ship stations and coast stations using the simplex frequencies specified in Appendix 17, Section C or in Appendix 17 Rev., Section B.

C. Bands between 156 and 174 MHz

1252 § 14. (1) When a station is called on 156·8 MHz it should reply on
Mar2 the same frequency unless another frequency is indicated by the calling station.

1253 (2) When a coast station open to public correspondence calls a ship station either by speech or by selective calling, using a two-frequency channel, the ship station shall reply by speech on the frequency associated with that of the coast station ; conversely, a coast station shall reply to a call from a ship station on the frequency associated with that of the ship station.

Indication of the Frequency to be Used for Traffic

A. Bands between 1 605 and 4 000 kHz

1254 § 15. If contact is established on the carrier frequency 2 182 kHz,
Mar coast and ship stations shall transfer to working frequencies for the exchange of traffic.

B. Bands between 4 000 and 23 000 kHz

1255 § 16. After a ship station has established contact with a coast station, or another ship station, on the calling frequency of the band chosen, traffic shall be exchanged on their respective working frequencies.

C. Bands between 156 and 174 MHz

1256 § 17. (1) Whenever contact has been established between a coast sta-
Mar2 tion in the public correspondence service and a ship station either on 156·8 MHz or on a two-frequency calling channel (see No. **1362**), the stations shall transfer to one of their normal pairs of working frequencies for the exchange of traffic. The calling station should indicate the channel to which it is proposed to transfer by reference to the frequency in MHz or, preferably, to its channel designator.

1257 (2) When contact on 156·80 MHz has been established between a coast station in the port operations service and a ship station, the ship station should indicate the particular service required (such as navigational information, docking instructions, etc.) and the coast station shall then indicate the channel to be used for the exchange of traffic by reference to the frequency in MHz or, preferably, to its channel designator.

1257A (2A) When contact on 156·8 MHz has been established between
Mar2 a coast station in the ship movement service and a ship station, the coast station shall then indicate the channel to be used for the exchange of traffic by reference to the frequency in MHz or, preferably, to its channel designator.

1258 (3) A ship station, when it has established contact with another ship station on 156·80 MHz, should indicate the inter-ship channel to which it is proposed to transfer for the exchange of traffic by reference to the frequency in MHz or, preferably, to its channel designator.

1258A **Mar2** (4) However, a brief exchange of traffic not to exceed one minute concerning the safety of navigation need not be transmitted on a working frequency when it is important that all ships within range receive the transmission.

1258B **Mar** (5) Stations hearing a transmission concerning the safety of navigation shall listen to the message until they are satisfied that the message is of no concern to them. They shall not make any transmission likely to interfere with the message.

Agreement on the Frequency to be Used for Traffic

1259 § 18. (1) If the station called is in agreement with the calling station, it shall transmit :

1260 *a)* an indication that from that moment onwards it will listen on the working frequency or channel announced by the calling station ;

1261 *b)* an indication that it is ready to receive the traffic of the calling station.

1262 (2) If the station called is not in agreement with the calling station on the working frequency or channel to be used, it shall transmit an indication of the working frequency or channel proposed.

1263 (3) For communications between a coast station and a ship station, the coast station shall finally decide the frequency or channel to be used.

1264 (4) When agreement is reached regarding the working frequency or channel which the calling station shall use for its traffic, the station called shall indicate that it is ready to receive the traffic.

Indication of Traffic

1265 **Mar2** § 19. When the calling station wishes to exchange more than one radiotelephone call, or to transmit one or more radiotelegrams, it should indicate this when contact is established with the station called.

Difficulties in Reception

1266 **Mar** § 20. (1) If the station called is unable to accept traffic immediately, it should reply to the call as indicated in No. **1241** followed by "Wait ... minutes" (or $\overline{\text{AS}}$ spoken as ALFA SIERRA ... (minutes) in case of language difficulties), indicating the probable duration of waiting time in minutes. If the probable duration exceeds ten minutes the reason for the delay shall be given. Alternatively the station called may indicate, by any appropriate means, that it is not ready to receive traffic immediately.

1267 (2) When a station receives a call without being certain that such a call is intended for it, it shall not reply until the call has been repeated and understood.

1268 (3) When a station receives a call which is intended for it, but is uncertain of the identification of the calling station, it shall reply immediately asking for a repetition of the call sign or other identification of the calling station.

Section IV. Forwarding (Routing) of Traffic

Traffic Frequency

1269 § 21. (1) Every station of the maritime mobile service should transmit its traffic (radiotelephone calls or radiotelegrams) on one of its working frequencies in the band in which the call has been made.

1270 (2) In addition to its normal working frequency, printed in heavy type in the List of Coast Stations, a coast station may use one or more supplementary frequencies in the same band in accordance with the provisions of Article 35.

1271 (3) The use of frequencies reserved for calling shall be forbidden for traffic, except distress traffic (see Article 35).

1272 (4) After contact has been established on the frequency to be used for traffic, the transmission of a radiotelegram or radiotelephone call shall be preceded by :

1273 Mar
- — the call sign or other identification of the station called;
- — the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- — the call sign or other identification of the calling station.

1274 (5) The call sign or other identification need not be sent more than once.

Establishment of Radiotelephone Calls and Transmission of Radiotelegrams

A. Establishment of Radiotelephone Calls

1275 § 22. (1) In setting up a radiotelephone call, the coast station should establish connection with the telephone network as quickly as possible. In the meantime the mobile station shall maintain watch on the appropriate working frequency as indicated by the coast station.

1276 (2) However, if the connection cannot be quickly established, the coast station shall inform the mobile station accordingly. The latter station shall then either :

1277 *a)* maintain watch on the appropriate frequency until an effective circuit can be established ; or

1278 *b)* contact the coast station later at a mutually agreed time.

1279 (3) When a radiotelephone call has been completed, the procedure indicated in No. **1289** shall be applied unless further calls are on hand at either station.

B. Transmission of Radiotelegrams

1280 **Mar** § 23. (1) The transmission of a radiotelegram should be made as follows :

— Radiotelegram begins : from . . . (name of ship or aircraft) ;

— number . . . (serial number of radiotelegram) ;

— number of words . . . ;

— date . . . ;

— time . . . (time radiotelegram was handed in aboard ship or aircraft) ;

— service indicators (if any) ;

— address . . . ;

— text . . . ;

— signature . . . (if any) ;

— radiotelegram ends, over.

1281 (2) As a general rule radiotelegrams of all kinds transmitted by ship stations, and radiotelegrams in the public correspondence service transmitted by aircraft stations shall be numbered in a daily series ; number 1 shall be given to the first radiotelegram sent each day to each separate station.

1282 (3) A series of numbers which has begun in radiotelegraphy should be continued in radiotelephony and vice versa.

1283 (4) Each radiotelegram should be transmitted once only by the sending station. However, it may, when necessary, be repeated in full or in part by the receiving or the sending station.

1284 SUP (Mar)

1285 **Mar** (6) In transmitting groups of figures each figure shall be spoken separately and the transmission of each group or series of groups shall be preceded by the words "in figures".

1286 (7) Numbers written in letters shall be spoken as they are written, their transmission being preceded by the words " in letters "

C. Acknowledgement of Receipt

1287 **Mar** § 24. (1) The acknowledgement of receipt of a radiotelegram or a series of radiotelegrams shall be given by the receiving station in the following manner:

— the call sign or other identification of the sending station;

— the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);

— the call sign or other identification of the receiving station;

— "Your No... received, over" (or R spoken as ROMEO... (number), K spoken as KILO in case of language difficulties); *or*

— "Your No... to No... received, over" (or R spoken as ROMEO ...(numbers), K spoken as KILO in case of language difficulties).

1288 (2) The radiotelegram, or series of radiotelegrams, shall not be considered as cleared until this acknowledgement has been received.

1289 **Mar** (3) The end of work between two stations shall be indicated by each of them by means of the word "Out" (or $\overline{VA}$ spoken as VICTOR ALFA in case of language difficulties).

Section V. Duration and Control of Working

1290 **Mar2** § 25. (1) Calling, and signals preparatory to traffic, shall not exceed one minute when made on the carrier frequency 2 182 kHz or on 156·8 MHz, except in cases of distress, urgency or safety to which the provisions of Article 36 apply.

1291 (2) In communications between land stations and mobile stations, the mobile station shall comply with the instructions given by the land station in all questions relating to the order and time of transmission, to the choice of frequency, and to the duration and suspension of work.

1292 (3) In communications between mobile stations, the station called controls the working in the manner indicated in No. **1291.** However, if a land station finds it necessary to intervene, these stations shall comply with the instructions given by the land station.

Section VI. Tests

1293 § 26. When it is necessary for a mobile station to send signals for testing or adjustments which are liable to interfere with the working of neighbouring coast stations, the consent of these stations shall be obtained before such signals are sent.

1294 § 27. (1) When it is necessary for a station to make test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, such signals shall not be continued for more than ten seconds, and shall include the call sign or other

identification of the station emitting the test signals. This call sign or other identification shall be spoken slowly and distinctly.

1295 (2) Any signals sent for testing shall be kept to a minimum,
Mar2 particularly:

- on the carrier frequency 2 182 kHz;
- on the frequency 156·8 MHz;
- in the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, on the carrier frequency 4 136·3 kHz;
- in the zone of Region 3 south of latitude 25° N also on the carrier frequency 6 204 kHz.

As from 1 January 1978, the carrier frequencies 4 136·3 kHz and 6 204 kHz will be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz respectively.

1295A (3) It is not permitted to send test transmissions of the
Mar2 radiotelephone alarm signal on the carrier frequency 2 182 kHz and the frequency 156·8 MHz, except where emergency equipment which can operate only on these frequencies is involved, in which case measures shall be taken to prevent radiation. Measures shall also be taken to prevent radiation from radiotelephone alarm tests carried out on frequencies other than 2 182 kHz and 156·8 MHz.

ARTICLE 34

Calls by Radiotelephony

1296 § 1. (1) The provisions of this Article are not applicable to the aeronautical mobile service when special agreements exist between the governments concerned.

1297 (2) Aircraft stations when communicating with stations of the maritime mobile service shall use the procedure specified in this Article.

1297A Mar2 (3) The provisions of this Article relating to the intervals between calls are not applicable to a station in the maritime mobile service operating under conditions involving distress, urgency or safety.

1297B Mar2 (4) The provisions of this Article are not applicable to the maritime mobile-satellite service.

1298 § 2. (1) As a general rule, it rests with the mobile station to establish communication with the land station. For this purpose the 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 mobile station can be heard by the land station.

1299 (2) However, a land station having traffic for a mobile station may call this station if it has reason to believe that the mobile station is keeping watch and is within the service area of the land station.

1300 Mar2 § 3. (1) In addition, each coast station shall, so far as practicable, transmit its calls in the form of "traffic lists" consisting of the call signs or other identification in alphabetical order of all mobile stations for which it has traffic on hand. These calls shall be made at specified times

fixed by agreement between the administrations concerned and at intervals of not less than two hours and not more than four hours during the working hours of the coast station.

1301 **Mar** (2) Coast stations shall transmit their traffic lists on their normal working frequencies in the appropriate bands. The transmission shall be preceded by a general call to all stations.

1302 **Mar** (3) The general call to all stations announcing the traffic lists may be sent on a calling frequency in the following form:

– "Hello all ships" or CQ (spoken as CHARLIE QUEBEC) not more than three times;

– the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);

– "... Radio" not more than three times;

– "Listen for my traffic list on... kHz.

In no case may this preamble be repeated.

1302A **Mar2** (3A) However, in the bands between 156 and 174 MHz when the conditions for establishing contact are good, the call described in No. **1302** may be replaced by:

– "Hello all ships" or CQ (spoken as CHARLIE QUEBEC), once;

– the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);

– ". . . Radio", twice;

– "Listen for my traffic list on channel . . .".

In no case may this preamble be repeated.

1303 (4) The provisions of No. **1302** are obligatory when 2 182 kHz or 156·80 MHz is used.

1304 (5) The hours at which coast stations transmit their traffic lists and the frequencies and classes of emission which they use for this purpose shall be stated in the List of Coast Stations.

1305 (6) Mobile stations should as far as possible listen to the traffic lists transmitted by coast stations. On hearing their call sign or other identification in such a list they must reply as soon as they can do so.

1306 (7) When the traffic cannot be sent immediately, the coast station shall inform each mobile station concerned of the probable time at which working can begin, and also, if necessary, the frequency and class of emission which will be used.

1307 § 4. When a land station receives calls from several mobile
Mar2* stations at practically the same time, it decides the order in which these stations may transmit their traffic. Its decision shall be based on the priority (see Nos. **1496** and **1496A**) of the radiotelegrams or radiotelephone calls that mobile stations have on hand and on the need for allowing each calling station to clear the greatest possible number of communications.

1308 § 5. (1) When a station called does not reply to a call sent three times at intervals of two minutes, the calling shall cease and shall not be renewed until after an interval of fifteen minutes.

1308A (1A) However, in the maritime mobile service, when a station
Mar called does not reply, the call may be repeated at three-minute intervals.

1308B (1B) In areas where reliable VHF communication with a called
Mar2 coast station is practicable, the calling mobile station may repeat the call as soon as it is ascertained that traffic has been terminated at the coast station.

1309 **Mar** (2) In the case of a communication between a station of the maritime mobile service and an aircraft station, calling may be renewed after an interval of five minutes.

1310 (3) Before renewing the call, the calling station shall ascertain that the station called is not in communication with another station.

1311 (4) If there is no reason to believe that harmful interference will be caused to other communications in progress, the provisions of Nos. **1308** and **1309** are not applicable. In such cases the call, sent three times at intervals of two minutes, may be repeated after an interval of less than fifteen minutes but not less than three minutes.

1311A **Mar** (5) However, in the maritime mobile service, before renewing the call, the calling station shall ascertain that further calling is unlikely to cause interference to other communications in progress and that the station called is not in communication with another station.

1312 § 6. Mobile stations shall not radiate a carrier wave between calls.

1313 § 7. When the name and address of the administration or private operating agency controlling a mobile station are not given in the appropriate list of stations or are no longer in agreement with the particulars given therein, it is the duty of the mobile station to furnish as a matter of regular procedure, to the land station to which it transmits traffic, all the necessary information in this respect.

1314 **Mar** § 8. (1) The land station may, by means of the abbreviation TR (spoken as TANGO ROMEO), ask the mobile station to furnish it with the following information:

1315 *a)* position and, whenever possible, course and speed ;

1316 *b)* next port of call.

1317 (2) The information referred to in Nos. **1314** to **1316**, preceded
Mar by the abbreviation TR, should be furnished by mobile stations, whenever this seems appropriate, without prior request from the coast station. The provision of this information is authorized only by the master or the person responsible for the ship, aircraft or other vehicle carrying the mobile station.

1318 SUP (**Mar**)

ARTICLE 35

Use of Frequencies for Radiotelephony in the Maritime Mobile Service

Section I. General Provisions

1319 § 1. (1) The provisions of this Article are applicable to radiotelephone stations of the maritime mobile service.

1320 (2) Aircraft stations may enter into telephone communication with stations of the maritime mobile service on frequencies allocated to that service for radiotelephony. They shall then comply with the provisions of this Article and Article 27.

1321 (3) Any aircraft in distress shall transmit the distress call on
Mar2* the frequency on which watch is kept by the land or mobile stations capable of helping it. When the call is intended for stations in the maritime mobile service, the provisions of Nos. **1323** and **1324** or **1359** and **1359AA** shall be complied with.

1321A § 1A. Except with regard to the provisions of Article 9 concern-
Mar2 ing notification and recording of frequencies, when designating frequencies for single sideband radiotelephony the carrier frequency is always to be designated. The assigned frequency is to be determined in accordance with No. **445A**.

1321B § 1B. Coast stations shall not occupy idle radiotelephone
Mar2 channels by emitting identification signals, such as those generated by call slips or tapes. Exceptionally, a coast station when requested by a mobile station for the purpose of establishing a radiotelephone call, may emit a receiver tuning signal of not more than 10 seconds duration.

1322 § 2. The frequencies of transmission (and reception when these frequencies are in pairs as in the case of duplex radiotelephony) assigned to each coast station shall be indicated in the List of Coast Stations. This list shall also indicate any other useful information concerning the service performed by each coast station.

1322A § 2A. Single sideband apparatus in radiotelephone stations of
Mar the maritime mobile service operating in the bands between 1 605 and 4 000 kHz allocated to this service and in the bands allocated exclusively to this service between 4 000 and 23 000 kHz shall satisfy the technical and operational conditions specified in Appendix 17A and Resolution No. Mar 4.

1322AA § 2AA. When linked compressor and expander systems are used
Mar2 they shall conform to the characteristics specified in Appendix 20D, paragraph *a)*.

1322AB § 2AB. Single sideband radio equipment used in conjunction with
Mar2 linked compressor and expander systems shall conform to the characteristics specified in Appendix 17A and should also conform to Appendix 20D, paragraph *b)*.

Section II. Bands between 1 605 and 4 000 kHz

A. Mode of Operation of Stations

1322B § 2B. (1) Except in the cases specified in Nos. **984**, **1322D** and **1323**,
Mar2 the classes of emissions to be used in the bands between 1 605 and 4 000 kHz shall be:

a) A3 or

b) A3H, A3A and A3J.

1322B.1 SUP **(Mar2)**

However, unless otherwise specified in the present Regulations (see Nos. **984**, **996**, **1322D**, **1323** and **1337**):

– after 1 January 1975, class A3 emissions shall no longer be authorized for coast stations and

– after 1 January 1982, class A3H emissions for coast stations and class A3 and A3H emissions for ship stations shall no longer be authorized.

1322BA (1A) The peak envelope power of coast radiotelephone stations
Mar2 operating in the authorized bands allocated between 1 605 and 4 000 kHz shall not exceed:[1]

– 5 kW for coast stations located north of latitude 32° N,

– 10 kW for coast stations located south of latitude 32° N.

1322C (2) The normal mode of operation for each coast station
Mar shall be indicated in the List of Coast Stations.

1322D (3) Transmissions in the bands 2 170 - 2 173·5 kHz and
Mar2 2 190·5 - 2 194 kHz with the carrier frequency 2 170·5 kHz and the carrier frequency 2 191 kHz respectively are limited to class A3A and A3J emissions and are limited to a peak envelope power of 400 watts. However, on the frequency 2 170·5 kHz and with the same power limit, coast stations may also use class A2H emissions when using the selective calling system[2] defined in Appendix 20C and, exceptionally, in Regions 1 and 3 and in Greenland, may also use class A3H emissions for safety messages.

1322BA.1 [1] See Resolution No. Mar2 – 9.
Mar2

1332D.1 SUP **(Mar2)**

1322D.2 [2] See also No. **1329A Mar2.**
Mar*

B. Distress

1323 **Mar** § 3. (1) The frequency 2 182 kHz[1] is the international distress frequency for radiotelephony; it shall be used for this purpose by ship, aircraft and survival craft stations and by emergency position-indicating radiobeacons using frequencies in the authorized bands between 1 605 and 4 000 kHz when requesting assistance from the maritime services. It is used for the distress call and distress traffic, for signals of emergency position-indicating radiobeacons, for the urgency signal and urgency messages and for the safety signal. Safety messages shall be transmitted, where practicable, on a working frequency after a preliminary announcement on 2 182 kHz. The class of emission to be used for radiotelephony on the frequency 2 182 kHz shall be A3 or A3H (see No. **984**). The class of emission to be used by emergency position-indicating radiobeacons shall be as specified in Appendix 20A (see also **1476G**).

1323A **Mar2** (1A) In the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, if a distress message on the carrier frequency 2 182 kHz has not been acknowledged, the radiotelephone alarm signal, whenever possible followed by the distress call and message, may be transmitted again on a carrier frequency of 4 136·3 kHz or 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz respectively), as appropriate (see Nos. **1351E**, **1351F** and **1354A**).

1323.1 **Mar2** [1] Where administrations provide at their coast stations a watch on 2 182 kHz for receiving class A3A and A3J emissions as well as class A3 and A3H emissions, ship stations beyond the A3 or A3H communication range of such coast stations may call them for safety purposes using class A3A or A3J emissions. This procedure shall only be used when calling by the use of class A3 and A3H emissions has not been successful.

1324 (2) However, ship and aircraft stations which cannot transmit
Mar2 on the carrier frequency 2 182 kHz or, in accordance with No. **1323A**, on the carrier frequencies 4 136·3 kHz or 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz respectively) should use any other available frequency on which attention might be attracted.

1325 (3) Except for transmissions authorized on the carrier frequency
Mar 2 182 kHz, all transmissions on the frequencies between 2 173·5 and 2 190·5 kHz are forbidden.

1325A (3A) Selective calling under the provisions of Article 28A may
Mar2 be used on the carrier frequency 2 182 kHz in the shore-to-ship, ship-to-shore and ship-to-ship directions and on this frequency shall be confined to distress and urgency and to vital navigational warnings. In no circumstances shall such selective calling be used in place of the procedures given in Nos. **1402, 1403, 1416, 1417** and **1465**.

1326 (4) Any coast station using the carrier frequency 2 182 kHz for
Mar distress purposes shall be able to transmit the radiotelephone alarm signal described in No. **1465** (see also Nos. **1471, 1472** and **1473**).

1326AA (4A) Any coast station authorized to send navigational warnings
Mar2 should be able to transmit the navigational warning signal described in No. **1476AA**, **1476AB** and **1476AC**.

1326A (5) Before transmitting on the carrier frequency 2182 kHz, a
Mar station in the mobile service should listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see No. **1217**).

1326B **Mar** (6) The provisions of No. **1326A** do not apply to stations in distress.

C. Search and Rescue

1326C **Mar2** § 3A. The frequency 3 023·5 kHz may be used for intercommunication between mobile stations when engaged in coordinated search and rescue operations, including communication between these stations and participating land stations, with the carrier frequencies, classes of emission and conditions of operation defined in Appendix 27.

D. Call and Reply

1327 § 4. (1) The frequency 2 182 kHz may also be used :

1328 *a)* for call and reply in accordance with the provisions of Article 33 ;

1329 **Mar** *b)* by coast stations to announce the transmission, on another frequency, of traffic lists (see Nos. **1301** to **1304**);

1329A **Mar2** *c)* by coast stations when using the selective calling system defined in Appendix 20C with class of emission A2H, until 1 April 1977 (see No. **999E.1**).

1330 (2) In addition, an administration may assign to its stations other frequencies for call and reply.

1331 § 5. To facilitate the reception of distress calls, all transmissions on 2 182 kHz shall be kept to a minimum.

E. Watch

1332 § 6. (1) All coast stations which are open to public correspondence and which form an essential part of the coverage of the area for distress purposes shall, during their hours of service, maintain a watch on 2 182 kHz.

1333 (2) These stations shall maintain this watch by means of an operator using some aural method, such as headphones, split headphones or loudspeaker.

1334 Mar2 (3) In addition, ship stations should keep the maximum watch practicable on the carrier frequency 2 182 kHz for receiving by any appropriate means the radiotelephone alarm signal described in No. **1465**, and the navigational warning signal described in Nos. **1476AA**, **1476AB** and **1476AC**, as well as distress, urgency and safety signals.

1335 § 7. Ship stations open to public correspondence should, as far as possible during their hours of service, keep watch on 2 182 kHz.

1335A Mar2 § 7A. In order to increase the safety of life at sea and over the sea, all stations of the maritime mobile service normally keeping watch on frequencies in the authorized bands between 1 605 and 2 850 kHz shall, during their hours of service, and as far as possible, take steps to keep watch on the international distress carrier frequency 2 182 kHz for three minutes twice each hour beginning at *x* h 00 and *x* h 30 Greenwich Mean Time (G.M.T.).

F. Traffic

1336 § 8. (1) Coast stations which use 2 182 kHz for calling shall be able to use at least one other frequency in the authorized bands between 1 605 and 2 850 kHz.

1336A Mar2 (1A) Coast stations authorized to use radiotelephony on one or more frequencies other than 2 182 kHz in the authorized bands between 1 605 and 2 850 kHz shall be capable of transmitting on those frequencies class A3 emissions or class A3H, A3A and A3J emissions. However, after 1 January 1975, class A3 emissions shall no longer be authorized, and after 1 January 1982 class A3H emissions also shall no longer be authorized, except on the frequency 2 182 kHz (see also No. **1322D**).

1337 Mar* (2) Coast stations open to the public correspondence service on one or more frequencies between 1 605 and 2 850 kHz shall also be capable of transmitting class A3H emissions with a carrier frequency of 2 182 kHz, and of receiving class A3 and A3H emissions with a carrier frequency of 2 182 kHz.

1338 (3) One of the frequencies which coast stations are required to be able to use (see No. **1336**) is printed in heavy type in the List of Coast Stations to indicate that it is the normal working frequency of the stations. Supplementary frequencies, if assigned, are shown in ordinary type.

1339 (4) Working frequencies of coast stations shall be chosen in such a manner as to avoid interference with other stations.

G. Additional Provisions Applying to Region 1

1340 § 9. (1) The provisions of this sub-section apply only to stations of the maritime mobile service.

1336A.1 SUP **(Mar2)**

1341 **Mar** (2) The peak envelope power of mobile radiotelephone stations operating in the authorized bands between 1 605 and 2 850 kHz shall not exceed 400 watts.

1342 SUP **(Mar2)**

1343 § 10. (1) All stations on ships making international voyages should be able to use :

1344 **Mar** *a)* the following ship-shore working frequencies, if required by their service:

— carrier frequency 2 046 kHz (assigned frequency 2 047·4 kHz) and carrier frequency 2 049 kHz (assigned frequency 2 050·4 kHz) for class A3A and A3J emissions;

— carrier frequency 2 049 kHz also for class A3 and A3H emissions until 1 January 1982.

1345 **Mar** *b)* the following intership frequencies, if required by their service:

— carrier frequency 2 053 kHz (assigned frequency 2 054·4 kHz) and carrier frequency 2 056 kHz (assigned frequency 2 057·4 kHz) for class A3A and A3J emissions;

— carrier frequency 2 056 kHz also for class A3 and A3H emissions until 1 January 1982.

These frequencies may be used as additional ship-shore frequencies.

1346 (2) These frequencies shall not be used for working between stations of the same nationality.

1347 SUP **(Mar)**

1348 **Mar** § 11. (1) Ships frequently exchanging correspondence with a coast station of a nationality other than their own may use the same frequencies as ships of the nationality of the coast station where mutually agreed by the administrations concerned.

1348A **Mar** (2) In exceptional circumstances, if frequency usage according to Nos. **1343** to **1345** or No. **1348** is not possible, a ship station may use one of its own assigned national ship-to-shore frequencies for communication with a coast station of another nationality, under the express condition that the coast station as well as the ship station take precautions (see No. **1217**) to ensure that the use of such a frequency will not cause harmful interference to the service for which the frequency in question is authorized.

1349-1350 SUP **(Mar2)**

H. Additional Provisions Applying to Regions 2 and 3

1351 **Mar** § 13. All stations on ships making international voyages should, if required by their service, be able to use the intership carrier frequencies:

2 635 kHz (assigned frequency 2 636·4 kHz)
2 638 kHz (assigned frequency 2 639·4 kHz)

The conditions of use of these frequencies are specified in No. **445**.

Section III. Bands between 4 000 and 23 000 kHz

A. Mode of Operation of Stations

1351A **Mar2** § 13A. (1) The classes of emission to be used for radiotelephony in the maritime mobile service bands between 4 000 and 23 000 kHz are:

1349.1 SUP **(Mar2)**

a) class A3[1] for existing ship stations until 1 January 1978, or

b) class A3H[2], A3A and A3J.

1351B (2) The normal mode of operation of each coast station is
Mar indicated in the List of Coast Stations.

1351C (3) Coast radiotelephone stations employing class **A3H**[3], A3A
Mar2 or A3J emissions in the maritime mobile service bands between 4 000 and 23 000 kHz shall use the minimum power necessary to cover their service area and shall at no time use a peak envelope power in excess of 10 kW per channel.

1351D (4) Ship radiotelephone stations employing class **A3H**[4], A3A
Mar2 or A3J emissions in the maritime mobile service bands between 4 000 and 23 000 kHz shall at no time use a peak envelope power in excess of 1·5 kW per channel.

Mar2 *B. Distress*

1351E § 13B.(1) In the zone of Regions 1 and 2 south of latitude 15° N, in-
Mar2 cluding Mexico, and in the zone of Region 3 south of latitude 25° N, the carrier frequency 4 136·3 kHz (as from 1 January 1978 to be replaced by the carrier frequency 4 125 kHz) is designated to supplement the carrier frequency of 2 182 kHz for distress and safety purposes and for call and reply.

1351A.1 [1] For the use of class A3 and A3B emissions, see Resolution No. Mar2 – 13.
Mar2

1351A.2 [2] The conditions of use of class A3H emissions are specified in No. **1351I.** in
Mar2 Appendix 17 and in Resolution No. Mar2 – 13.

1351A.3 SUP **(Mar2)**

1351C.1 [3] For the use of class A3H emissions after 1 January 1978, see No. **1351I.**
Mar2

1351D.1 [4] For the use of class A3H emissions after 1 January 1978, see No. **1351I.**
Mar2

1351F Mar2 (2) In the zone of Region 3 south of latitude 25° N, the carrier frequency 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequency 6 215·5 kHz) is designated to supplement the carrier frequency of 2 182 kHz for distress and safety purposes and for call and reply.

1351G Mar2 (3) In the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, before transmitting on the carrier frequency 4 136·3 kHz or 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz respectively), a station shall listen on the frequency for a reasonable period to make sure that no distress traffic is being sent (see No. **1217**).

1351H Mar2 (4) The provisions of No. **1351G** do not apply to stations in distress.

1351I Mar2 (5) Stations using the carrier frequencies 4 136·3 kHz and 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz) in the conditions specified in Nos. **1351E** and **1351F** may continue to use class A3H emission until 1 January 1984.

Mar2

C. Call and Reply

1352 Mar2 § 14. (1) Ship stations may use the following carrier frequencies for calling in radiotelephony:

4 136·3	kHz [1,2]
6 204	kHz [3]
8 268·4	kHz
12 403·5	kHz
16 533·5	kHz
22 073·5	kHz

Notes [1 2 3] See following page.

As from 1 January 1978, the above-indicated carrier frequencies will be replaced by the following carrier frequencies:

4 125	kHz [1,2]
6 215·5	kHz [3]
8 257	kHz
12 392	kHz
16 522	kHz
22 062	kHz

1352.1 **Mar2** [1] In the United States and Canada, the carrier frequency 4 136·3 kHz (as from 1 January 1978 to be replaced by the carrier frequency 4 125 kHz) is also authorized for common use by coast and ship stations for single sideband radiotelephony on a simplex basis, provided the peak envelope power of such stations does not exceed 1 kW (see also No. **1352A.2**).

1352.2 **Mar2** [2] In the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, the carrier frequency 4 136·3 kHz is also authorized for common use by coast and ship stations for single sideband radiotelephony on a simplex basis for call, reply and safety purposes, provided the peak envelope power of such coast stations does not exceed 1 kW. In these zones the use of the carrier frequency 4 136·3 kHz for working purposes is not permitted (see also Nos. **1351E**, **1351G** and **1352.1**).

As from 1 January 1978, the carrier frequency 4 136·3 kHz will be replaced by the carrier frequency 4 125 kHz.

1352.3 **Mar2** [3] In the zone of Region 3 south of latitude 25° N, the carrier frequency 6 204 kHz is also authorized for common use by coast and ship stations for single sideband radiotelephony on a simplex basis for call, reply and safety purposes, provided the peak envelope power of such coast stations does not exceed 1 kW. In these zones the use of the carrier frequency 6 204 kHz for working purposes is not permitted (see also No. **1351F**).

As from 1 January 1978, the carrier frequency 6 204 kHz will be replaced by the carrier frequency 6 215·5 kHz.

1352A (2) Coast stations may use the following carrier frequencies for
Mar2 calling in radiotelephony: [1]

4 434·9 kHz [2]
6 518·6 kHz [2]
8 802·4 kHz
13 182·5 kHz
17 328·5 kHz
22 699 kHz

As from 1 January 1978, the above-indicated carrier frequencies will be replaced by the following carrier frequencies: [1]

4 419·4 kHz [2]
6 521·9 kHz [2]
8 780·9 kHz
13 162·8 kHz
17 294·9 kHz
22 658 kHz

1352AA § 14A. Ship and coast stations using digital selective calling in
Mar2 accordance with No. **999F** may use the frequencies specified in Nos. **1238C** and **1238D** respectively.

1352A.1 [1] These frequencies may also be used by coast stations with class A2H emission,
Mar2 when using the selective calling system defined in Appendix 20C.

1352A.2 [2] In Regions 2 and 3, the carrier frequencies 4 434·9 kHz and 6 518·6 kHz are also
Mar2 authorized for common use by coast and ship stations for single sideband radiotelephony on a simplex basis, provided the peak envelope power of such stations does not exceed 1 kW. The use of 6 518·6 kHz for this purpose should be limited to daytime use (see also No. **1352.1**).

As from 1 January 1978, the carrier frequencies 4 434·9 kHz and 6 518·6 kHz will be replaced by the carrier frequencies 4 419·4 kHz and 6 521·9 kHz, respectively.

1352B – 1353A SUP **(Mar2)**

Mar2 *D. Search and Rescue*

1353B Mar2 § 15A. The frequency 5 680 kHz may be used for intercommunication between mobile stations when engaged in coordinated search and rescue operations, including communication between these stations and participating land stations with the carrier frequencies, classes of emission and conditions of operation defined in Appendix 27.

Mar2 *E. Watch*

1354 Mar § 16. The hours of service of coast stations open to public correspondence and the frequency or frequencies on which watch is maintained shall be indicated in the List of Coast Stations.

1354A Mar2 § 16A. (1) In the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, all coast stations which are open to public correspondence and which form an essential part of the coverage of the area for distress purposes may, during their hours of service, maintain a watch on the carrier frequencies 4 136·3 kHz and/or 6 204 kHz (as from 1 January 1978 to be replaced by the carrier frequencies 4 125 kHz and 6 215·5 kHz respectively), as appropriate (see Nos. **1351E** and **1351F**). Such watch should be indicated in the List of Coast Stations.

1354B Mar2 (2) These stations should maintain this watch by means of an operator using some aural method, such as headphones, split headphones or loudspeaker.

Mar2 *F. Traffic*

1355 Mar2 § 17. (1) For the conduct of duplex telephony, the transmitting frequencies of the coast stations and of the corresponding ship stations shall be associated in pairs, as indicated in Appendix 17 and Appendix 17 Rev., except temporarily in cases where working conditions prohibit the use of paired frequencies in order to meet operational needs.

1356 Mar2 (2) The frequencies to be used for the conduct of simplex radiotelephony are shown in Appendix 17, Section C, or in Appendix 17 Rev., Section B. In these cases, the peak envelope power of the coast station transmitter shall not exceed 1 kW.

1357 Mar2 (3) The frequencies indicated in Appendix 17 or in Appendix 17 Rev. for ship station transmissions may be used by ships of any category according to traffic requirements.

1358 Mar (4) The technical characteristics of transmitters used for radiotelephony in the maritime mobile service in the bands between 4 000 and 23 000 kHz are specified in Appendix 17A.

Section IV. Bands between 156 and 174 MHz

Mar2 *A. Distress, Safety, Call and Reply*

1359 Mar2 § 18. (1) The frequency 156·8 MHz is the international distress, safety and calling frequency for radiotelephony for stations of the maritime mobile service when using frequencies in the authorized bands between 156 and 174 MHz. It is used for the distress signal and call and distress traffic, for the urgency signal, urgency traffic and the safety signal. Safety messages shall be transmitted where practicable on a working frequency after a preliminary announcement on 156·8 MHz. The class of emission to be used for radiotelephony on the frequency 156·8 MHz shall be F3 (see Appendix 19).

1359AA (1A) However, ship stations which cannot transmit on 156·8
Mar2 MHz should use any other available frequency on which attention might be attracted.

1359A (1B) The frequency 156·8 MHz may also be used:
Mar2

a) by coast and ship stations for call and reply in accordance with the provisions of Article 33;

b) by coast stations to announce the transmission on another frequency of traffic lists and important maritime information (see Nos. **1301** to **1304**).

1359B (1C) The frequency 156·8 MHz may be used by ship stations
Mar2 and coast stations for selective calling.

1360 SUP **(Mar2)**

1361 (3) Any one of the channels designated in Appendix 18 for public correspondence may be used as a calling channel if an administration so desires. Such use shall be indicated in the List of Coast Stations.

1362 (4) Ship and coast stations in the public correspondence service may use a working frequency, for calling purposes, as provided in Article 33.

1363 (5) All emissions in the band 156·725-156·875 MHz[1] capable
Mar of causing harmful interference to the authorized transmissions of stations of the maritime mobile service on 156·80 MHz are forbidden.

1363A (6) Before transmitting on the frequency 156·8 MHz, a station
Mar2 in the mobile service should listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see No. **1217**).

1363.1 [1]After 1 January 1983 this band is reduced to 156·7625-156·8375 MHz (see
Mar2 Resolution No. Mar2 – 14).

1363B Mar2 (7) The provisions of No. **1363A** do not apply to stations in distress.

1363C Mar2 (8) To facilitate the reception of distress calls all transmissions on 156·8 MHz shall be kept to a minimum and shall not exceed one minute.

B. Watch

1364 Mar2 § 19. (1) A coast station providing an international maritime mobile radiotelephone service in the band 156-174 MHz and which forms an essential part of the coverage of the area for distress purposes should, during its working hours in that band, maintain an efficient aural watch on 156·8 MHz (see Recommendation No. Mar2 – 10).

1365 (2) In addition to the watch referred to in No. **1364**, a coast station open to the international public correspondence service should, during its hours of service, maintain watch on its receiving frequency or frequencies indicated in the List of Coast Stations for receiving calls from mobile stations.

1366 (3) The method of watch on a working frequency shall be no less efficient than watch by an operator.

1367 Mar2 (4) Ship stations should, where practicable, maintain watch on 156·8 MHz when within the service area of a coast station providing international maritime mobile radiotelephone service in the band 156-174 MHz. Ship stations fitted only with VHF radiotelephone equipment operating in the authorized bands between 156 and 174 MHz, should maintain watch on 156·8 MHz, when at sea.

1367A Mar2 (5) Ship stations, when in communication with a port station may, on an exceptional basis and subject to the agreement of the administration concerned, continue to maintain watch, on the appropriate port operations frequency only, provided that watch on 156·8 MHz is being maintained by the port station.

1367B Mar2 (6) Ship stations, when in communication with a coast station in the ship movement service and subject to the agreement of the administrations concerned, may continue to maintain watch on the appropriate ship movement service frequency only, provided the watch on 156·8 MHz is being maintained by that coast station.

1368 § 20. A coast station in the port operations service in an area where 156·80 MHz is being used for distress, urgency or safety, shall, during its working hours, keep an additional watch on 156·60 MHz or other port operations frequency indicated in heavy type in the List of Coast Stations.

1368A Mar2 § 20A. A coast station in the ship movement service in an area where 156·8 MHz is being used for distress, urgency and safety shall, during its working hours, keep an additional watch on the ship movement frequencies indicated in heavy type in the List of Coast Stations.

C. Traffic

1369 § 21. (1) Where practicable, coast stations open to the international public correspondence service shall be capable of working with ship stations equipped for duplex or semi-duplex operation.

1370 Mar* (2) The method of working (single-frequency or two-frequency) specified in Appendix 18 for each channel should be used in the international services (see Resolution No. Mar2 – 14).

1371 Mar2 § 22. Communications in the port operations service shall be restricted to those relating to operational handling, the movement and the safety of ships and, in emergency, to the safety of persons. Messages of a public correspondence nature shall be excluded from this service.

1371A § 22A. Communications in the ship movement service shall be
Mar2 restricted to those relating to the movement of ships. Messages of a public correspondence nature shall be excluded from this service.

1372 § 23. (1) Coast stations, which use 156·80 MHz for calling shall be able to use at least one other authorized channel in the international maritime mobile radiotelephone service in the band 156 to 174 MHz.

1373 (2) In the band 156 to 174 MHz administrations shall, where
Mar* practicable, assign frequencies to coast and ship stations in accordance with the Table of Transmitting Frequencies given in Appendix 18 for such international services as administrations consider necessary (see Resolution No. Mar2 – 14).

1373A (3) The normal sequence in which channels should be put
Mar into use by stations of the maritime mobile service in the band 156-174 MHz is indicated by the figures in the relevant columns of Appendix 18.

1373B (4) Administrations should, as far as possible, arrange that ship
Mar stations fitted with the channels corresponding to the figures in a circle in Appendix 18 can obtain a reasonably adequate use of available services.

1373C SUP **(Mar2)**

1374 (6) In assigning frequencies to their coast stations, administra-
Mar tions should collaborate in cases where harmful interference might occur.

1375 (7) Channels are designated by numbers in the Table of Trans-
Mar* mitting Frequencies given in Appendix 18 (see Resolution No. Mar2 – 14).

1376 § 24. (1) In assigning frequencies to stations of authorized services, other than maritime mobile, administrations shall avoid the possibility of interference to international maritime services in the bands between 156 and 174 MHz.

1377 **Mar*** (2) The use of channels for maritime mobile purposes other than those indicated in the Table of Transmitting Frequencies given in Appendix 18 shall not cause harmful interference to services which operate in accordance with that Table and shall not prejudice the future development of such services (see Resolution No. Mar2 – 14).

1378 SUP (**Mar**)

1379 **Mar** § 25. The carrier power of ship station transmitters shall not exceed 25 watts for equipment brought into service after 1 January, 1970.

Mar2

ARTICLE 35A

Conditions to be Observed by Mobile Earth Stations in the Maritime Mobile-Satellite Service

1379AA § 1. Mobile earth stations shall be so established as to conform
Mar2 to the provisions of Chapter II as regards frequencies.

1379AB § 2. The frequencies of emissions of mobile earth stations shall
Mar2 be checked as often as practicable by the inspection service to which these stations are subject.

1379AC § 3. The energy radiated by receiving apparatus shall be re-
Mar2 duced to the lowest practicable value and shall not cause harmful interference to other stations.

1379AD § 4. Administrations shall take all practicable steps necessary to
Mar2 ensure that the operation of any electrical or electronic apparatus installed in mobile earth stations does not cause harmful interference to the essential radio services of stations which are operating in accordance with the provisions of these Regulations.

CHAPTER VIII

Distress, Alarm, Urgency and Safety

ARTICLE 36

Distress Signal and Traffic. Alarm, Urgency and Safety Signals

Section I. General

1380 § 1. The procedure specified in this Article is obligatory in the maritime mobile service and for communications between aircraft stations and stations of the maritime mobile service. The provisions of this Article are also applicable to the aeronautical mobile service except in the case of special arrangements between the governments concerned.

1380A Mar2 § 1A. The procedures specified in this Article are 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. **1391**, **1394**, **1397**, **1398**, **1399**, **1400**, **1481**, **1483** and **1490** are also applicable.

1381 Mar2 § 2. (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.

1381A Mar2 (1A) 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.

1382 (2) 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.

1383 § 3. The distress call and message shall be sent only on the **Mar2** authority of the master or person responsible for the ship, aircraft or other vehicle carrying the mobile station or ship earth station.

1384 § 4. In cases of distress, urgency or safety, transmissions :

1385 *a)* by radiotelegraphy, shall not in general exceed a speed of sixteen words a minute ;

1386 *b)* by radiotelephony, shall be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.

1386A § 4A. The abbreviations and signals of Appendix 13A and the **Mar** 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.

1387 § 5. (1) The characteristics of the radiotelegraph alarm signal are given in No. **1463**.

1388 (2) The characteristics of the radiotelephone alarm signal are given in No. **1465**.

1388AA (3) The characteristics of the "all ships call" in the selective **Mar2** calling system, which is reserved for alarm purposes only, are given in Appendix 20C.

1388A § 5A. Information concerning the characteristics of the emergency **Mar** position-indicating radiobeacon signals is given in Nos. **1476B**, **1476C** and **1476D**.

Section II. Distress Signal

1389 § 6. (1) The radiotelegraph distress signal consists of the group ··· — — — ···, symbolized herein by $\overline{\text{SOS}}$, transmitted as a single signal in which the dashes are emphasized so as to be distinguished clearly from the dots.

1390 (2) The radiotelephone distress signal consists of the word MAYDAY pronounced as the French expression " m'aider ".

1391 (3) These distress signals indicate that a ship, aircraft or other vehicle is threatened by grave and imminent danger and requests immediate assistance.

Section III. Distress Call and Message

1392 § 7. (1) The distress call sent by radiotelegraphy consists of :

— the distress signal $\overline{\text{SOS}}$, sent three times ;

— the word DE ;

— the call sign of the mobile station in distress, sent three times.

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.

1394 § 8. 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 acknowledgment of receipt shall not be given before the distress message which follows it is sent.

1395 § 9. (1) The radiotelegraph distress message consists of :

— the distress signal $\overline{\text{SOS}}$;

— 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.

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.

1397 **Mar2** § 10. (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.

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).

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.

1400 (4) However, in radiotelegraphy, the words NORTH or SOUTH and EAST or WEST, indicated in Nos. **1397** and **1399**, may be replaced by the letters N or S and E or W.

Section IV. Distress Call and Message Transmission Procedure

A. Radiotelegraphy

1401 § 11. (1) The radiotelegraph distress procedure shall consist of :

1402 — the alarm signal ; followed in order by :

1403 — the distress call and an interval of two minutes ;

1404 — the distress call ;

1405 — the distress message ;

1406 — two dashes of ten to fifteen seconds duration each ;

1407 — the call sign of the station in distress.

1408 (2) However, when time is vital, the second step of this pro-
Mar cedure (No. **1403**) or even the first and second steps (Nos. **1402** and **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.

1409 § 12. (1) The distress message, preceded by the distress call, shall be repeated at intervals, especially during the periods of silence prescribed in No. **1130** for radiotelegraphy, until an answer is received.

1410 (2) The intervals shall, however, be sufficiently long to allow time for stations preparing to reply to start their sending apparatus.

1411 (3) The alarm signal may also be repeated, if necessary.

1412 § 13. The transmissions under Nos. **1406** and **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.

1413 § 14. 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.

1414 § 15. 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.

B. Radiotelephony

1415 § 16. The radiotelephone distress procedure shall consist of:

1416 — the alarm signal (whenever possible) followed by:

1417 — the distress call;

1418 — the distress message.

1419 § 17. 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.

1420 § 18. (1) The distress message, preceded by the distress call, shall
Mar* be repeated at intervals, especially during the periods of silence prescribed in No. **1335A** for radiotelephony, until an answer is received.

1421 (2) The intervals shall, however, be sufficiently long to allow time for stations preparing to reply to start their sending apparatus.

1422 (3) This repetition shall be preceded by the alarm signal whenever possible.

1423 § 19. 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.

1424 § 20. 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.

Section V. Acknowledgment of Receipt of a Distress Message

1425 § 21. (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.

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.

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.

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. **1455**.

1428 § 22. The acknowledgment of receipt of a distress message shall be given in the following form :

1429 **Mar2** *a)* Radiotelegraphy:

– the distress signal $\overline{\text{SOS}}$;

– 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.

1430 *b)* Radiotelephony:
Mar2

– the distress signal MAYDAY;
– the call sign or other identification of the station sending the distress message, 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 acknowledging receipt, spoken three times;
– the word RECEIVED (or RRR spoken as ROMEO ROMEO ROMEO in case of language difficulties);
– the distress signal MAYDAY.

1431 § 23. (1) Every mobile station which acknowledges receipt of a
Mar 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. **1397**, **1399** and **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).

1432 **Mar** (2) Before transmitting the message specified in No. **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.

Section VI. Distress Traffic

1433 § 24. Distress traffic consists of all messages relating to the immediate assistance required by the mobile station in distress.

1434 § 25. In distress traffic, the distress signal shall be sent before the call and at the beginning of the preamble of any radiotelegram.

1435 § 26. 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 VII of the present Article, has sent the distress message. These stations may, however, delegate the control of the distress traffic to another station.

1436 **Mar** § 27. 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:

1437 – in radiotelegraphy, the abbreviation QRT, followed by the distress signal $\overline{\text{SOS}}$;

1438 – in radiotelephony, the signal SEELONCE MAYDAY, pronounced as the French expression " silence, m'aider ".

1439 § 28. 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 :

1440 *a)* in radiotelegraphy, the abbreviation QRT, followed by the word DISTRESS and its own call sign ;

1441 *b)* in radiotelephony, the word SEELONCE, pronounced as the French word " silence ", followed by the word DISTRESS and its own call sign.

1442 § 29. (1) In radiotelegraphy, the use of the signal QRT $\overline{\text{SOS}}$ shall be reserved for the mobile station in distress and for the station controlling distress traffic.

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.

1444 § 30. (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.

1445 (2) Until they receive the message indicating that normal working may be resumed (see No. **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.

1446 § 31. 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. **1445** and does not interfere with the distress traffic.

1447 § 32. 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. **1477**, **1478**, **1488** and **1489** should only be sent once (e.g. XXX DE ABC QSW . . .).

1448 § 33. A land station or an earth station in the maritime mobile-
Mar2 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.

1449 § 34. (1) When distress traffic has ceased on a frequency which has
Mar2 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.

1449A (1A) When complete silence is no longer necessary on a fre-
Mar2 quency 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.

1450 (2) *a)* In radiotelegraphy, the message referred to in No. **1449**
Mar2 consists of:

- the distress signal $\overline{\text{SOS}}$;
- 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 was in distress;
- the service abbreviation QUM.

b) In radiotelegraphy, the message referred to in No. **1449A** consists of:

- the distress signal $\overline{\text{SOS}}$;
- 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.

1451 **Mar2** (3) *a)* In radiotelephony, the message referred to in No. **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. **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".

1451A § 34A. When a station in distress has delegated control of distress
Mar 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. **1449.**

Section VII. Transmission of a Distress Message by a Station not itself in Distress

1452 § 35. 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 :

1453 *a)* when the station in distress is not itself in a position to transmit the distress message ;

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 ;

1455 *c)* when, although not in a position to render assistance, it has heard a distress message which has not been acknowledged.

1456 Mar2 § 36. (1) The transmission of a distress message under the conditions prescribed in Nos. **1453** to **1455** 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. **1107**, **1108**, **1208**, **1321**, **1323**, **1324**, **1359** and **1359AA**).

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.

1458 (3) This call consists of :

1459 *a)* Radiotelegraphy :

- the signal $\overline{\text{DDD}}$ $\overline{\text{SOS}}$ $\overline{\text{SOS}}$ $\overline{\text{SOS}}$ $\overline{\text{DDD}}$;
- the word DE ;
- the call sign of the transmitting station, sent three times.

1460 Mar *b)* Radiotelephony:

- the signal MAYDAY RELAY pronounced as the French expression "m'aider relais", 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 transmitting station, spoken three times.

1461 § 37. 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. **1459**.

1462 § 38. When a station of the mobile service transmits a distress message under the conditions mentioned in No. **1455**, it shall take all necessary steps to notify the authorities who may be able to render assistance.

1462A § 38A. A ship station should not acknowledge receipt of a distress
Mar message transmitted by a coast station under the conditions mentioned in Nos. **1452** to **1455** until the master or person responsible has confirmed that the ship station concerned is in a position to render assistance.

Section VIII. Radiotelegraph and Radiotelephone Alarm Signals

1463 § 39. (1) The radiotelegraph alarm signal consists of a series of twelve dashes sent in one minute, the duration of each dash being four seconds and the duration of the interval between consecutive dashes one second. It may be transmitted by hand but its transmission by means of an automatic instrument is recommended.

1464 (2) Any ship station working in the bands between 405 and 535 kHz, which is not provided with an automatic apparatus for the transmission of the radiotelegraph alarm signal shall be permanently equipped with a clock, clearly marking the seconds, preferably by means of a sweep hand completing one revolution per minute. This clock shall be placed at a point sufficiently visible from the operator's table so that the operator may, by keeping it in view, easily and correctly time the different elements of the alarm signal.

1465 § 40. (1) The radiotelephone alarm signal consists of two substantially sinusoidal audio frequency tones transmitted alternately. One tone shall have a frequency of 2 200 Hz aand the other a frequency of 1 300 Hz, the duration of each tone being 250 milliseconds.

1466 (2) The radiotelephone alarm signal, when generated by automatic means, shall be sent continuously for a period of at least thirty seconds but not exceeding one minute; when generated by other means, the signal shall be sent as continuously as practicable over a period of approximately one minute.

1466AA (2A) The radiotelephone alarm signal transmitted by coast
Mar2 stations shall be that described in Nos. **1465** and **1466**, which may be followed by a single tone of 1 300 Hz for 10 seconds.

1466A (3) The use of the radiotelephone alarm signal (see No. **1465**)
Mar by emergency position-indicating radiobeacons is indicated in Article 36, Section VIIIA.

1466B (4) To reduce unnecessary alarm signal emissions, tests of the
Mar2 radiotelephone alarm signal on the carrier frequency 2 182 kHz are prohibited (see No. **1295A**).

1466C (5) As an exception such tests are permitted for radiotelephone
Mar2 emergency equipment which can operate only on the international distress frequency 2 182 kHz, in which case a suitable artificial aerial shall be employed.

1467 § 41. The purpose of these special signals is :

1468 *a)* in radiotelegraphy, the actuation of automatic devices giving the alarm to attract the attention of the operator when there is no listening watch on the distress frequency ;

1469 *b)* in radiotelephony, to attract the attention of the person on
Mar2 watch or to actuate automatic devices giving the alarm, or activating a silenced loudspeaker for the message which is to follow.

1470 § 42. (1) These signals shall only be used to announce :

1471 *a)* that a distress call or message is about to follow ; or

1472 *b)* the transmission of an urgent cyclone warning,
Mar which should be preceded by the safety signal (see Nos. **1488** and **1489**). In this case they may only be used by coast stations duly authorized by their government; or

1473 *c)* the loss of a person or persons overboard. In this case they may only be used when the assistance of other ships is required and cannot be satisfactorily obtained by the use of the urgency signal only, but the alarm signal shall not be repeated by other stations. The message shall be preceded by the urgency signal (see Nos. **1477** and **1478**).

1473A (2) The radiotelephone alarm signal may be used by emergency
Mar position-indicating radiobeacons of Type H (see No. **1476C**).

1474 (3) In the cases referred to in Nos. **1472** and **1473**, an interval
Mar of two minutes should, if possible, separate the end of the radiotelegraph alarm signal and the beginning of the warning or the message.

1475 § 43. Automatic devices intended for the reception of the radiotelegraph and radiotelephone alarm signals shall meet the requirements specified in Appendix 20.

1476 § 44. Before any such automatic device is approved for use on ships, the administration having jurisdiction over those ships shall be satisfied by practical tests made under operating conditions equivalent to those obtaining in practice (including interference, vibration, etc.), that the apparatus complies with the provisions of these Regulations.

Mar2 **Section VIIIAA. Navigational Warning Signal**

1476AA § 44AA. (1) The navigational warning signal consists of one
Mar2 substantially sinusoidal tone of the frequency 2 200 Hz, interrupted so that the durations of tone and space are 250 milliseconds each.

1476AB Mar2 (2) The signal should be transmitted by coast stations continuously for a period of 15 seconds before vital navigational warnings on radiotelephony in the medium frequency maritime bands.

1476AC Mar2 (3) The purpose of the signal is to attract the attention of the person on watch using a loudspeaker or a filtered loudspeaker, or to activate an automatic device to activate a silenced loudspeaker for the message which is to follow.

Section VIIIA. Emergency position-indicating radiobeacon signals

1476A Mar §44A.(1) The emergency position-indicating radiobeacon signal consists of:

1476B Mar *a)* for medium frequencies, i.e. 2 182 kHz[1]:

1) a keyed emission modulated by a tone of 1 300 Hz, and having a ratio of the period of the emission to the period of silence equal to or greater than one, and an emission duration between one and five seconds; *or*

1476C Mar 2) the radiotelephone alarm signal (see No. **1465**) followed by the Morse letter B and/or the call sign of the ship to which the radio-beacon belongs transmitted by keying a carrier modulated by a tone of either 1 300 or 2 200 Hz;

1476B.1 Mar [1] In Japan, there are emergency position-indicating radiobeacons which transmit the distress signal and identification on frequencies between 2 089·5 kHz and 2 092·5 kHz using class A1 emissions.

1476D Mar

b) for very high frequencies, i.e. 121·5 MHz and 243 MHz, the signal characteristics shall be in accordance with those recommended by the Organizations mentioned in Resolution No. Mar 7.

1476E Mar (2) Only the signal specified in No. **1476B** shall be used by low power radiobeacons (Type L) and it shall be transmitted continuously.

1476F Mar (3) High power radiobeacons (Type H) may transmit either of the signals specified in Nos. **1476B** or **1476C** with a keying cycle which consists of the keying signal for between thirty and fifty seconds followed by a period of silence of between thirty and sixty seconds.

1476G Mar (4) However, the keying cycles in Nos. **1476E** and **1476F** may be interrupted for speech transmission if administrations so desire.

1476H Mar (5) The essential purpose of the emergency position-indicating radiobeacon signals is to facilitate determining the position of survivors in search and rescue operations.

1476I Mar (6) These signals shall indicate that one or more persons are in distress, may no longer be on board a ship or an aircraft, and that receiving facilities may not be available.

1476J Mar (7) Any mobile service station receiving one of these signals, while no distress or urgent traffic is being passed, shall consider that the provisions of Nos. **1452** and **1453** are applicable.

1476K Mar (8) Equipment designed to transmit emergency position-indicating radiobeacon signals on the carrier frequency 2 182 kHz shall meet the requirements specified in Appendix 20A.

1476L Mar2 (9) Equipment designed to transmit emergency position indicating radiobeacon signals on the frequencies 121·5 MHz and 243 MHz shall be in agreement with the recommendations and standards recommended by the Organizations mentioned in Resolution No. Mar 7.

Section IX. Urgency Signal

1477 § 45. (1) In radiotelegraphy, the urgency signal consists of three repetitions of the group XXX, sent with the letters of each group and the successive groups clearly separated from each other. It shall be transmitted before the call.

1478 Mar2 (2) In radiotelephony, the urgency signal consists of three repetitions of the group of words PAN PAN, each word of the group pronounced as the French word "panne". The urgency signal shall be transmitted before the call.

1479 Mar2 § 46. (1) The urgency signal shall be sent only on the authority of the master or the person responsible for the ship, aircraft or other vehicle carrying the mobile station or mobile earth station in the maritime mobile-satellite service.

1480 Mar2 (2) The urgency signal may be transmitted by a land station or an earth station in the maritime mobile-satellite service at specified fixed points only with the approval of the responsible authority.

1481 § 47. (1) The urgency signal indicates that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or the safety of a person.

1482 Mar2 (2) The urgency signal and the message following it shall be sent 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.

1482A Mar2 (2A) However, in the maritime mobile service, the message shall be transmitted on a working frequency:

a) in the case of a long message or a medical call or

b) in areas of heavy traffic in the case of the repetition of a message transmitted in accordance with the provision as laid down in No. **1482**.

An indication to this effect shall be given at the end of the call.

1483 (3) The urgency signal shall have priority over all other com-
Mar2 munications, except distress. All stations which hear it shall take care not to interfere with the transmission of the message which follows the urgency signal.

1483A (4) In the maritime mobile service, urgency messages may be
Mar addressed either to all stations or to a particular station.

1484 § 48. Messages preceded by the urgency signal shall, as a general rule, be drawn up in plain language.

1485 § 49. (1) Mobile stations which hear the urgency signal shall continue
Mar to listen for at least three minutes. At the end of this period, if no urgency message has been heard, a land station should, if possible, be notified of the receipt of the urgency signal. Thereafter, normal working may be resumed.

1486 (2) However, land and mobile stations which are in communication on frequencies other than those used for the transmission of the urgency signal and of the call which follows it may continue their normal work without interruption provided the urgency message is not addressed " to all stations " (CQ).

1487 § 50. When the urgency signal has been sent before transmitting a message " to all stations " (CQ) and which calls for action by the stations receiving the message, the station responsible for its transmission shall cancel it as soon as it knows that action is no longer necessary. This message of cancellation shall likewise be addressed " to all stations " (CQ).

Section X. Safety Signal

1488 § 51. (1) In radiotelegraphy, the safety signal consists of three repetitions of the group TTT, the individual letters of each group, and the successive groups being clearly separated from each other. It shall be sent before the call.

1489 (2) In radiotelephony, the safety signal consists of the word SÉCURITÉ pronounced clearly as in French, spoken three times and transmitted before the call.

1490 § 52. (1) The safety signal indicates that the station is about to
Mar2 transmit a message containing an important navigational or important meteorological warning.

1491 (2) The safety signal and call shall be sent on one or more of
Mar2 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.

1492 (3) The safety message which follows the call should be sent on
Mar2 a working frequency. A suitable announcement to this effect shall be made at the end of the call.

1492A (4) In the maritime mobile service, safety messages shall
Mar generally be addressed to all stations. In some cases, however, they may be addressed to a particular station.

1493 § 53. (1) With the exception of messages transmitted at fixed times,
Mar* the safety signal, when used in the maritime mobile service, shall be transmitted towards the end of the first available period of silence (see No. **1130** for radiotelegraphy and No. **1335A** for radiotelephony); the message shall be transmitted immediately after the period of silence.

1494 (2) In the cases prescribed in Nos. **1612**, **1615** and **1619**, the safety signal and the message which follows it shall be transmitted as soon as possible, and shall be repeated at the end of the first period of silence which follows.

1495 § 54. All stations hearing the safety signal shall listen to the safety message until they are satisfied that the message is of no concern to them. They shall not make any transmission likely to interfere with the message.

CHAPTER IX

Mar2

Radiotelegrams, Radiotelephone Calls and Radiotelex Calls

ARTICLE 37

Mar2

Order of Priority of Communications in the Mobile Service except in the Maritime Mobile Service and in the Maritime Mobile-Satellite Service

1496 The term " communication " as used in this Article means radiotelegrams as well as radiotelephone calls. The order of priority for communications in the mobile service shall be as follows :

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.
6. Communications relating to the navigation, movements, and needs of ships, and weather observation messages destined for an official meteorological service.
7. Government radiotelegrams : Priorité Nations.
8. Government communications for which priority has been requested.
9. Service communications relating to the working of the radiocommunication service or to communications previously exchanged.
10. Government communications other than those shown in 7 and 8 above, and all other communications.

Mar2

ARTICLE 37A

Order of Priority of Communications in the Maritime Mobile Service and in the Maritime Mobile-Satellite Service

1496A Mar2 The term "communication" as used in this Article means radiotelegrams, radiotelephone calls and radiotelex calls. The order of priority for communications in the maritime mobile service and the maritime mobile-satellite service shall be as follows:

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. FLATPRIORITENATIONS – Government radio telegrams relative 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 7 and 8 above, ordinary private communications, RCT radiotelegrams and press radiotelegrams.

ARTICLE 38

Indication of the Station of Origin of Radiotelegrams

1497 § 1. When, because of duplication of names, the name of a station is followed by its call sign, the latter shall be separated from the name of the station by a fraction bar. Example: Oregon/OZOC (not Oregonozoc); Rose/DDOR (not Roseddor).

1498 § 2. When a coast or aeronautical station retransmits over the general network of telecommunication channels a radiotelegram received from a mobile station, it shall transmit, as office of origin, the name of the mobile station in which the radiotelegram originated as this name appears in the appropriate list of stations, followed by its own name. Where appropriate, the provisions of No. **1497** shall also apply.

1499 § 3. In order to avoid any confusion with a telegraph office or a fixed station of the same name, the coast or aeronautical station may, if desirable, complete the indication of the name of the mobile station of origin by the word "ship" or "aircraft" placed before the name of the station of origin.

ARTICLE 39

Routing of Radiotelegrams

1500 § 1. (1) In routing radiotelegrams, a mobile station should, as a general rule, give preference to the coast or aeronautical station established on the territory of the country of destination, or the country likely to provide the most suitable transit route for radiotelegrams.

1501 **Mar2*** (2) However, to expedite or facilitate the routing of radiotelegrams to a coast or aeronautical station, a mobile station may transmit them to another mobile station. The latter shall dispose of such radiotelegrams in the same manner as if they originated with itself (see the Additional Radio Regulations, Articles 10 and 10A).

1502 § 2. A mobile station, when using class A2 emission in the bands between 405 and 535 kHz to transmit radiotelegrams to a coast or aeronautical station which is not the nearest to it, shall cease working or shall change frequency or class of emission upon the first request made by a coast or aeronautical station which is nearer to the mobile station than the coast or aeronautical station being worked, when this request is based upon interference which the working of the mobile station causes to the nearer coast or aeronautical station.

1503 § 3. If the sender of a radiotelegram handed in at a mobile station has indicated the coast or aeronautical station to which he desires his radiotelegram to be sent, the mobile station shall, in order to effect this transmission to the coast or aeronautical station indicated, wait, if necessary, until the conditions specified in Nos. **1500** to **1502** above are fulfilled.

1504 § 4. In order to facilitate disposal of traffic, and subject to such restrictions as individual governments may impose, coast stations may, in exceptional circumstances and with discretion, without incurring additional charges, exchange radiotelegrams and service messages relating thereto.

ARTICLE 40*)

Mar2

Accounting for Radiotelegrams and Radiotelephone Calls except in the Maritime Mobile Service

Section I. General

1505 § 1. In principle, land station and ship and aircraft station charges shall not be entered in the international telegraph and telephone accounts.

1506 § 2. Administrations reserve to themselves the right to make, between themselves and with the recognized private operating agencies concerned, different arrangements with a view to the adoption of other accounting systems, more specifically the adoption, as far as practicable, of the system by which the land station and ship and aircraft station charges follow the radiotelegrams and radiotelephone calls from country to country through the medium of the telegraph and telephone accounts.[1] Such arrangements are subject to previous agreement between the administrations concerned.

1507 § 3. In the absence of a different arrangement in accordance with the provisions of No. **1506**, the accounts relating to these charges are prepared monthly by the administrations to which the land stations are subject and are forwarded by them to the administrations or accounting authorities concerned.

1508 § 4. (1) Where the enterprise operating the land station is not the administration of the country, this enterprise may replace the administration of that country as far as accounts are concerned. In this event the provisions of Nos. **1510** to **1559** shall apply to such enterprise in the same manner as to an administration.

1509 (2) When the provisions of No. **1082** are not followed, and the operating enterprise controlling the mobile station is not known, accounts should be sent to the administration to which the mobile station is subject, for forwarding to the appropriate accounting authority for settlement.

1506.1 [1] Canada and the United States of America request that this system be adopted to the greatest possible extent in relations between themselves and other countries.

*) *Note by the General Secretariat:* References to the Maritime Mobile Service in this Article should no longer be taken into account (see Foreword).

Section II. Establishment of Accounts for Radiotelegrams

1510 § 5. (1) In the case of radiotelegrams originating in ship and aircraft stations, the administration to which the land station is subject shall debit the administration to which the mobile station of origin is subject (or, if appropriate, the administration to which the operating enterprise of the mobile station of origin is subject, or the operating enterprise direct) with :

— the land station charges,
— the charges relating to transmission over the general network of telecommunication channels, which will hereafter be called telegraph charges,
— the total charges collected for prepaid replies,
— land station and telegraph charges made for collation,
— charges collected for delivery by express as well as the supplementary charges fixed by the Telegraph Regulations for delivery by post or by air mail,
— charges fixed by the Telegraph Regulations for copies of multiple telegrams.

1511 (2) So far as concerns transmission over the general network of telecommunication channels, radiotelegrams are treated, from the point of view of accounting, in conformity with the provisions of the Telegraph Regulations.

1512 § 6. (1) For radiotelegrams to a country other than that to which the land station belongs, the telegraph charges to be settled in accordance with the above provisions shall be the charges shown in the table of rates relating to international telegraph correspondence, or those fixed by special arrangements between the administrations and/or recognized private operating agencies of adjacent countries and published by those administrations or recognized private operating agencies.

1513 (2) However, account must be taken of the fact that a seven-word minimum charge is levied for every radiotelegram ; for press radiotelegrams this minimum is fourteen words.

1514 § 7. (1) In the case of radiotelegrams addressed to ship and aircraft stations, the administration to which the office of origin is subject shall be debited direct by the administration to which the land station is subject, with the land station and ship or aircraft station charges plus the land station and ship or aircraft station charges applicable to collation and for copies of multiple telegrams, but only where the radiotelegram has been transmitted to the ship or aircraft station. In the case provided for in No. **2132** of the Additional Radio Regulations, however, the administration to which the office of origin is subject shall be debited with the land station charge by the administration to which the land station is subject.

1515 (2) Unless otherwise arranged, the administration to which the office of origin is subject shall be debited through the medium of the telegraph accounts, from country to country if necessary, by the administration to which the land station is subject, with the telegraph charges and the total charges for prepaid replies.

1516 (3) When the radiotelegram has been transmitted, the administration to which the land station is subject credits the administration to which the mobile station of destination is subject (or, if appropriate, the administration to which the operating enterprise of the mobile station of destination is subject, or the operating enterprise direct) :

1517 *a)* with the ship or aircraft station charge ;

1518 *b)* if occasion arises, with

- — the charges due to intermediate ship or aircraft stations,
- — the total charge collected for prepaid replies,
- — the ship or aircraft station charge for collation,
- — the charges fixed by the Telegraph Regulations for copies of multiple telegrams.

1519 § 8. When the charge for a radiotelegram is paid for wholly or partly by means of a reply voucher, the radiotelegram shall be treated for accounting purposes as if the charge had been paid in cash.

1520 § 9. Radiotelegrams exchanged between stations in ships or aircraft:

1521 *a) without the intervention of land stations :*

except when other arrangements have been made, the enterprise to which the station of destination is subject debits the enterprise to which the station of origin is subject with all charges collected, less the charges due to this latter station ;

1522 *b) through the medium of a single land station :*

the administration to which the land station is subject debits the administration to which the mobile station of origin is subject (or, if appropriate, the administration to which the operating enterprise of the mobile station of origin is subject, or the operating enterprise direct) with all the charges collected, less the charges due to that mobile station, in accordance with the provisions of Nos. **1510** and **1511**. Thereafter the provisions of Nos. **1514** to **1518** are applied ;

1523 *c) through the medium of two land stations :*

the administration to which the first land station is subject debits the administration to which the mobile station of origin is subject (or, if appropriate, the administration to which the operating enterprise of the mobile station of origin is subject, or the operating enterprise direct) with all the charges collected, less the charges due to that mobile station, in accordance with the provisions of Nos. **1510** and **1511**. The provisions of Nos. **1514** to **1518** are then applied, the first land station being regarded as the office of origin as far as the accounts are concerned.

1524 § 10. In the case of radiotelegrams which, at the request of the sender, are forwarded through one or two intermediate ship or aircraft stations, each such intermediate station debits with the charge accruing to it for transit :

1525 *a)* the ship or aircraft station of destination, in the case of a radiotelegram originating on land and destined for a ship or aircraft station, or in the cases contemplated in Nos. **1522** and **1523** (second radiotelegraph transmission) ;

1526 *b)* the ship or aircraft station of origin, in the case of a radiotelegram originating on a ship or aircraft station and destined for the land, or in the cases provided for in Nos. **1521** to **1523** (first radiotelegraph transmission).

Section III. Establishment of Accounts for Radiotelephone Calls

1527 § 11. In the case of radiotelephone calls originating in ship or aircraft stations, the administration to which the land station is subject :

— debits the administration to which the mobile station of origin is subject (or, if appropriate, the administration to which the operating enterprise of the mobile station of origin is subject, or the operating enterprise direct) with the land station charges, the charges relating to transmission over the telephone system of the country of the land station, and, where appropriate, with the charges relating to transmission over the international telephone system,

— credits, where appropriate, through the international telephone accounts, the administration or recognized private operating agency of the country of destination, and the administrations or recognized private operating agencies of intermediate countries, if any, with the charges relating to transmission over the international telephone system.

1528 § 12. (1) In the case of radiotelephone calls destined for ship or aircraft stations and originating in the country to which the land station belongs, the administration to which the land station is subject credits the administration to which the mobile station of destination is subject (or, if appropriate, the administration to which the operating enterprise of the mobile station of destination is subject, or the operating enterprise direct) with the ship or aircraft station charges.

1529 (2) In the case of radiotelephone calls destined for ship or aircraft stations and originating in a country other than that to which the land station belongs :

1530 *a)* the administration to which the land station is subject :

— debits the administration or recognized private operating agency of the country of origin with the land station and ship or aircraft station charges,

— credits the administration to which the mobile station of destination is subject (or, if appropriate, the administration to which the operating enterprise of the mobile station of destination is subject, or the operating enterprise direct) with the ship or aircraft station charges ;

1531 *b)* the administration or recognized private operating agency of the country in which the calls originate credits, through the international telephone accounts, the administration of the country to which the land station is subject, and the administrations or recognized private operating agencies of intermediate countries, if any, with the charges relating to transmission over the international telephone system.

1532 § 13. The provisions of Nos. **1520** to **1523** relative to the accounting for radiotelegrams exchanged between stations on ships or aircraft shall be followed in the case of radiotelephone calls exchanged between stations on ships or aircraft.

1533 § 14. For accounting purposes, collect radiotelephone calls shall be regarded as originating in the country or mobile station of destination.

Section IV. Exchange and Verification of Accounts. Payment of Balances

1534 § 15. (1) In principle, radiotelegrams and radiotelephone calls are entered individually, with all necessary particulars, in the monthly accounts which serve as a basis for the accounting mentioned in this

Article. A specimen statement is given in Appendix 21. The accounts, in duplicate, are forwarded before the end of the third month following that to which the accounts relate.

1535 (2) However, when by special agreement, the accounts cover a period of more than one month, these accounts shall be forwarded before the end of the third month following the last month of the period to which the accounts in question relate.

1536 § 16. The acceptance of an account is notified, or observations thereon made, within a period of six months from the date of its despatch. An administration or recognized private operating agency which has not received any observations in this period shall be entitled to regard the account as admitted by right.

1537 § 17. The periods mentioned in Nos. **1534** and **1536** may be exceeded when exceptional difficulties occur in the transmission of the documents by post between the land stations and the administrations to which they are subject. However, the debtor administration or recognized private operating agency 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 to which the accounts relate.

1538 § 18. Unless otherwise arranged, the following provisions are applicable to the radiotelegraph and radiotelephone accounts referred to in the present Article.

1539 § 19. (1) When there are differences between the accounts prepared by two administrations, two recognized private operating agencies, or an administration and a recognized private operating agency, the monthly accounts shall be admitted without revision in the following cases :

Amount of the account of the creditor	Difference not exceeding
less than 1,000 gold francs	10 gold francs
from 1,000 to 100,000 gold francs	1% of the amount of the creditor's account
more than 100,000 gold francs	1% of the first 100,000 gold francs, and 0.5% of the remainder of the creditor's account.

1540 (2) A revision which has been begun shall be stopped following the exchange of observations between the two administrations and/or recognized private operating agencies concerned, as soon as the difference is brought down to a sum not exceeding the maximum fixed by No. **1539**.

1541 § 20. (1) Immediately after the acceptance of the accounts proper to the last month of the quarter, a quarterly account showing the balance for the whole of the three months of the quarter shall, unless otherwise arranged between the two administrations and/or recognized private operating agencies concerned, be prepared by the creditor administration or recognized private operating agency and forwarded in duplicate to the debtor administration or recognized private operating agency, which, after verification, shall return one of the copies endorsed with its acceptance.

1542 (2) In default of acceptance of one or other of the monthly accounts of a given quarter before the expiration of the sixth month following the quarter to which the accounts relate, the quarterly account may, nevertheless, be prepared by the creditor administration or recognized private operating agency with a view to a provisional settlement which shall become obligatory for the debtor administration or recognized private operating agency under the conditions fixed by No. **1544**.

1543 (3) Adjustments later agreed upon shall be included in a subsequent quarterly settlement.

1544 § 21. The quarterly account shall be verified and the amount shall be paid within a period of six weeks dating from the day on which it is received by the debtor administration or recognized private operating agency. Beyond this period, the creditor administration or recognized private operating agency shall have the right to charge interest at the rate of six per cent per annum, reckoned from the day following the date of expiration of the said period.

1545 § 22. (1) The balance of the quarterly account in gold francs shall be paid by the debtor administration or recognized private operating agency to the creditor administration or recognized private operating agency by a sum equivalent to its value, in conformity with the provisions of these Regulations and of such special monetary arrangements as may exist between the countries of the administrations or recognized private operating agencies concerned.

1546 (2) This payment shall be effected, without cost to the creditor administration or recognized private operating agency [1], by one of the following methods :

1547 *a)* at the choice of the debtor administration or recognized private operating agency, in gold or by means of cheques or drafts payable on demand in the capital or in a commercial centre of the creditor country, or by transfer on a bank of this capital or of a commercial centre of the creditor country ; cheques, drafts or transfers shall be made out in one of the currencies specified under Part A of Appendix 22 ;

1546.1 [1] Taxes, clearing expenses, impositions and commissions which may be levied on the creditor administration or recognized private operating agency by the country in which they operate shall not be considered as expenses to be borne by the debtor administration or recognized private operating agency.

1548 *b)* by agreement between the two administrations and/or recognized private operating agencies, through the intermediary of a bank clearing through the Bank of International Settlements at Basle ;

1549 *c)* by any other means agreed upon between the parties concerned.

1550 (3) The currencies used for payment, and the rules for converting the balances expressed in gold francs into the currency of payment, shall be those shown in Appendix 22.

1551 (4) Any loss or gain resulting from the settlement of balances by cheque or draft shall be treated according to the following rules :

1552 *a)* any loss or gain arising from an unforeseen rise or fall affecting the gold par rate of one of the currencies specified in (3) *a)*, (3) *b)* or (3) *c)* of § 2 of Appendix 22 and occurring up to and including the day on which the cheque or draft is received, shall be divided equally between the administrations and/or recognized private operating agencies concerned ;

1553 *b)* when a considerable variation occurs in the gold par rate or in the rate upon which conversion was based, the provisions indicated in No. **1552** shall apply, except when a rise or fall is caused by a revaluation or devaluation of the currency of the creditor country ;

1554 *c)* in the case of delay in the despatch of a cheque or draft which has been delivered, or in the transmission to a bank of a transfer order, the debtor administration and/or recognized private operating agency shall bear any loss incurred as a result of such delay ; any unreasonable period [1] which may have elapsed between delivery by the bank and forwarding of the cheque or draft shall be considered as a delay ; if any

---

1554.1 [1] A period greater than four working days counted from the day of issue of the cheque or draft (but not including that day) until the day of forwarding of this cheque or draft.

gain is incurred as a result of such delay, one half shall be made good to the debtor administration or recognized private operating agency ;

1555 *d)* in any case provided for in Nos. **1552** to **1554**, differences not exceeding five per cent shall be ignored ;

1556 *e)* the provisions of Nos. **1546** to **1550** shall be observed for the settlement of differences ; and the period of settlement shall begin from the date of receipt of the cheque or draft.

1557 (5) When the amount of the balance is more than 5,000 gold francs (five thousand), the date of the despatch of a cheque or a draft, the date of its purchase and its amount, or else the date of the transfer order and its amount, shall, upon a request by the creditor administration or recognized private operating agency, be notified by the debtor administration or recognized private operating agency by means of a service telegram.

Section V. Period of Retention of Accounting Records

1558 § 23. (1) The originals of radiotelegrams and documents relating to radiotelegrams and radiotelephone calls retained by the administrations and/or recognized private operating agencies shall be held, with all necessary precautions from the point of view of secrecy, until the settlement of the relative accounts and, in any case, for at least six months counting from the month in which the accounts were sent.

1559 (2) However, should an administration or recognized private operating agency deem it desirable to destroy such documents before the above-mentioned period, and hence is not 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 which might otherwise have been observed.

Mar2

ARTICLE 40A

Accounting for Radiotelegrams, Radiotelephone Calls and Radiotelex Calls in the Maritime Mobile Service

Section I. General

1559AA § 1. For the purposes of this Article, the following terms shall
Mar2 have the meanings defined below:

1559AAA *Accounting authority:* Any organization notified by an ad-
Mar2 ministration to the Secretary-General for inclusion in the List of Ship Stations as being responsible for settling radio maritime accounts for some or all of the ship stations licensed by that administration. An accounting authority may be the administration itself, a private operating agency, a ship station licensee or an operating enterprise authorized by a ship station licensee to receive and settle accounts on his behalf.

1559AAB *Land-line charges:* Charges relating to transmission over
Mar2 the general network of telecommunication channels, national and international.

1559AB § 2. In principle, land station and mobile station charges shall
Mar2 not be entered in the international telegraph and telephone accounts.

1559AC § 3. The following charges shall be included in the accounts:
Mar2

1559AD (1) In the case of radiotelegrams, radiotelephone calls and
Mar2 radiotelex calls originating in mobile stations,

– the land station charges,

– the land-line charges,

– the accessory charges for radiotelegrams which have to be considered in the accounting, and

– the supplementary charges for radiotelephone calls with special facilities.

1559AE (2) In the case of radiotelegrams, radiotelephone calls and
Mar2 radiotelex calls destined for mobile stations and passing through a land station of another country,

– the land station charges,

– the mobile station charges.

1559AF (3) As far as the transmission over the general international
Mar2 network of telecommunication channels is concerned, and from the point of view of accounting, the provisions laid down in the Telegraph Regulations and Telephone Regulations, taking into account C.C.I.T.T. Recommendations and Instructions, shall apply to radiotelegrams, radiotelephone calls and radiotelex calls.

1559AG (4) The land-line charges shall be included in the international
Mar2 telegraph and telephone accounts and shall be accounted for according to the provisions of the Telegraph Regulations and Telephone Regulations, taking into account C.C.I.T.T. Recommendations and Instructions.

1559AH § 4. Administrations reserve to themselves the right to make,
Mar2 between themselves and with the recognized private operating agencies concerned, different arrangements with a view to the adoption of other accounting systems, more specifically the adoption, as far as practicable, of the system by which the land station and mobile station charges follow the radiotelegrams, radiotelephone calls and radiotelex calls from country to country through the medium of the telegraph and telephone accounts.[1] Such arrangements are subject to previous agreement between the administrations concerned.

1559AH.1 [1] Canada and the United States of America request that this system be adopted to
Mar2 the greatest possible extent in relations between themselves and other countries.

1559AI § 5. In the absence of a different arrangement in accordance
Mar2 with the provisions of No. **1559AH**, the accounts relating to these charges are prepared monthly by the administrations to which the land stations are subject and are forwarded by them to the accounting authorities concerned.

1559AJ § 6. The country on whose territory is established a land station
Mar2 serving as intermediary for the exchange of radiotelegrams, radiotelephone calls and radiotelex calls between a mobile station and another country, is considered, as far as the application of land-line charges is concerned, as the country of origin or destination and not as a transit country.

1559AK § 7. (1) Where the enterprise operating the land station is not the
Mar2 administration of the country, this enterprise may replace the administration of that country as far as accounts are concerned. In this event, all the provisions of Article 40A shall apply to such enterprise in the same manner as to an administration.

1559AL (2) When the provisions of No. **1082** are not followed, and the
Mar2 operating enterprise controlling the mobile station is not known, accounts should be sent to the administration to which the mobile station is subject, for forwarding to the appropriate accounting authority for settlement.

1559AM (3) If an accounting authority does not meet its obligations, the
Mar2 administration which has issued the licence for the ship station should assist, as far as possible, the creditor administration in its efforts to have the accounts settled.

1559AN (4) In the general interest of administrations, the number of
Mar2 accounting authorities shall be kept to the minimum required for the efficient settlement of accounts.

Section II. Establishment of Accounts for Radiotelegrams

1559AO § 8. (1) In the case of radiotelegrams originating in mobile stations,
Mar2 the administration to which the land station is subject shall debit the administration to which the mobile station of origin is subject (or, if appropriate, the accounting authority) with:

- the land station charges,
- the land-line charges,
- the total charges collected for prepaid replies,
- any accessory charges for special telegram services.

1559AP (2) So far as transmission over the general network of telecom-
Mar2 munication channels is concerned, see Nos. **1559AF** and **1559AG**.

1559AQ § 9. (1) In the case of radiotelegrams destined for a country other
Mar2 than that to which the land station belongs, the land-line charges to be settled in accordance with the above provisions shall be the charges shown in the table of rates relating to international telegraph correspondence, or those fixed by special arrangements between the administrations and/or recognized private operating agencies of adjacent countries and published by those administrations or recognized private operating agencies.

1559AR (2) The land-line charges applicable to radiotelegrams to a
Mar2 country other than that to which the land station belongs may be the collection charges fixed or applied by the administration or recognized private operating agency to which the land station belongs.

1559AS (3) A seven-word minimum charge is levied for every
Mar2 radiotelegram; for press radiotelegrams this minimum is fourteen words.

1559AT § 10. (1) In the case of radiotelegrams addressed to mobile stations,
Mar2 the administration to which the office of origin is subject shall be debited direct by the administration to which the land station is subject with the land station and mobile station charges, but only where the radiotelegram has been transmitted to the mobile station. In the case provided for in No. **2132** of the Additional Radio Regulations, however, the administration to which the office of origin is subject shall be debited with the land station charge by the administration to which the land station is subject.

1559AU (2) When the radiotelegram has been transmitted, the ad-
Mar2 ministration to which the land station is subject credits the administration to which the mobile station of destination is subject (or, if appropriate, the accounting authority):

1559AV *a)* with the mobile station charge;
Mar2

1559AW *b)* if occasion arises, with
Mar2

– the total charge collected for prepaid replies,

– any accessory charges for special telegram services.

1559AX § 11. When the charge for a radiotelegram is paid for wholly or
Mar2 partly by means of a reply voucher, the radiotelegram shall be treated for accounting purposes as if the charge had been paid in cash.

1559AY § 12. Radiotelegrams exchanged between mobile stations:
Mar2

1559AZ *a) without the intervention of land stations:*
Mar2

except when other arrangements have been made, the administration to which the station of destination is subject (or, if appropriate, the accounting authority) debits the administration to which the station of origin is subject (or, if appropriate, the accounting authority) with all charges collected, less the charges due to this latter station;

1559BA Mar2

b) through the medium of a single land station:

the administration to which the land station is subject debits the administration to which the mobile station of origin is subject (or, if appropriate, the accounting authority) with all the charges collected, less the charges due to that mobile station. Thereafter the provisions of Nos. **1559AU** to **1559AW** are applied;

1559BB Mar2

c) through the medium of two land stations:

the administration to which the first land station is subject debits the administration to which the mobile station of origin is subject (or, if appropriate, the accounting authority) with all the charges collected, less the charges due to that mobile station, taking into account the provisions of Nos. **1559AP** and **1559AR**. Thereafter the provisions of Nos. **1559AT** to **1559AW** are applied by the second land station, the first land station being regarded as the office of origin as far as the accounts are concerned.

Section III. Establishment of Accounts for Radiotelephone Calls

1559BC Mar2 § 13. (1) In the case of radiotelephone calls originating in mobile stations, the administration to which the land station is subject debits the administration to which the mobile station of origin is subject (or, if appropriate, the accounting authority) with:

- the land station charges,
- the land-line charges,
- where appropriate, the supplementary charges for radiotelephone calls with special facilities.

1559BD Mar2 (2) So far as transmission over the general network of telecommunication channels is concerned, see Nos. **1559AF** and **1559AG**.

1559BE § 14. The land-line charges applicable to radiotelephone calls to a
Mar2 country other than that to which the land station belongs are the collection charges fixed or applied by the administration or recognized private operating agency to which the land station belongs.

1559BF § 15. In the case of radiotelephone calls destined for mobile
Mar2 stations and originating in the country to which the land station belongs, the administration to which the land station is subject credits the administration to which the mobile station of destination is subject (or, if appropriate, the accounting authority) with the mobile station charges.

1559BG § 16. (1) In the case of radiotelephone calls destined for mobile
Mar2 stations and originating in a country other than that to which the land station belongs, the administration to which the land station is subject:

- debits the administration or recognized private operating agency of the country of origin with the land station and mobile station charges,
- credits the administration to which the mobile station of destination is subject (or, if appropriate, the accounting authority) with the mobile station charges.

1559BH (2) So far as transmission over the general network of telecom-
Mar2 munication channels is concerned, see Nos. **1559AF** and **1559AG.**

1559BI § 17. The provisions of Nos. **1559AY** to **1559BB** relative to the
Mar2 accounting for radiotelegrams exchanged between mobile stations shall be followed in the case of radiotelephone calls exchanged between mobile stations.

1559BJ § 18. For accounting purposes, collect radiotelephone calls shall
Mar2 be regarded as originating in the country or mobile station of destination.

Section IV. Establishment of Accounts for Radiotelex Calls

1559BK Mar2 § 19. (1) In the case of radiotelex calls originating in mobile stations, the administration to which the land station is subject debits the administration to which the mobile station of origin is subject (or, if appropriate, the accounting authority) with:

- the land station charges,
- the land-line charges.

1559BL Mar2 (2) So far as transmission over the general network of telecommunication channels is concerned, see Nos. **1559AF** and **1559AG**.

1559BM Mar2 § 20. The land-line charges applicable to radiotelex calls to a country other than that to which the land station belongs are the collection charges fixed or applied by the administration or recognized private operating agency to which the land station belongs.

1559BN Mar2 § 21. In the case of radiotelex calls destined for mobile stations and originating in the country to which the land station belongs, the administration to which the land station is subject credits the administration to which the mobile station of destination is subject (or, if appropriate, the accounting authority) with the mobile station charges.

1559BO Mar2 § 22. (1) In the case of radiotelex calls destined for mobile stations and originating in a country other than that to which the land station belongs, the administration to which the land station is subject:

- debits the administration or recognized private operating agency of the country of origin with the land station and mobile station charges,
- credits the administration to which the mobile station of destination is subject (or, if appropriate, the accounting authority) with the mobile station charges.

1559BP Mar2 (2) So far as transmission over the general network of telecommunication channels is concerned, see Nos. **1559AF** and **1559AG**.

1559BQ § 23. The provisions of Nos. **1559AY** to **1559BB** relative to the
Mar2 accounting for radiotelegrams exchanged between mobile stations shall be followed in the case of radiotelex calls exchanged between mobile stations.

1559BR § 24. For accounting purposes collect radiotelex calls (if collect
Mar2 calls are admitted) shall be regarded as originating in the country or mobile station of destination.

Section V. Exchange and Verification of Accounts. Payment of Balances

1559BS § 25. Exchange and verification of accounts and payment of
Mar2 balances will be carried out in accordance with the Telegraph Regulations and the Telephone Regulations taking into account C.C.I.T.T. Recommendations, subject to the special provisions in Nos. **1559BT** to **1559BX**.

1559BT § 26. (1) The accounts, in duplicate, are forwarded before the end of
Mar2 the third month following that to which the accounts relate.

1559BU (2) Radiotelegrams, radiotelephone calls and radiotelex calls
Mar2 shall be entered individually, with all necessary particulars, in the monthly accounts which serve as a basis for the accounting mentioned in this Article. The entries in accounts shall be spaced in such a way that the duplicate of the accounts can be divided and used for the accounting with the mobile station licensee by the administration to which the mobile stations are subject (or, if appropriate, the accounting authority). In addition, the entries shall be grouped under mobile station name and call sign, with a total charge shown for each mobile station. A specimen statement is given in Appendix 21A.

1559BV § 27. (1) In principle, an account shall be considered as accepted
Mar2 without the need for specific notification of acceptance to the accounting authority which sent it.

1559BW Mar2 (2) However, any accounting authority shall have the right to question the contents of an account for a period of six months after receipt of the account.

1559BX Mar2 § 28. The periods mentioned in Nos. **1559BT** and **1559BW** may be exceeded when exceptional difficulties occur in the transmission of the documents by post between the land stations and the administrations to which they are subject. However, 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 VI. Period of Retention of Accounting Records

1559BY Mar2 § 29. (1) The originals of radiotelegrams and documents relating to radiotelegrams, radiotelephone calls and radiotelex calls retained by the administrations and/or recognized private operating agencies shall be held, with all necessary precautions from the point of view of secrecy, until the settlement of the relative accounts and, in any case, for at least six months counting from the month in which the accounts were sent.

1559BZ Mar2 (2) However, should an administration or recognized private operating agency deem it desirable to destroy such documents 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 which might otherwise have been observed.

CHAPTER X

Miscellaneous Stations and Services

ARTICLE 41

Amateur Stations

1560 § 1. Radiocommunications between amateur stations of different countries shall be forbidden if the administration of one of the countries concerned has notified that it objects to such radiocommunications.

1561 § 2. (1) When transmissions between amateur stations of different countries are permitted, they shall be made in plain language and shall be limited to messages of a technical nature relating to tests and to remarks of a personal character for which, by reason of their unimportance, recourse to the public telecommunications service is not justified. It is absolutely forbidden for amateur stations to be used for transmitting international communications on behalf of third parties.

1562 (2) The preceding provisions may be modified by special arrangements between the administrations of the countries concerned.

1563 § 3. (1) Any person operating the apparatus of an amateur station shall have proved that he is able to send correctly by hand and to receive correctly by ear, texts in Morse code signals. Administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 144 MHz.

1564 (2) Administrations shall take such measures as they judge necessary to verify the technical qualifications of any person operating the apparatus of an amateur station.

1565 § 4. The maximum power of amateur stations shall be fixed by the administrations concerned, having regard to the technical qualifications of the operators and to the conditions under which these stations are to work.

1566 § 5. (1) All the general rules of the Convention and of these Regulations shall apply to amateur stations. In particular, the emitted frequency shall be as stable and as free from spurious emissions as the state of technical development for such stations permits.

1567 (2) During the course of their transmissions, amateur stations shall transmit their call sign at short intervals.

1567A § 6. Space stations in the amateur-satellite service operating in
Spa2 bands shared with other services shall be fitted with appropriate devices for controlling emissions in the event that harmful interference is reported in accordance with the procedure laid down in Article 15. Administrations authorizing such space stations shall inform the I.F.R.B., and shall ensure that sufficient earth command stations are established before launch to guarantee that any harmful interference that might be reported can be terminated by the authorizing Administration (see No. **470V**).

ARTICLE 42

Experimental Stations

1568 § 1. (1) An experimental station may enter into communication with an experimental station of another country only after it has been authorized to do so by its administration. Each administration shall notify other administrations concerned when such authorizations are issued.

1569 (2) The administrations concerned determine by special arrangement the conditions under which communications may be established.

1570 § 2. (1) In experimental stations any person operating radiotelegraph apparatus, either on his own account or for another, shall have proved his ability to transmit by hand and to receive by ear, texts in Morse code signals.

1571 (2) Administrations shall take such steps as they think necessary to verify the qualifications, from the technical point of view, of any person operating the apparatus of an experimental station.

1572 § 3. The administrations concerned shall fix the maximum power of experimental stations, having regard to the purpose for which their establishment has been authorized and the conditions under which they are to work.

1573 § 4. (1) All the general rules of the Convention, and of these Regulations, shall apply to experimental stations. In particular, experimental stations shall comply with the technical conditions imposed upon transmitters operating in the same frequency bands, except where the technical principles of the experiments prevent this.

1574 (2) During the course of their transmissions, experimental stations shall transmit, at short intervals, their call sign, or, in the case of stations not yet provided with a call sign, their name.

1575 § 5. Where there is no risk of an experimental station causing harmful interference to a service of another country, the administration concerned may, if considered desirable, adopt different provisions from those contained in this Article.

ARTICLE 43

Mar2

Radiodetermination Service and Radiodetermination-Satellite Service

Section I. General Provisions

1576 § 1. Administrations which have established a radiodetermination service shall take the necessary steps to ensure the effectiveness and regularity of that service; however they accept no responsibility for the consequences that might arise from the use of inaccurate information furnished, defective working, or failure of their stations.

1577 § 2. In the case of doubtful or unreliable observations, the station taking the bearing or fixing the position shall, whenever possible, notify the station for which the information is being obtained of any such doubt or unreliability.

1578 § 3. Administrations shall notify to the Secretary General the characteristics of each radiodetermination station providing an international service of value to the maritime mobile service and, if considered necessary, for each station or group of stations, the sectors in which the information furnished is normally reliable. This information is published in the List of Radiodetermination and Special Service Stations, and the Secretary-General shall be notified of any change of a permanent nature.

1579 § 4. The method of identification of radiodetermination stations shall be so chosen as to avoid any doubt as to their identity.

1580 § 5. Signals sent by radiodetermination stations shall be such as to permit accurate and precise measurements.

1581 § 6. Any information concerning modification or irregularity of working of a radiodetermination station shall be notified without delay in the following manner :

1582 *a)* Land stations of countries operating a radiodetermination service shall send out daily, if necessary, notices of modifications or irregularities in working until such time as normal working is restored or, if a permanent alteration has been made, until such time as it can reasonably be taken that all navigators interested have been warned.

1583 *b)* Permanent alterations or irregularities of long duration shall be published as soon as possible in the relevant notices to navigators.

1584 § 7. Where radiocommunication by telegraphy or telephony is part of a radiodetermination service, such communication shall be subject to the provisions of these Regulations.

1584A Mar2 § 7A. The provisions of Nos. **1576** to **1584** also apply to the maritime radiodetermination-satellite service, in so far as practicable.

Section II. Radio Direction-Finding Stations

1585 § 8. (1) In the maritime radionavigation service, the radiotelegraph frequency normally used for radio direction-finding is 410 kHz. All direction-finding stations of the maritime radionavigation service using radiotelegraphy shall be able to use this frequency. They shall, in addition, be able to take bearings on 500 kHz, especially for locating stations sending signals of distress, alarm and urgency.

1586 (2) Where a radio direction-finding service is provided in the authorized bands between 1 605 and 2 850 kHz, the radio direction-finding stations should be able to take bearings on the radiotelephone distress and calling frequency 2 182 kHz.

1587 § 9. The procedure to be followed by radio direction-finding stations is given in Appendix 23.

1588 § 10. In the absence of prior arrangements, an aircraft station which calls a radio direction-finding station for a bearing shall use for this purpose a frequency on which the station called normally keeps watch.

1589 § 11. In the aeronautical radionavigation service, the procedure contemplated for radio direction-finding in this section is applicable, except where special procedures are in force as a result of arrangements concluded between the administrations concerned.

Section III. Radiobeacon Stations

1590 § 12. When an administration thinks it desirable in the interests of navigation to organize a service of radiobeacon stations, it may use for this purpose :

1591 *a)* radiobeacons properly so called, established on land or on ships permanently moored or, exceptionally, on ships navigating in a restricted area, the limits of which are known and published. The emissions of these radiobeacons may have either directional or non-directional patterns ;

1592 *b)* fixed stations, coast stations or aeronautical stations designated to function as radiobeacons, at the request of mobile stations.

1593 § 13. (1) Radiobeacons properly so called shall use the frequency bands which are available to them under Chapter II.

1594 (2) Other stations notified as radiobeacons shall use for this purpose their normal working frequency and their normal class of emission.

1595 (3) The power radiated by each radiobeacon properly so called shall be adjusted to the value necessary to produce the stipulated field strength at the limit of the range required (see Nos. **434** and **458**).

ARTICLE 44

Special Services

Section I. Meteorology

1596 § 1. (1) Meteorological messages comprise :

1597 *a)* messages addressed to meteorological services officially entrusted with weather forecasts, more specifically for the protection of maritime and air navigation ;

1598 *b)* messages from these meteoroiogical services intended specially for :

1599 — ship stations ;

1600 — protection of aircraft ;

1601 — the public.

1602 (2) The information contained in these messages may be :

1603 *a)* observations taken at fixed times ;

1604 *b)* warnings of dangerous phenomena ;

1605 *c)* forecasts and warnings ;

1606 *d)* statements of the general meteorological situation.

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.

1608 (2) The meteorological observations contained in the classes mentioned in Nos. **1597** to **1600** are, in principle, drawn up in an international meteorological code, whether they are transmitted by or intended for mobile stations.

1609 § 3. For observation messages intended for an official meteorological service, use shall be made of the facilities resulting from the allocation of exclusive frequencies to synoptic meteorology and the aeronautical meteorological service, in conformity with regional

agreements made by the services concerned for the use of these frequencies.

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.

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 transmissions 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.

1612 (3) Meteorological warning messages for the maritime mobile
Mar2* service shall be transmitted without delay. They shall be repeated at the end of the first silence period which follows their receipt (see Nos. **1130** and **1335A**) as well as at the end of the first silence period which occurs in the working hours of a ship station having a single operator. They shall be preceded by the safety signal and sent on the appropriate frequencies (see No. **1491**).

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.

1614 (5) The provisions of Nos. **1610** to **1613** are applicable to the aeronautical mobile service, in so far as they are not contrary to more detailed special arrangements which ensure at least equal protection to air navigation.

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.

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.

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.

Section II. Notices to Mariners

1618 § 6. The provisions of Nos. **1610** to **1614** shall apply to notices to mariners.

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.

1620 § 8. When thought desirable, and provided the sender agrees, administrations may authorize their land staticns 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.

Section III. Medical Advice

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 Services Stations.

1622 § 10. Radiotelegrams and radiotelephone calls concerning medical advice may be preceded by the appropriate urgency signal (see Nos. **1479** to **1487**).

Section IV. Standard Frequency and Time Signals

1623 § 11. (1) To facilitate more efficient use of the radio frequency spectrum and to assist other technical and scientific activities, administrations should endeavour to provide, on a co-ordinated world-wide basis, a service of standard frequency and time signal transmissions. Attention should be given to the extension of this service to those areas of the world not adequately served.

1624 (2) To this end, each administration shall take steps to co-ordinate 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 C.C.I.R. who shall also continue to seek the advice and co-operation of the International Time Bureau (B.I.H.), the International Scientific Radio Union (U.R.S.I.) and other international organizations having a direct and substantial interest in the subject.

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.

1626 § 12. Administrations shall co-operate in reducing interference in the standard frequency bands in accordance with the Recommendations of the C.C.I.R.

1627 § 13. Administrations which provide this service shall co-operate through the C.C.I.R. 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.

1628 § 14. In selecting the technical characteristics of standard frequency and time signal transmissions, administrations shall be guided by the relevant C.C.I.R. Recommendations.

CHAPTER XI

ARTICLE 45

Effective Date of the Radio Regulations

The Radio Regulations (Geneva, 1959) signed on 21 December 1959, include the following provisions:

1629 § 1. These Regulations, which are annexed to the International Telecommunication Convention, shall come into force on first May, 1961.

1630 § 2. The provisions of the Extraordinary Administrative Radio Conference Agreement, Geneva, 1951, shall be abrogated upon the coming into force of the provisions of these Regulations.

1631 § 3. The delegates signing these Regulations hereby declare that, should an administration make reservations about the application of one or more provisions of these Regulations, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration.

The Final Acts of the Extraordinary Administrative Radio Conference to allocate frequency bands for Space Radiocommunication purposes (Geneva, 1963), signed on 8 November 1963, include the following provisions:

"The revised provisions of the Radio Regulations, Geneva, 1959, shall form an integral part of the Radio Regulations, which are annexed to the

International Telecommunication Convention. They shall come into force on the first of January, 1965, upon which date the provisions of the Radio Regulations, Geneva, 1959, which are cancelled or modified by these revisions, shall be abrogated.

The delegates signing this revision of the Radio Regulations, Geneva, 1959, hereby declare that should an administration make reservations concerning the application of one or more of the revised provisions of the Radio Regulations, Geneva, 1959, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration."

The Final Acts of the Extraordinary Administrative Radio Conference for the preparation of a revised allotment plan for the Aeronautical Mobile (R) Service (Geneva, 1966), signed on 29 April 1966, include the following provisions:

"The revised provisions of the Radio Regulations, Geneva, 1959, shall form an integral part of the Radio Regulations which are annexed to the International Telecommunication Convention. These revised provisions shall come into force on and from the first of July, 1967, except for the Frequency Allotment Plan for the Aeronautical Mobile (R) Service contained in Appendix 27 which shall come into force on and from 0001 hours G.M.T. on the tenth of April, 1970. The provisions of the Radio Regulations, Geneva, 1959, which are cancelled, superseded or modified by these revised provisions shall be abrogated on the dates of coming into force of the respective revised provisions.

The delegates signing this revision of the Radio Regulations, Geneva, 1959, hereby declare that should an administration make reservations concerning the application of one or more of the revised provisions of the Radio Regulations, Geneva, 1959, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration."

The Final Acts of the World Administrative Radio Conference to deal with matters relating to the Maritime Mobile Service (Geneva, 1967), signed on 3 November 1967, include the following provisions:

"The revised provisions of the Radio Regulations, Geneva, 1959, shall form an integral part of the Radio Regulations which are annexed to the International Telecommunication Convention. They shall come into force on 1 April 1969 upon which date the provisions of the Radio Regulations, Geneva, 1959, which are cancelled or modified by these revisions shall be abrogated.

The delegates signing this revision of the Radio Regulations, Geneva, 1959, hereby declare that, should an administration make reservations concerning the application of one or more of the revised provisions of the Radio Regulations, Geneva, 1959, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration."

The Final Acts of the World Administrative Radio Conference for Space Telecommunications (Geneva, 1971), signed on 17 July 1971, include the following provisions

"The revised provisions of the Radio Regulations shall form an integral part of the Radio Regulations which are annexed to the International Telecommunication Convention. They shall come into force on 1 January, 1973, on which date the provisions of the Radio Regulations which are cancelled or modified by this revision shall be abrogated.

The delegates signing this revision of the Radio Regulations hereby declare that, should an administration make reservations concerning the application of one or more of the revised provisions of the Radio Regulations, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration."

The Final Acts of the World Administrative Radio Conference for Maritime Radiocommunications (Geneva, 1974), signed on 8 June 1974, include the following provisions:

"The revised provisions of the Radio Regulations shall form an integral part of the Radio Regulations which are annexed to the International Telecommunication Convention. They shall come into force on 1 January 1976, upon which date the provisions of the Radio Regulations which are cancelled or modified by this revision shall be abrogated.

The delegates signing this revision of the Radio Regulations hereby declare that, should an administration make reservations concerning the application of one or more of the revised provisions of the Radio Regulations, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration."

ADDITIONAL
RADIO
REGULATIONS

ADDITIONAL RADIO REGULATIONS

ARTICLE 1*)

Mar2 **Application of the Telegraph Regulations and the Telephone Regulations to Radiocommunications except in the Maritime Mobile Service**

2001 § 1. The provisions of the Telegraph and Telephone Regulations and the Protocols annexed thereto are applicable to radiocommunications in so far as the provisions of the Radio Regulations do not provide otherwise.

2002 § 2. (1) With the exceptions mentioned in the following Articles, radiotelegrams are drawn up and treated in accordance with the provisions of the Telegraph Regulations for telegrams.

2003 (2) The use of groups of letters from the International Code of Signals is permitted in radiotelegrams in the maritime mobile service.

2004 § 3. Since the word RADIO or AERADIO, as the case may be, is always included in the list of stations and in the address of a radiotelegram, as part of the name of the land station, this word must not be given as a service indication at the beginning of the preamble in the transmission of a radiotelegram.

---

*) *Note by the General Secretariat:* References to the Maritime Mobile Service in this Article should no longer be taken into account (see Foreword).

Mar2

ARTICLE 1A

Application of the Telegraph Regulations and the Telephone Regulations to Radiocommunications in the Maritime Mobile Service

2004A § 1. The provisions of the Telegraph Regulations and the
Mar2 Telephone Regulations and the Protocols annexed thereto, taking into account C.C.I.T.T. Recommendations, shall apply to radiocommunications in so far as the provisions of the Radio Regulations do not provide otherwise.

2004B § 2. (1) With the exceptions mentioned in the following Articles,
Mar2 radiotelegrams are drawn up and treated in accordance with the provisions of the Telegraph Regulations for telegrams, taking into account C.C.I.T.T. Recommendations.

2004C (2) The use of groups of letters from the International Code of
Mar2 Signals is permitted in radiotelegrams in the maritime mobile service.

2004D § 3. Since the word RADIO or AERADIO, as the case may be,
Mar2 is always included in the list of stations and in the address of a radiotelegram, as part of the name of the land station, this word must not be given as a service indication at the beginning of the preamble in the transmission of a radiotelegram.

ARTICLE 2

Address of Radiotelegrams

2005 § 1. (1) The address of radiotelegrams destined for mobile stations must be as complete as possible and must include :

2006 *a)* the name or the designation of the addressee, with supplementary particulars, if necessary ;

2007 *b)* in the case of a ship station, the name of this station followed, when necessary, by its call sign, the latter separated from the name of the station by a fraction bar, as shown in the List of Ship Stations ;

2008 *c)* in the case of an aircraft station the call sign or other identification, as it appears in No. **2011** ;

2009 *d)* the name of the land station through which the message is to be forwarded, as it appears in the appropriate list of stations.

2010 (2) If the ship does not appear in the List of Ship Stations, the sender should, if possible, indicate the nationality and route followed by the ship.

2011 (3) However, the name and call sign required under Nos. **2007** and **2008** may be replaced, at the risk of the sender, by particulars of the passage made by such mobile station, indicated by the names of the ports or airports of departure and of destination, or by any equivalent indication.

2012 (4) In the address, the name of the mobile station and that of the land station, written as they appear in the appropriate list of stations are, in all cases and irrespective of their length, each counted as one word.

Note by the General Secretariat: The Administration of a Member of the Union has pointed out that in No. **2008** there is a discrepancy between the French and Spanish texts on the one hand and the English text on the other. According to the French text, it would appear that the words "call sign" in Nos. **2008** and **2011** should read "flight identification number".

2013 § 2. (1) Mobile stations not supplied with the International List of Telegraph Offices may add to the name of the telegraph office of destination,

— the name of the territorial subdivision, or

— the country of destination, or

— both of the above,

if it is doubtful whether, without such addition, the message could be correctly routed without difficulty.

2014 (2) In that case the name of the telegraph office and the supplementary particulars are counted and charged for as a single word. The land station operator receiving the radiotelegram retains or deletes these particulars, or further amends the name of the office of destination as is necessary or sufficient for forwarding the radiotelegram to its proper destination.

ARTICLE 3

Time of Handing-in of Radiotelegrams

2015 § 1. In the transmission of radiotelegrams originating in a mobile station, the date and time of handing-in at this station are given in the preamble.

2016 § 2. The time of handing-in is indicated in Greenwich Mean Time (G.M.T.) from 0 to 24 h. beginning at midnight, and is always expressed and transmitted by means of four figures (0001 to 2400).

2017 § 3. Administrations of countries situated outside Zone A (Appendix 12 to the Radio Regulations) may, however, authorize ship stations passing along the coasts of their countries to use zone time for giving, in a group of four figures, the time of handing-in. In that case the group must be followed by the letter F.

ARTICLE 4*)

Mar2

Charges for Radiotelegrams except in the Maritime Mobile Service

Section I. General. Full-rate Radiotelegrams

2018 § 1. The charge for a radiotelegram originating in and/or intended for a mobile station comprises, according to circumstances :

2019 *a)* the ship or aircraft charge or charges accruing to the mobile station of origin or destination, or to both of these stations ;

2020 *b)* the land station charge accruing to the land station or stations (see No. **2028**) which participate in the transmission ;

2021 *c)* the charge for transmission over the general network of telecommunication channels, reckoned in accordance with the ordinary rules ;

2022 *d)* the charges for accessory services requested by the sender.

2023 § 2. (1) The land station charge and the ship or aircraft charge, as well as the charge for transmission over the general network of telecommunication channels are fixed on the basis of a word rate ; for each full-rate radiotelegram, however, a minimum charge for seven words shall be made.

2024 (2) In conformity with Article 30 of the Convention the rate shall be expressed in gold francs. The rate shall be the same in the two directions for radiotelegrams transmitted over the same route.

2025 (3) The maximum land station charge is 0.60 gold franc (sixty centimes) per word ; the maximum ship or aircraft charge is 0.40 gold franc (forty centimes) per word. Administrations shall notify to the Secretary-General the rates fixed by them.

2026 (4) Each administration, however, reserves to itself the right to fix and authorize a land station charge higher than the maximum

*) *Note by the General Secretariat:* Nos. 2046 to 2057 still apply to the Maritime Mobile Service, otherwise references to the Maritime Mobile Service in this Article should no longer be taken into account (see Foreword).

charge indicated in No. **2025** in the case of land stations which are exceptionally costly on account of their installation or working.

2027 § 3. (1) When a single land station is used as an intermediary between mobile stations, only one land station charge is collected. If the land station charge applicable to traffic with the mobile station of origin is different from that applicable to traffic with the mobile station of destination, the higher of these two charges is collected. In addition, a land telegraph charge may be collected equal to that indicated in No. **2030** as applicable to transmission over the telecommunication network.

2028 (2) When, at the request of the sender, two land stations are used as intermediaries between two mobile stations, the land station charge of each station is collected and also the telegraph charge for the section between the two stations.

2029 § 4. The retransmission service and charges are governed by Article 10 of these Regulations.

2030 § 5. In the case of radiotelegrams originating in or destined for a country which pass through land stations of that country, the telegraph charge per word applicable to the transmission over the internal telecommunication system of that country is notified in gold francs to the Secretary-General by the administration to which the land stations are subject.

2031 SUP (Mar)

2032 § 7. The country on whose territory is established a land station serving as intermediary for the exchange of radiotelegrams between a mobile station and another country, is considered, as far as the application of telegraph charges is concerned, as the country of origin or destination of the radiotelegrams, and not as a transit country.

2033 § 8. (1) For the purpose both of transmission and of international accounting, the word count of the office of origin is decisive in the case of radiotelegrams destined for mobile stations, and that of the mobile station of origin is decisive in the case of radiotelegrams originating in mobile stations.

2034 (2) Nevertheless, when a radiotelegram is expressed wholly or partly either :

— in one of the languages of the country of destination (in the case of radiotelegrams originating in mobile stations), or

— in one of the languages of the country to which the mobile station is subject (in the case of radiotelegrams destined for mobile stations),

and when the radiotelegram contains combinations or alterations of words contrary to the usage of that language, the office or the mobile station of destination, as the case may be, has the right to recover from the addressee the amount of the charge not collected. Where payment is refused, the radiotelegram may be withheld.

2035 § 9. The total charge for radiotelegrams is collected from the sender, with the exception of :

2036 *a)* express charges to be collected on delivery (see No. **576** of the Telegraph Regulations, Geneva Revision, 1958) ;

2037 *b)* charges applicable to radiotelegrams to be redirected at the request of the addressee as provided under No. **2122** (see Article 57 of the Telegraph Regulations, Geneva Revision, 1958) ;

2038 *c)* the charges applicable to inadmissible combinations or alterations of words, observed by the office or mobile station of destination (see No. **2034**) which are collected from the addressee.

2039 § 10. Mobile stations must be acquainted with the tariffs necessary for charging for radiotelegrams. However, they are authorized, where necessary, to obtain such information from land stations ; rates furnished by land stations are expressed in gold francs.

2040 § 11. The land station or ship or aircraft station charges for radio-
Mar telegrams concerning stations not yet included in the appropriate list of stations are fixed, as part of its duties, by the office which collects the charge. The ship or aircraft station charges pertaining to radiotelegrams intended for mobile stations, the names or call signs of which are replaced by the indication of the route followed or by any other equivalent indication (see No. **2011**), are also fixed, as part of its duties, by the office which collects the charge. They are the normal rates notified by the administration(s) concerned or, in the absence of such notification, they are the maximum charges prescribed in No. **2025**.

2041 § 12. (1) No new rate and no modification, either general or of detail, relative to the tariff shall be effective for countries other than those which establish the new rate or rate modification until fifteen days after its notification by the Secretary-General, excluding the day of despatch, and it shall not be applied until the first of the month following the expiration of this period.

2042 (2) If there are several notifications, the date of the first only is to be considered in reckoning the interval.

2043 (3) The interval of fifteen days shall be reduced to ten days for modifications intended to equalize rates with those already notified for competing routes.

2044 (4) Nevertheless, for radiotelegrams originating in mobile stations, modifications of tariffs are not applicable until a month after the periods laid down in No. **2041**.

2045 (5) No exceptions shall be made to the provisions of Nos. **2041** to **2044**.

Section II. Reduced-rate Radiotelegrams

A. Radiotelegrams of Immediate General Interest

2046 § 13. No charge for radio transmission in the mobile service is made for radiotelegrams of immediate general interest, which fall within the following classes :

2047 *a)* distress messages and replies thereto ;

2048 *b)* messages originating in mobile stations notifying the presence of icebergs, derelicts, mines and other dangers to navigation, or announcing cyclones and storms ;

2049 *c)* messages announcing unexpected phenomena threatening air navigation or the sudden occurrence of obstacles at airports ;

2050 *d)* messages originating in mobile stations notifying sudden changes in the position of buoys, the working of lighthouses, devices connected with buoyage, etc. ;

2051 *e)* service messages relating to the mobile service.

B. Radiotelegrams Relating to Medical Advice

2052 § 14. No charge for radio transmission is made for messages relating to medical advice exchanged direct between mobile stations and land stations which are shown in the List of Radiodetermination and Special Service Stations as providing such a service. Such messages from mobile stations to any one of these land stations shall be addressed in accordance with the conditions indicated in this List.

C. Meteorological Radiotelegrams

2053 § 15. (1) The term "meteorological radiotelegram" denotes a radiotelegram consisting solely of meteorological observations or meteorological forecasts, which is sent by an official meteorological service or by a station in official relation with such a service, and addressed to such a service or to such a station.

2054 Mar (2) Meteorological radiotelegrams must bear the service instruction =OBS= at the beginning of the preamble and the paid service indication =OBS= before the address. This paid service indication is the only one admitted.

2055 (3) If requested, the sender must affirm that the text of his radiotelegram complies with the above conditions.

2056 § 16. (1) Land station and ship or aircraft station charges applicable to meteorological radiotelegrams are reduced by at least 50 per cent in all relations. The minimum number of chargeable words in meteorological radiotelegrams shall be fixed at seven.

2057 (2) For land stations, the date on which this provision is put into force is fixed by agreement between the administrations and operating companies on the one hand, and the official meteorological services concerned on the other hand.

D. Press Radiotelegrams

2057A § 16A. Press telegrams from a mobile station to a land station
Mar shall be admitted as press radiotelegrams.

2058 § 17. The minimum number of chargeable words for press radiotelegrams shall be fixed at fourteen.

2059 § 18. (1) The land station and ship or aircraft charges are reduced
Mar by 50 per cent. These radiotelegrams are subject to the conditions of acceptance laid down in Articles 65 to 69 of the Telegraph Regulations, Geneva Revision, 1958. For those radiotelegrams which are addressed to a destination in the country of the land station, the telegraph charge to be collected is one-half of the telegraph charge applicable to an ordinary radiotelegram.

2060 (2) Press radiotelegrams destined for a country other than that of the land station are subject to the press rate in force between the country of the land station and the country of destination.

E. Radiotelegrams concerning Persons Protected in Time of War by the Geneva Conventions of 12 August, 1949

2061 § 19. (1) Radiotelegrams concerning persons protected in time of war by the Geneva Conventions of 12 August, 1949, are accepted under the conditions specified in Article 64 of the Telegraph Regulations (Geneva Revision, 1958) and shall bear the paid service indication = RCT = placed before the address.

2062 (2) The land station charge and the ship or aircraft station charge for radiotelegrams bearing the paid service indication = RCT = shall be decreased in the same proportion as the charge for transmission on the general network of telecommunication channels (see Nos. **646** and **647** of the Telegraph Regulations, Geneva Revision, 1958).

Mar2

ARTICLE 4A

Charges for Radiotelegrams in the Maritime Mobile Service

Section I. General. Full-rate Radiotelegrams

2062AA § 1. The charge for a radiotelegram originating in and/or in-
Mar2 tended for a mobile station comprises, according to circumstances:

2062AB Mar2 *a)* the mobile station charge or charges accruing to the mobile station of origin or destination, or to both of these stations;

2062AC Mar2 *b)* the land station charge or charges accruing to the land station or stations (see No. **2062AJ**) which participate in the transmission;

2062AD Mar2 *c)* the land-line charge;

2062AE Mar2 *d)* the accessory charges for special telegram services requested by the sender.

2062AF § 2. (1) The land station charge and the mobile station charge, as
Mar2 well as the land-line charge, are fixed on the basis of a word rate; for each full-rate radiotelegram, however, a minimum charge for seven words shall be made.

2062AG (2) In conformity with Article 30 of the Convention the rate
Mar2 shall be expressed in gold francs. The rate shall be the same in the two directions for radiotelegrams transmitted over the same route.

2062AH (3) Administrations shall notify to the Secretary-General the
Mar2 rates fixed by them.

2062AI § 3. (1) When a single land station is used as an intermediary
Mar2 between mobile stations, only one land station charge is collected. If the land station charge applicable to traffic with the mobile station of origin is different from that applicable to traffic with the mobile station of destination, the higher of these two charges is collected.

2062AJ (2) When, at the request of the sender, two land stations are
Mar2 used as intermediaries between two mobile stations, the land station charge of each station is collected and also the land-line charge for the section between the two stations.

2062AK § 4. The retransmission service by mobile stations is governed
Mar2 by Article 10A of these Regulations.

2062AL § 5. In the case of radiotelegrams orginating in or destined for a
Mar2 country, which pass through land stations of that country, the land-line charge per word applicable to the transmission over the internal telecommunication system of that country is notified in gold francs to the Secretary-General by the administration to which the land stations are subject.

2062AM § 6. (1) For the purpose both of transmission and of international
Mar2 accounting, the word count of the office of origin is decisive in the case of radiotelegrams destined for mobile stations, and that of the mobile station of origin is decisive in the case of radiotelegrams originating in mobile stations.

2062AN (2) Nevertheless, when a radiotelegram is expressed wholly or
Mar2 partly either:

- in one of the languages of the country of destination (in the case of radiotelegrams originating in mobile stations), or
- in one of the languages of the country to which the mobile station is subject (in the case of radiotelegrams destined for mobile stations),

and when the radiotelegram contains combinations or alterations of words contrary to the usage of that language, the office or the mobile station of destination, as the case may be, has the right to recover from the addressee the amount of the charge not collected. Where payment is refused, the radiotelegram may be withheld.

2062AO § 7. The total charge for radiotelegrams is collected from the
Mar2 sender, with the exception of:

2062AP
Mar2
a) express charges to be collected on delivery (see C.C.I.T.T. Recommendations);

2062AQ
Mar2
b) charges applicable to radiotelegrams to be redirected at the request of the addressee as provided under C.C.I.T.T. Recommendations;

2062AR
Mar2
c) the charges applicable to inadmissible combinations or alterations of words, observed by the office or mobile station of destination (see No. **2062AN**) which are collected from the addressee.

2062AS § 8. Mobile stations must be acquainted with the tariffs
Mar2 necessary for charging for radiotelegrams. However, they are authorized, where necessary, to obtain such information from land stations; rates furnished by land stations are expressed in gold francs.

2062AT § 9. The land station or mobile station charges for
Mar2 radiotelegrams concerning stations not yet included in the appropriate list of stations are fixed, as part of its duties, by the office which collects the charge. The mobile station charges pertaining to radiotelegrams intended for mobile stations, the names or call signs of which are replaced by the indication of the route followed or by any other equivalent indication (see No. **2011**), are also fixed, as part of its duties, by the office which collects the charge. They are the normal rates notified by the administration(s) concerned.

2062AU § 10. (1) No new rate and no modification, either general or of detail,
Mar2 relative to the tariff shall be effective for countries other than those which establish the new rate or rate modification until 15 days after its

notification by the Secretary-General, excluding the day of despatch, and it shall not be applied until the first of the month following the expiration of this period.

2062AV (2) If there are several notifications, the date of the first only is
Mar2 to be considered in reckoning the interval.

2062AW (3) The interval of 15 days shall be reduced to 10 days for
Mar2 modifications intended to equalize rates with those already notified for competing routes.

2062AX (4) Nevertheless, for radiotelegrams originating in mobile
Mar2 stations, modifications of tariffs are not applicable until a month after the periods laid down in No. **2062AU**.

2062AY (5) No exceptions shall be made to the provisions of Nos.
Mar2 **2062AU** to **2062AX**.

Section II. Reduced-rate Radiotelegrams

A. Radiotelegrams of Immediate General Interest

2062AZ § 11. The provisions of Nos. **2046** to **2051** are applicable to the
Mar2 maritime mobile service.

B. Radiotelegrams relating to Medical Advice

2062BA § 12. The provisions of No. **2052** are applicable to the maritime
Mar2 mobile service.

C. Meteorological Radiotelegrams

2062BB § 13. The provisions of Nos. **2053** to **2057** are applicable to the
Mar2 maritime mobile service.

D. Press Radiotelegrams

2062BC § 14. Press telegrams from a mobile station to a land station shall
Mar2 be admitted as press radiotelegrams.

2062BD § 15. The minimum number of chargeable words for press
Mar2 radiotelegrams shall be fixed at 14.

2062BE § 16. (1) The land station and mobile station charges are reduced by
Mar2 50 per cent. The conditions of acceptance specified in C.C.I.T.T. Recommendations should be taken into account for these radiotelegrams. For those radiotelegrams which are addressed to a destination in the country of the land station, the land-line charge to be collected is one-half of the land-line charge applicable to an ordinary radiotelegram.

2062BF (2) Press radiotelegrams destined for a country other than that
Mar2 of the land station are subject to the press rate in force between the country of the land station and the country of destination.

E. Radiotelegrams concerning Persons Protected in Time of War by the Geneva Conventions of 12 August 1949

2062BG § 17. (1) Radiotelegrams concerning persons protected in time of
Mar2 war by the Geneva Conventions of 12 August 1949, are accepted under the conditions specified in number 4 of the Annex to the Telegraph Regulations (Geneva, 1973), taking into account C.C.I.T.T. Recommendations, and shall bear the service indication RCT placed before the address.

2062BH (2) The land station charge and the mobile station charge for
Mar2 radiotelegrams bearing the service indication RCT shall be decreased in the same proportion as the charge for transmission on the general network of telecommunication channels (see C.C.I.T.T. Recommendations).

ARTICLE 5*)

Mar2

Charges for Radiotelephone Calls in the Aeronautical Mobile Service

Section I. Mobile Station Charge, Land Station Charge, Land-line Charge

2063 § 1. Unless special arrangements between the administrations and/or the recognized private operating agencies concerned are in effect, the following rules shall be applied as regards charging for radiotelephone calls in the maritime and aeronautical mobile services.

2064 § 2. The charge for a radiotelephone call originating in and/or intended for a mobile station comprises, according to circumstances :

2065 *a)* the mobile station charge or charges accruing to the mobile station of origin or destination, or to both of these stations ;

2066 *b)* the land station charge or charges accruing to the land station or land stations which participate in the transmission ;

2067 *c)* the land-line charge or charges, i.e., the appropriate charge for transmission over the general network of telecommunication channels ;

2068 *d)* the charges for accessory services requested by the person who booked the call (see Section II).

2069 § 3. (1) The charge for a radiotelephone call is fixed on a time basis. Calls of a duration of three minutes or less are charged as for three minutes. In the case of calls whose duration exceeds three minutes, a charge per minute is made for the period in excess of three minutes, any fraction of a minute being charged as for one minute. The charge per minute is one-third of the charge for three minutes.

2070 (2) The mobile station charge will in principle be the same for ship stations and aircraft stations of the same nationality under like conditions of installation and working.

2071 (3) Administrations shall notify the Secretary-General of the rates fixed by them.

*) *Note by the General Secretariat:* References to the Maritime Mobile Service in this Article should no longer be taken into account (see Foreword).

2072 § 4. (1) When a single land station is used as an intermediary for a radiotelephone call between two mobile stations, only one land station charge is collected. If the land station charge applicable to traffic with the mobile station booking the radiotelephone call is different from that applicable to traffic with the mobile station called, the higher of these two charges is collected.

2073 (2) When, at the request of the person booking the radiotelephone call, two land stations are used as intermediaries for a radiotelephone call between two mobile stations, the appropriate land station charge of each station is collected and also the land-line charge between the two land stations.

2074 § 5. (1) When handled through a land station the chargeable duration of a radiotelephone call will be fixed at the end of the call by the land station ; if two land stations are participating in the handling of the radiotelephone call, the opinion of that land station will prevail which has accepted the call from the originating mobile station. The decision of this land station will also be valid for international accounting.

2075 (2) The chargeable duration of a radiotelephone call between two mobile stations in direct communication with each other will be fixed by the mobile station in which the call originates.

2076 § 6. (1) When, through any fault of the service, the booking of a radiotelephone call is not followed by the calling and called stations being placed in communication, no charge shall be payable. If the amount of the charge has been paid, it shall be refunded.

2077 (2) When, through any fault of the service, the correspondents experience difficulty in the course of a radiotelephone conversation, the chargeable duration of the call shall be reduced to the total time during which speech conditions have been satisfactory.

2078 § 7. (1) When after onward transmission of the booking particulars of a radiotelephone call, it is cancelled at the request of the person booking the call, or when a correspondent refuses to accept a call, or when the caller does not answer the call though his station is not engaged, or when the caller has become unavailable, a report charge will be collected.

2079 (2) The report charge will be not more than one-third of the charge for an ordinary radiotelephone call of three minutes' duration between the two stations concerned.

2080 § 8. The total charge for a radiotelephone call is collected from the calling station with the exception of collect calls (if collect calls are admitted). For collect calls, the charge shall be payable by the called subscriber.

2081 § 9. Mobile stations must be acquainted with the tariffs applicable to radiotelephone calls. However, they are authorized, where necessary, to obtain such information from land stations; rates furnished by land stations are expressed in gold francs, or in any other currency by special arrangement between the respective administrations and/or recognized private operating agencies of the mobile and land stations.

2082 § 10. The rules prescribed in Nos. **2041** to **2044** shall be applied as regards the interval before the application of new rates.

Section II. Supplementary Charge

2083 § 11. Unless special arrangements between the administrations and/or the recognized private operating agencies concerned are in effect, the following supplementary charges for préavis calls, avis d'appel calls, and collect calls, if admitted, shall be applied.

2084 § 12. (1) The charge for a préavis call (from ship or aircraft to land), a call with avis d'appel (from ship or aircraft to land) and a collect call shall be the same as that for an ordinary call of the same duration, with the addition of a supplementary charge equal to one-third of the charge for a radiotelephone call of three minutes' duration, between the two stations concerned.

2085 (2) The préavis charge or avis d'appel charge is payable when the mobile station with which the call is booked transmits the particulars of this booking. This charge is, however, not collected when, because of a fault of the service, the call is not established or the station wanted has not been advised.

2086 (3) The caller will, however, be required to pay the supplementary charge for a collect call if the called subscriber refuses to pay for the call and the call is not established.

2087 (4) When the booking of a radiotelephone call which is liable to the payment of a supplementary charge (for example, a collect call) is accompanied by a préavis or an avis d'appel, only one supplementary charge shall be collected.

Mar2

ARTICLE 5A

Charges for Radiotelephone Calls in the Maritime Mobile Service

Section I. Mobile Station Charge, Land Station Charge, Land-Line Charge

2087AA Mar2 § 1. Unless special arrangements between the administrations and/or the recognized private operating agencies concerned are in effect, the following rules shall be applied as regards charging for radiotelephone calls in the maritime mobile service.

2087AB Mar2 § 2. The charge for a radiotelephone call originating in and/or intended for a mobile station comprises, according to circumstances:

2087AC Mar2 *a)* the mobile station charge or charges accruing to the mobile station of origin or destination, or to both of these stations;

2087AD Mar2 *b)* the land station charge or charges accruing to the land station or land stations (see No. **2087AL**) which participate in the transmission;

2087AE Mar2 *c)* the land-line charge or charges;

2087AF Mar2 *d)* the supplementary charges for special facilities requested by the person who booked the call (see Nos. **2087AV** to **2087AZ**).

2087AG Mar2 § 3. (1) If no uniform charges apply in respect of the land stations of a country, different land station charges for radiotelephone calls shall be fixed for the medium frequency, high frequency and very high frequency bands. Calls of a duration of three minutes or less are charged as for three minutes. In the case of calls whose duration exceeds three minutes, a charge per minute is made for the period in excess of three minutes, any fraction of a minute being charged as for one minute. The charge per minute is one-third of the charge for three minutes.

2087AH Mar2 (2) In the case of radiotelephone calls originating in or destined for a country which pass through land stations of that country, the charges applicable to the transmission over the internal telecommunication system of that country are notified in gold francs to the Secretary-General.

2087AI Mar2 (3) The mobile station charge will in principle be the same for mobile stations of the same nationality. If no uniform charges apply in respect of mobile stations of the same nationality, different mobile station charges for radiotelephone calls may be fixed for the MF, HF and VHF bands.

2087AJ Mar2 (4) The land and mobile station charges for radiotelephone calls shall be expressed in gold francs; administrations shall notify to the Secretary-General the rates fixed by them.

2087AK Mar2 § 4. (1) When a single land station is used as an intermediary for a radiotelephone call between two mobile stations, only one land station charge is collected. If the land station charge applicable to traffic with the mobile station booking the radiotelephone call is different from that applicable to traffic with the mobile station called, the higher of these two charges is collected.

2087AL Mar2 (2) When, at the request of the person booking the radiotelephone call, two land stations are used as intermediaries for a radiotelephone call between two mobile stations, the appropriate land station charge of each station is collected and also the land-line charge between the two land stations.

2087AM Mar2 § 5. (1) When handled through a land station the chargeable duration of a radiotelephone call will be fixed at the end of the call by the land station; if two land stations are participating in the handling of the radiotelephone call, the opinion of that land station will prevail which has accepted the call from the originating mobile station. The decision of this land station will also be valid for international accounting.

2087AN Mar2 (2) The chargeable duration of a radiotelephone call between two mobile stations in direct communication with each other will be fixed by the mobile station in which the call originates.

2087AO § 6. (1) When, through any fault of the service, the booking of a
Mar2 radiotelephone call is not followed by the calling and called stations being placed in communication, no charge shall be payable. If the amount of the charge has been paid, it shall be refunded.

2087AP (2) In order to simplify operating and accounting procedures,
Mar2 administrations may decide that no charge shall be payable when a requested connection has not been set up, whatever the reason.

2087AQ (3) However, administrations may decide to collect charges in
Mar2 cases where there is no fault of service. In that case the basis of charging shall be notified to the Secretary-General for inclusion in the List of Coast Stations.

2087AR (4) When, through any fault of the service, the correspondents
Mar2 experience difficulty in the course of a radiotelephone conversation, the chargeable duration of the call shall be reduced to the total time during which speech conditions have been satisfactory.

2087AS § 7. The total charge for a radiotelephone call is normally
Mar2 collected from the calling station with the exception of collect calls (if collect calls are admitted). For collect calls, the charge shall be payable by the called subscriber.

2087AT § 8. Mobile stations must be acquainted with the tariffs
Mar2 applicable to radiotelephone calls. However, they are authorized, where necessary, to obtain such information from land stations; rates furnished by land stations are expressed in gold francs.

2087AU § 9. The rules prescribed in Nos. **2062AU** to **2062AY** shall be
Mar2 applied as regards the interval before the application of new rates.

Section II. Supplementary Charge

2087AV § 10. Unless special arrangements between the administrations
Mar2 and/or the recognized private operating agencies concerned are in effect, supplementary charges for personal calls (from mobile station to land) and collect calls, if admitted, shall be applied.

2087AW § 11.(1) The charge for these special call facilities may be based on
Mar2 the land-line charge only.

2087AX (2) However, administrations may decide to calculate the
Mar2 charge for these special facilities on the total call charge for a three-minute call.

2087AY (3) In either case the amount shall be calculated on the basis
Mar2 applied in the normal international relation concerned.

2087AZ (4) When the booking of a radiotelephone call which is liable to
Mar2 the payment of a supplementary charge (for example, a collect call) is accompanied by a booking of a personal call, only one supplementary charge shall be collected.

Mar2

ARTICLE 5B

Charges for Radiotelex Calls in the Maritime Mobile Service

Section I. Mobile Station Charge, Land Station Charge, Land-Line Charge

2087BA § 1. Unless special arrangements between the administrations
Mar2 and/or the recognized private operating agencies concerned are in effect, the following rules shall be applied as regards charging for radiotelex calls in the maritime mobile service.

2087BB § 2. The charge for a radiotelex call originating in and/or in-
Mar2 tended for a mobile station comprises, according to circumstances:

2087BC Mar2 *a)* the mobile station charge or charges accruing to the mobile station of origin or destination, or to both of these stations;

2087BD Mar2 *b)* the land station charge or charges accruing to the land station or land stations which participate in the transmission;

2087BE Mar2 *c)* the land-line charge or charges;

2087BF Mar2 *d)* the charges for accessory services requested by the person who booked the call (see Nos. **2087BW** to **2087BZ**).

2087BG § 3. (1) If no uniform charges apply in respect of the land stations of
Mar2 a country, different land station charges for radiotelex calls shall be fixed for the MF, HF and VHF bands. The charge for a manually operated or semi-automatic radiotelex call is fixed on a time basis. Calls of a duration of three minutes or less are charged as for three minutes. In the case of calls whose duration exceeds three minutes, a charge per minute is made for the period in excess of three minutes, any fraction of a minute being charged as for one minute. The charge per minute is one-third of the charge for three minutes.

2087BH Mar2 (2) Fully automatic radiotelex calls should be charged by one of the following two methods, taking into account C.C.I.T.T. Recommendations:

a) charging minute by minute;

b) charging by periodic pulses of the type used in the national automatic service.

2087BI Mar2 (3) In the case of radiotelex calls originating in or destined for a country which pass through land stations of that country, the charges applicable to the transmission over the internal telecommunication system of that country are notified in gold francs to the Secretary-General.

2087BJ Mar2 (4) The mobile station charge will in principle be the same for mobile stations of the same nationality. If no uniform charges apply in respect of mobile stations of the same nationality, different mobile station charges for radiotelex calls may be fixed for the MF, HF and VHF bands.

2087BK Mar2 (5) The land and mobile station charges for radiotelex calls shall be expressed in gold francs; administrations shall notify to the Secretary-General the rates fixed by them.

2087BL Mar2 § 4. (1) When a single land station is used as an intermediary for a radiotelex call between two mobile stations, only one land station charge is collected. If the land station charge applicable to traffic with the mobile station booking the radiotelex call is different from that applicable to traffic with the mobile station called, the higher of these two charges is collected.

2087BM Mar2 (2) When, at the request of the person booking the radiotelex call, two land stations are used as intermediaries for a radiotelex call between two mobile stations, the appropriate land station charge of each station is collected and also the land-line charge between the two land stations.

2087BN § 5. (1) When handled through a land station, the chargeable
Mar2 duration of a radiotelex call will be fixed at the end of the call by the land station; if two land stations are participating in the handling of the radiotelex call, the opinion of that land station will prevail which has accepted the call from the originating mobile station. The decision of this land station will also be valid for international accounting.

2087BO (2) The chargeable duration of a radiotelex call between two
Mar2 mobile stations in direct communication with each other will be fixed by the mobile station in which the call originates.

2087BP § 6. (1) When, through any fault of the service, the booking of a
Mar2 radiotelex call is not followed by the calling and called stations being placed in communication, no charge shall be payable. If the amount of the charge has been paid, it shall be refunded.

2087BQ (2) In order to simplify operating and accounting procedures,
Mar2 administrations may decide that no charge shall be payable when a requested connection has not been set up, whatever the reason.

2087BR (3) However, administrations may decide to collect charges in
Mar2 cases where there is no fault of service. In that case the basis of charging shall be notified to the Secretary-General for inclusion in the List of Coast Stations.

2087BS (4) When, through any fault of the service, difficulty is ex-
Mar2 perienced in the course of a radiotelex call, the chargeable duration of the call shall be reduced to the total time during which transmission conditions have been satisfactory.

2087BT § 7. The total charge for a radiotelex call is normally collected
Mar2 from the calling station with the exception of collect calls (if collect calls are admitted). For collect calls, the charge shall be payable by the called subscriber.

2087BU Mar2 § 8. Mobile stations must be acquainted with the tariffs applicable to radiotelex calls. However, they are authorized, where necessary, to obtain such information from land stations; rates furnished by land stations are expressed in gold francs.

2087BV Mar2 § 9. The rules prescribed in Nos. **2062AU** to **2062AY** shall be applied as regards the interval before the application of new rates.

Section II. Supplementary Charge

2087BW Mar2 § 10. Unless special arrangements between the administrations and/or the recognized private operating agencies concerned are in effect, the supplementary charges for accessory services, if admitted, shall be applied.

2087BX Mar2 § 11. (1) The charge for accessory services may be based on the land-line charge only.

2087BY Mar2 (2) However, administrations may decide to calculate the charge for accessory services on the total call charge for a three-minute call.

2087BZ Mar2 (3) In either case the amount shall be calculated on the basis applied in the normal international relation concerned.

ARTICLE 6*)

Mar2

Radio Air Letters

2088 § 1. Each administration may organize a service of radiomaritime letters between ships at sea and its coast stations, and radio air letters between aircraft in flight and its land stations. Such correspondence is transmitted by radio between the ships or aircraft and the land stations. They may be forwarded on the land section :

2089 *a)* wholly or partly by post (ordinary or airmail);

2090 *b)* exceptionally by telegraph, in which case delivery is subject to the periods of delay fixed for letter telegrams of the European or extra-European systems.

2091 § 2. Radio retransmission of radiomaritime letters and radio air letters is not permitted in the mobile service.

2092 § 3. Radiomaritime letters and radio air letters shall be exchanged only with places in the country in which the land station is situated, unless other arrangements have been made with the administrations concerned. In that event, an additional charge may be collected in accordance with the agreement between these administrations.

2093 § 4. Radiomaritime letters bear the paid service indication = SLT = and radio air letters the paid service indication = ALT =. These indications precede the address.

2094 § 5. (1) Other paid service indications which may be admitted are : =RPx=, =PR=, =GP=, =GPR=, =PAV=, =PAVR=.

---

*) *Note by the General Secretariat:* References to the Maritime Mobile Service in this Article should no longer be taken into account (see Foreword).

2095 (2) Where the transmission over the land section is performed exceptionally by telegraph, the only paid service indications which may be admitted are :
=RPx=, =GP=, =TR=, =LX=, =LXDEUIL=, =Réexpédié de x=.

2096 § 6. The address must enable delivery to be effected without inquiry or requests for information. Registered or abbreviated addresses are admitted when, exceptionally, radiomaritime letters and radio air letters are forwarded telegraphically on the land section.

2097 § 7. As a general rule, the text is subject to the regulations applicable to letter telegrams (see Article 70 of the Telegraph Regulations, Geneva Revision, 1958).

2098 § 8. (1) The ship or aircraft station charge for radiomaritime letters and radio air letters shall be 2.75 gold francs up to 22 words. For each word in excess of 22 : 0.125 gold franc.

2099 (2) The land station charge up to 22 words and the charge per word in excess shall be determined by the administrations concerned subject to a maximum of 4.40 gold francs for the first and 0.20 gold franc for the second. The land station charge shall include the postal charge (by ordinary letter) due for routing in the country to which the land station is subject.

2100 (3) The following charges are added where applicable :

2101 — charges due for authorized accessory services and, if necessary, the further charge mentioned in No. **2092.**

2102 — the telegraph charge when transmission on the land section is exceptionally by telegraph.

2103 § 9. Radiomaritime letters and radio air letters rank for radio transmission after ordinary radiotelegrams on hand. Those which have not been transmitted within 24 hours of handing-in are sent concurrently with ordinary radiotelegrams.

2104 § 10. The normal rules of accounting as regards radiocommunications are applicable to radiomaritime letters and to radio air letters, in accordance with the provisions of Nos. **2098** and **2099**.

2105 § 11. (1) When a radiomaritime letter or a radio air letter fails to reach its destination due to the failure of the postal service, only the charges in respect to the services not carried out are refunded.

2106 (2) Reimbursement of charges is admitted when, through the fault of the telegraph or radiotelegraph service, a radiomaritime or radio air letter has not reached its destination, as well as in the cases provided for in Nos. **911**, **912** and **913** of the Telegraph Regulations (Geneva Revision, 1958).

Mar2

ARTICLE 6A

Radiomaritime Letters

2106A § 1. Each administration may organize a service of
Mar2 radiomaritime letters between ships at sea and its land stations. Such correspondence is transmitted by radio between the ships and the land stations. They may be forwarded on the land section:

2106B Mar2 *a)* wholly or partly by post (ordinary or airmail);

2106C Mar2 *b)* exceptionally by telegraph, in which case delivery is subject to the periods of delay fixed for letter telegrams.

2106D § 2. Radio retransmission of radiomaritime letters is not per-
Mar2 mitted in the mobile service.

2106E § 3. Radiomaritime letters shall be addressed only to places in
Mar2 the country in which the land station is situated, unless it is indicated in the List of Coast Stations that the station concerned will accept such traffic for onward transmission by post to places in other countries.

2106F § 4. Radiomaritime letters bear the service indication SLT. This
Mar2 indication precedes the address.

2106G § 5. Except as otherwise provided in this Article, radiomaritime
Mar2 letters may be accepted, taking into account C.C.I.T.T. Recommendations relating to letter telegrams.

2106H § 6. Special telegram services are admitted, provided the ad-
Mar2 ministrations or recognized private operating agencies concerned accept them, taking into account C.C.I.T.T. Recommendations.

2106I § 7. The address must enable delivery to be effected without in-
Mar2 quiry or requests for information. Registered or abbreviated addresses are admitted when, exceptionally, radiomaritime letters are forwarded telegraphically on the land section.

2106J § 8. (1) The land station charge shall include the postal charge (by
Mar2 ordinary letter or airmail letter) due for routing in the country to which the land station is subject. An additional charge may be collected where delivery is to be made to a country other than that to which the land station is subject.

2106K (2) The following charges are added where applicable:
Mar2

2106L — charges due for authorized accessory services and, if
Mar2 necessary, the further charge mentioned in No. **2106J**;

2106M — the land-line charge when transmission on the land sec-
Mar2 tion is exceptionally by telegraph.

2106N § 9. Radiomaritime letters rank for radio transmission after
Mar2 ordinary radiotelegrams on hand. Those which have not been transmitted within 24 hours of handing-in are sent concurrently with ordinary radiotelegrams.

2106O § 10. The normal rules of accounting as regards radiocom-
Mar2 munications are applicable to radiomaritime letters.

2106P § 11. (1) When a radiomaritime letter fails to reach its destination
Mar2 due to the failure of the postal service, only the charges in respect to the services not carried out are refunded.

2106Q (2) Reimbursement of charges is admitted when, through the
Mar2 fault of the telegraph or radiotelegraph service, a radiomaritime letter has not reached its destination, as well as in the cases provided for in Article 12 of the Telegraph Regulations (Geneva, 1973), taking into account C.C.I.T.T. Recommendations.

ARTICLE 7*)

Mar2 **Special Radiotelegrams. Paid Service Indications except in the Maritime Mobile Service**

2107 § 1. The following special radiotelegrams are admitted provided the administrations concerned accept them :

2108 Mar *a)* Press radiotelegrams in the conditions specified in Nos. **2057A** to **2060**.

2109 Mar *b)* Meteorological radiotelegrams in the conditions specified in Nos. **2053** to **2057**.

2110 *c)* Paid service advices. These are forwarded, as far as practicable, by the same route as that of the original radiotelegram. In the case of diversion (for example, in case of interruption or where the mobile station proceeds beyond the service area of the land station which has acted as intermediary for the transmission of the original radiotelegram) they bear the indication " dévié " and particulars of the route followed by the original radiotelegram.

2111 *d)* Urgent radiotelegrams, but only over the general network of telecommunication channels.

2112 *e)* Radiotelegrams with prepaid reply. The reply voucher issued on board a mobile station gives the right to send up to its value a radiotelegram to any destination, but only from the mobile station which issued the voucher. When the charge for a radiotelegram paid for by voucher exceeds the value of the voucher, the excess charge must be paid by the sender using the voucher.

2113 *f)* Radiotelegrams with collation.

2114 *g)* Radiotelegrams with notification of delivery destined for mobile stations, but only as far as concerns the notification to the telegraph office of origin of the

*) *Note by the General Secretariat:* References to the Maritime Mobile Service in this Article should no longer be taken into account (see Foreword).

date and time at which the land station has transmitted the radiotelegram to the mobile station of destination.

2115 *h)* Multiple radiotelegrams.

2116 *i)* Radiotelegrams to be delivered by express or by post (from ship or aircraft to land).

2117 *j)* De luxe radiotelegrams (subject to the conditions laid down in Article 60 of the Telegraph Regulations, Geneva Revision, 1958).

2117A **Mar** *k)* The supplementary charges levied by the offices of origin or by mobile stations for the special radiotelegrams specified in Nos. **2110** to **2117** inclusive shall be the charges specified in the Telegraph Regulations, Geneva Revision, 1958.

2118 **Mar** *l)* Radiotelegrams to be retransmitted by one or two mobile stations at the sender's request (=RM=), in the conditions specified in Nos. **2152** to **2154**.

2119 **Mar** *m)* Radiomaritime letters and radio air letters in the conditions specified in Article 6 of these Additional Regulations.

2120 **Mar** *n)* Radiotelegrams concerning persons protected in time of war by the Geneva Conventions of 12 August 1949 (=RCT=) in the conditions specified in Nos. **2061** and **2062**.

2121 SUP **(Mar)**

2122 **Mar** § 2. In addition, the following paid service indications shall be permitted in radiotelegrams: =GP=, =GPR=, =MP=, =TR=, =TFx= (from ship or aircraft to land), =TLXx= (from ship or aircraft to land), =Jx= (from land to ship or aircraft), =Réexpédié de x= (only when the charge for forwarding can be collected), =Jour=, =Nuit=, =Etat Priorité Nations=, =Etat Priorité=, =Etat=, =Remettre x= (from ship or aircraft to land).

2123 § 3. Radiotelegrams are not admitted as letter telegrams. Radiotelegrams to follow the addressee at the request of the sender are also not admitted.

Mar2

ARTICLE 7A

Mar2*

Special Radiotelegram Services in the Maritime Mobile Service

2123A
Mar2 Special telegram services are admitted, taking into account C.C.I.T.T. Recommendations and provided the administrations or recognized private operating agencies concerned accept them.

ARTICLE 8

Period of Retention of Radiotelegrams at Land Stations

Section I. Radiotelegrams destined for Ships at Sea

2124 § 1. (1) The sender of a radiotelegram destined for a ship at sea may specify the number of days during which the coast station may hold the radiotelegram.

2125 (2) In that case, the sender writes before the address the paid service indication = Jx = (x days) specifying the number of days (ten at the most) exclusive of the day of handing-in of the radiotelegram.

2126 **Mar** § 2. When it has not been possible for a land station to transmit to a ship station:

a) a radiotelegram bearing the paid service indication = Jx = within the prescribed period, or

b) a radiotelegram not bearing this service indication up to the morning of the fourth day following the date of handing-in,

the coast station informs the office of origin, which notifies the sender. The sender of the radiotelegram may then ask, by paid service advice, addressed to the coast station, either that his radiotelegram be cancelled as regards the section between the coast station and the ship station or that further attempts at transmitting it to the ship station be made during a period of another seven days at the most. Failing such a request, the radiotelegram is treated as undelivered by the coast station three days after the dispatch of the advice of non-transmission. The same applies upon the expiry of any period for further attempts which may have been requested by the sender if it has been impossible to reach the ship. The office of origin shall be immediately advised if the coast station transmits the radiotelegram during the last-mentioned period of three days. The same shall apply if the coast station transmits the radiotelegram during the additional period which may have been requested by the sender.

2127 Mar2 § 3. On the morning of the day following that day on which a radiotelegram to a mobile station is treated as undelivered by the land station, the latter shall advise the office of origin which notifies the sender. The mobile station charge and the charges for the special telegram services not performed shall be refunded to the sender.

2128 § 4. The periods mentioned in No. 2126 shall be ignored if the coast station is sure that the ship station will soon come within its service area.

2129 § 5. (1) On the other hand, the lapse of those periods is not awaited when the coast station is sure that the ship station being in course of a voyage either has definitely left its service area or will not enter it. If there is reason to believe that no other coast station of the administration or of the private enterprise to which it is subject is or will be in touch with it, the coast station cancels the radiotelegram as far as concerns the section between itself and the ship station and informs the office of origin which notifies the sender. In the contrary case, the coast station forwards the radiotelegram to the coast station believed to be in touch with the ship station, provided, however, that no additional charge results therefrom.

2130 Mar (2) The coast station which carries out the redirection alters the address of the radiotelegram by placing after the name of the ship station that of the new coast station charged with the transmission and adding at the end of the preamble the service instruction "redirected from x Radio" which must be transmitted throughout the course of the radiotelegram.

2131 Mar (3) If, within the limits of the requisite period of retention of radiotelegrams, the coast station which has redirected a radiotelegram to another coast station is subsequently in a position to transmit the radiotelegram direct to the mobile station of destination, it does so by inserting the service instruction " ampliation " before the preamble. It shall then transmit to the coast station to which the radiotelegram had been redirected a service notice informing the latter of the transmission of the said radiotelegram.

2132 § 6. When a radiotelegram cannot be transmitted to a ship station owing to the arrival of the latter in a port near the coast station, the latter station may, according to circumstances, forward the radiotelegram to the ship station by other means of communication, at the same time informing the office of origin by service advice of the delivery. In this case the coast station charge is retained by the administration to which the coast station is subject and the ship charge is refunded to the sender by the administration to which the office of origin is subject.

Section II. Radiotelegrams destined for Aircraft in Flight

2133 § 7. (1) Radiotelegrams intended for aircraft in flight must be sent by land stations with the least possible delay. When the land station is certain that the aircraft station cannot be reached, it immediately informs the office of origin by service advice, so that the land station and aircraft station charges, and any charges for special services not performed, may be refunded to the sender.

2134 (2) When, however, a radiotelegram cannot be transmitted to an aircraft station due to the latter's arrival at an airport (other than that where the land station is situated) and if the stay of the aircraft is prolonged, the land station may, if necessary, forward the radiotelegram to the aircraft station by other means of communication, and advise the office of origin of this transmission by a service message. In this case, the land station charge is retained by the administration to which the land station belongs, and the aircraft station charge is refunded to the sender by the administration to which the office of origin is subject.

2135 (3) The radiotelegram may be delivered to the aircraft station at the airport where the land station, which should have made the transmission, is situated.

2136 (4) In this case, the land station notifies the office of origin of this delivery by service advice, and the office of origin refunds the land station and aircraft station charges to the sender.

ARTICLE 9

Doubtful Reception. Transmission by "Ampliation". Long-distance Radiocommunications

2137 § 1. (1) In the mobile service, when communication becomes difficult, the two stations in communication make every effort to complete the radiotelegram in course of transmission. The receiving station may request not more than two repetitions of a radiotelegram of which the reception is doubtful. If this triple transmission is ineffective, the radiotelegram is kept on hand in case a favourable opportunity for completing its transmission occurs.

2138 (2) If the transmitting station considers that it will not be possible to re-establish communication with the receiving station within twenty-four hours, it proceeds as follows :

2139 *a) If the transmitting station is a mobile station,* it immediately informs the sender of the reason for the non-transmission of his radiotelegram. The sender may then request :

2140 — that the radiotelegram be transmitted through another land station or through other mobile stations ; or,

2141 — that the radiotelegram be held until it can be transmitted without additional charge ; or,

2142 — that the radiotelegram be cancelled.

2143 *b) If the transmitting station is a land station,* it applies the provisions of Article 8 of these Regulations to the radiotelegram.

2144 § 2. When a mobile station subsequently transmits a radiotelegram thus held to the land station which incompletely received it, this new transmission must bear the service instruction " ampliation " in the preamble of the radiotelegram. If the radiotelegram is transmitted to another land station subject to the same administration or the same private enterprise, the new transmission must bear the service instruction " ampliation via . . . " (insert here the call sign of the land station to which the radiotelegram was transmitted in the first instance) and the administration or private enterprise in question may claim only the charges relating to a single transmission. The " other land station " which thus forwards the radiotelegram may claim from the mobile station of origin any additional charges resulting from the transmission of the radiotelegram over the general network of telecommunication channels between itself and the office of destination.

2145 § 3. When the land station designated in the address as the station by which the radiotelegram is to be forwarded cannot reach the mobile station of destination, and has reason to believe that such mobile station is within the service area of another land station of the administration or private enterprise to which it is itself subject, it may, if no additional charge is incurred thereby, forward the radiotelegram to this other land station.

2146 § 4. (1) A station of the mobile service which has received a radiotelegram and has been unable to acknowledge its receipt in the usual way, must take the first favourable opportunity to give such acknowledgment.

2147 (2) When the acknowledgment of receipt of a radiotelegram transmitted between a mobile station and a land station cannot be given direct, it is forwarded through another mobile or land station by service advice if the latter is able to communicate with the station which has transmitted the radiotelegram in question. In any case, no additional charge shall result.

2148 § 5. (1) Administrations reserve the right to organize a long-distance radiocommunication service between land stations and mobile stations, with deferred acknowledgment of receipt or without any acknowledgment of receipt.

2149 (2) When there is doubt about the accuracy of any part of a radiotelegram transmitted under either of these systems, the indication "doubtful reception" is entered on the copy delivered to the addressee, and the doubtful words or groups of words are underlined. If words are missing, blanks are left in the places where these words should be.

2150 (3) In the long-distance radiocommunication service with deferred acknowledgment of receipt, when the transmitting land station has not, within a period of 5 days, received the acknowledgment of receipt of a radiotelegram sent by it, the station notifies the office of origin. The reimbursement of the land station and ship or aircraft station charges must be postponed until the office of origin has ascertained from the land station in question that an acknowledgment of receipt has not been received subsequently, within a period not exceeding one month.

2151 (4) Each administration designates the land station or stations
Mar participating in the long-distance radio service. An indication to this effect shall appear in the List of Coast Stations.

ARTICLE 10*)

Mar2

Retransmission by Mobile Stations, except in the Maritime Mobile Service

Section I. Retransmission at the Request of the Sender

2152 § 1. Mobile stations shall, if the sender so requests, serve as inter-
Mar mediaries for the routing of radiotelegrams; the number of intermediary mobile stations is, however, limited to two.

2153 § 2. Radiotelegrams forwarded as described in No. **2152** above shall bear, before the address, the paid service indication = RM = (retransmission).

2154 § 3. The transit charge, whether two intermediary stations are concerned or only one, is fixed uniformly at 0.40 gold franc (forty centimes) per word, with the collection of a minimum charge for seven words. When two mobile stations have participated, this charge is divided equally between them.

Section II. Routine Retransmission

2155 § 4. (1) When a land station cannot reach the mobile station for which a radiotelegram is destined and no payment for retransmission of the radiotelegram has been deposited by the sender, the land station may, in order to forward the radiotelegram to its destination, have recourse to the help of another mobile station provided that the latter consents. The radiotelegram is then transmitted to this other mobile station. The help of the latter is given free of charge.

2156 (2) The same provision is also applicable to traffic from mobile stations to land stations, when necessary.

---

*) *Note by the General Secretariat:* References to the Maritime Mobile Service in this Article should no longer be taken into account (see Foreword).

2157 (3) The station assisting in the free retransmission in accordance
Mar with the provisions of Nos. **2155** and **2156** must enter the service abbreviation QSP... (name of the mobile station) at the end of the preamble of the radiotelegram.

2158 (4) In order that a radiotelegram thus forwarded may be considered as having reached its destination, the station which has made use of this indirect route must have obtained the regular acknowledgment of receipt, either direct or by an indirect route, from the mobile station for which the radiotelegram was destined or from the land station to which it was to be forwarded, as the case may be.

Mar2

ARTICLE 10A

Routine Retransmission by Maritime Mobile Stations

2158A § 1. (1) When a land station cannot reach the mobile station for
Mar2 which a radiotelegram is destined, the land station may, in order to forward the radiotelegram to its destination, have recourse to the help of another mobile station provided that the latter consents. The radiotelegram is then transmitted to this other mobile station. The help of the latter is given free of charge.

2158B (2) The same provision is also applicable to traffic from mobile
Mar2 stations to land stations, when necessary.

2158C (3) The station assisting in the free retransmission in accor-
Mar2 dance with the provisions of Nos. **2158A** and **2158B** must enter the service abbreviation QSP... (name of the mobile station) at the end of the preamble of the radiotelegram.

2158D (4) In order that a radiotelegram thus forwarded may be con-
Mar2 sidered as having reached its destination, the station which has made use of this indirect route must have obtained the regular acknowledgement of receipt, either direct or by an indirect route, from the mobile station for which the radiotelegram was destined or from the land station to which it was to be forwarded, as the case may be.

ARTICLE 11

Advice of Non-Delivery

2159 § 1. When, for any reason, a radiotelegram originating in a mobile station and destined for a place on land cannot be delivered to the addressee, an advice of non-delivery is addressed to the land station which received the radiotelegram. After checking the address, the land station forwards the advice, when possible, to the mobile station, if necessary, by way of another land station of the same country or of a neighbouring country, as far as existing conditions or special agreements permit.

2160 § 2. When a radiotelegram received at a mobile station cannot
Mar be delivered, that station so informs the office or mobile station of origin by a service advice. In the case of a radiotelegram originating on land, this service advice is sent, whenever possible, to the land station through which the radiotelegram passed, or, if necessary, to another land station of the same country or of a neighbouring country, so far as existing conditions or special arrangements permit. In such cases the name or call sign of the station from which the radiotelegram was received is quoted.

ARTICLE 12

Radiotelegrams originating in or destined for Aircraft

2161 In the absence of special arrangements the provisions of the Additional Radio Regulations are applicable generally to public correspondence radiotelegrams originating in or destined for aircraft.

ARTICLE 13

Mar2 **Radiocommunications for Multiple Destinations (not applicable in the Maritime Mobile Service)**

2162 Radiocommunications for multiple destinations shall be carried on in accordance with the provisions of the Telegraph Regulations.

ARTICLE 14

Effective Date of the Additional Radio Regulations

The Additionnal Radio Regulations (Geneva, 1959) signed on 21 December 1959, include the following provisions:

2163 These Additional Radio Regulations shall come into force on first May, 1961.

2164 The delegates signing these Regulations hereby declare that, should an administration make reservations about the application of one or more provisions of these Regulations, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration.

The Final Acts of the World Administrative Radio Conference to deal with matters relating to the Maritime Mobile Service (Geneva, 1967), signed on 3 November 1967, include the following provisions:

"The revised provisions of the Additional Radio Regulations, Geneva, 1959, shall form an integral part of the Additional Radio Regulations which are annexed to the International Telecommunication Convention. They shall come into force on 1 April 1969, upon which date the provisions of the Additional Radio Regulations, Geneva, 1959, which are cancelled or modified by these revisions shall be abrogated.

The delegates signing this revision of the Additional Radio Regulations, Geneva, 1959, hereby declare that, should an administration make reservations concerning the application of one or more of the revised provisions

of the Additional Radio Regulations, Geneva, 1959, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration."

The Final Acts of the World Maritime Administrative Radio Conference (Geneva, 1974), signed on 8 June 1974, include the following provisions:

"The revised provisions of the Additional Radio Regulations shall form an integral part of the Additional Radio Regulations which are annexed to the International Telecommunication Convention. They shall come into force on 1 January 1976, upon which date the provisions of the Additional Radio Regulations which are cancelled or modified by this revision shall be abrogated.

The delegates signing this revision of the Additional Radio Regulations hereby declare that, should an administration make reservations concerning the application of one or more of the revised provisions of the Additional Radio Regulations, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration."