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Documents of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (WARC-Aer2) (Geneva, 1978)

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- This PDF includes Document DT No. 1-65
- The complete set of conference documents includes Document No. 1-364, DT No. 1-65, DL No. 2-4

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Addendum No. 1 to
Document No. DT/1-E
1st February 1978

Note by the Secretary-General

COORDINATED PROPOSALS

Attached hereto please find the inventory of proposals received after the date of the publication of Document No. DT/1 (Annex 1 : RR, AP3, AP27; Annexe 2 : Resolutions and Recommendations).

M. MILI
Secretary-General

Annexes : 2

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Annexe 1
Annex 1
Anexo 1

N° de la disposition ayant fait l'objet de propositions	Voir proposition				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
No. of provision subject to proposals	See proposal				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
N.° de la disposición objeto de proposiciones	léase proposición				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
RR 201A		42			47
205A		43			48
429				1	
ADD 429A		44		2-3	49
431				4	
ADD 431A				5	
432				6	
590		45			50
591		46			51
969A		47			52
1326C		48			53
1353B		49			54
APP 3		50,51			
ADD 27/8A					1
27/9		1	1		2
ADD 27/9A					3
27/10 (titre)		2			
27/10		3			4
27/11		4			5
ADD 27/11A					6
27/12		5			7
27/13		6			8
27/14		7			8
27/15		8			9
27/16		9			10-11
		9A			
27/17		10	2		12
27/18		11	3		13
27/19		12	4		14
27/20		13	5		15
27/23			6		16
27/24		14			17

N° de la disposition ayant fait l'objet de propositions	Voir proposition				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
No. of provision subject to proposals	See proposal				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
N.° de la disposición objeto de proposiciones	léase proposición				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
ADD 27/24A					18
27/32		15			
27/34					19
27/49			7		
27/50 - 56		16	8-13		20-26
27/62					27
27/63-73		17	14-19		28-29
ADD section/sección N° 0		18-20	21-25		
27/95		22			
27/96		23-23A			
27/80-94 97-119 121-132 134, 137 139-173 176-185		24			
27/120		21			
27/130	1				
27/133		25			
27/135		26			
27/136		27			
27/138		28			
27/158					30
27/159					31
27/160					32
27/161					33
27/164					34
27/171					35
27/172					36
27/174		29			
27/175		30			
27/186		31			37

N° de la disposition ayant fait l'objet de propositions	Voir proposition				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
No. of provision subject to proposals	See proposal				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
N.° de la disposicion objeto de proposiciones	léase proposicion				
	PHL/55	ZAI/56	ARG/60	E/61-62	B/65
27/188		32			38
27/189		33			39
27/192		34			40
27/193		35			41
27/194					42
ADD 27/194A		36			43
ADD 27/194B					44
ADD 27/195-207		37,38 39			45
27/196,201		40, 41	20		46
27/195		41A			
27/196		41B			
27/197		41C			
27/198		41D			
27/199		41E			
27/200		41F			
27/201		41G			
27/202		41H			
27/203		41I			
27/204		41J			
27/205		41K			

Annex 2

	Resolutions (abbreviated titles)		
	No. 13	ZAI/56/54	B/65/55
	No. 14	ZAI/56/55	B/65/57
ADD	Use of frequencies of the aeronautical mobile (R) service	ZAI/56/56	B/65/56
	No. Aer 1	ZAI/56/57	B/65/58
ADD	Use of frequencies 3023 and 5680 kHz	ZAI/56/58	B/65/59
	No. Aer 2	ZAI/56/59	B/65/60
ADD	Unauthorized use of frequencies in the bands allocated to the aeronautical mobile (R) service	ZAI/56/60	B/65/61
	No. Aer 3	ZAI/56/61	B/65/62
ADD	Use of SSB techniques in the bands allocated exclusively to the aeronautical mobile (R) service		B/65/67
	No. Aer 4	ZAI/56/62	B/65/63
ADD	Use of VHF for communication in the aeronautical mobile (R) service	ZAI/56/63	
	No. Aer 5	ZAI/56/64	B/65/64
ADD	Use of VHF for meteorological broadcasts in the aeronautical mobile (R) service	ZAI/56/65	B/65/65
	No. Aer 6	ZAI/56/66	
ADD	Processing of frequency assignment notices	ZAI/56/53	
ADD	Implementation of new provisions	ZAI/56/52	PHL/54/1
ADD	Implementation of the Plan	ZAI/56/67	B/65/66 B/65/68
	Recommendations		
	No. 19	E/63/2	
	No. Aer 1	ZAI/56/69	B/65/70
ADD	Development of techniques which would help to reduce congestion in the HF bands	ZAI/56/70	B/65/71

Recommendations (contd.)

ADD	Development of techniques which would help to reduce congestion in the HF bands	ZAI/56/70	B/65/71	
ADD	Exclusive allocation of new HF bands	ZAI/56/68	ARG/60/27	B/65/69
ADD	Service characteristics, operational conditions and related provisions	ARG/60/26		
ADD	Public correspondence in the aeronautical mobile service	E/63/1		

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/1-E
11 January 1978

PLENARY MEETING

Note by the Secretary-General

COORDINATED PROPOSALS

1. This working document contains the proposals submitted by administrations and published in preparatory Documents Nos. 1 to 53.

These proposals are grouped as follows :

Proposals concerning	Page
- the Radio Regulations	5
- Appendix 3 to the Radio Regulations	15
- Appendix 27 to the Radio Regulations	21
- Part I (General Provisions), Nos. 27/1 to 27/73	21
- Part II (Frequency Allotment Plan for the Aeronautical Mobile (R) Service) Nos. 27/74 to 27/207	67
- Dates of entry into force	153
- Resolutions	155
- Recommendations	181

Each proposal is preceded by the original text to which it refers (this text is marked with a square bracket in the left-hand margin).

Where the same proposals have been formulated in an identical manner by several countries, they are only published once, and are preceded by the symbols of the countries which have submitted them.

2. Proposals published subsequent to this document will be contained in a supplement.

3. The country symbols are taken from Table 1 of the Preface to the International Frequency List. The other symbols (ADD, MOD and SUP) have their customary meaning.

4. The preliminary remarks by Administrations and the "reasons" for the proposals have not been reproduced. Delegates interested in them should refer to the documents in which the relevant proposals appear.

M. MILI

Secretary-General

Annex : Coordinated proposals

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INTRODUCTION AND GENERAL REMARKS

USA	See Document No.	4,	pages 3 and 4
URS	" "	29,	page 1
G	" "	43,	pages 2 and 3
J	" "	44,	page 2
CAN	" "	46	

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ARTICLE 5

Spa2 **Frequency Allocations** [1]
10 kHz to 275 GHz

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

201A The frequencies 2 182 kHz, 3 023·5 kHz, 5 680 kHz, 8 364 kHz, 121·5 MHz,
Spa2 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 ± 3 kHz about the frequency.

D/8/1 USA/4/53 F/22/1-94 MAU/33/1-94 G/43/48 MOD 201A The frequencies 2182 kHz, ~~3023.5~~ 3023 kHz, 5680 kHz, 8364 kHz, 121.5 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radio-communication services, for search and rescue operations concerning manned space vehicles.

The same applies to the frequencies, 10003 kHz, 14993 kHz and 19993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency.

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.

USA/4/54 MOD 205A The carrier frequencies ~~3023.5~~ 3023 and 5680 kHz may also be used, in accordance with Nos. 1326C and 1353B, respectively, by stations of the maritime mobile service engaged in co-ordinated search and rescue operations.

D/8/2 MOD 205A The carrier frequencies ~~3023.5~~ 3023 and 5680 kHz
F/22/1-95 may also be used, in accordance with Nos. 1326C and
MAU/33/1-95 1353B, respectively, by stations of the maritime mobile
G/43/49 service engaged in coordinated search and rescue operations.

ARTICLE 7

Special Rules Relating to Particular Services

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.

D/8/3 MOD 429 §3.(1) Frequencies in any band allocated to the aeronautical mobile (R) service are reserved for communications between any aircraft and those aeronautical stations primarily concerned with the safety and regularity of flight along national or international civil air routes.

(2) Aeronautical Operational Control Communications in the aeronautical mobile (R) service are intended to permit communications related to regularity of flight.

USA/4/55 ADD 429A Aeronautical Operational Control Communications in the aeronautical mobile (R) service are reserved for communications related to regularity of flight.

ADD 429A • Aeronautical Operational Control Communications in the aeronautical mobile (R) service are intended to permit communications related to regularity of flight.
F/22/1-96
MAU/33/1-96
J/44/31

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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.

CAN/20/1 MOD

431 § 5. Frequencies in the bands allocated to the aeronautical mobile service between 2850 and ~~18030~~ 22000 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.

ARTICLE 9

Spa2 Notification and Recording in the Master International Frequency Register of Frequency Assignments[1] to Terrestrial Radiocommunication Stations[2]

Spa2 Sub-Section IIA. Procedure to be followed in cases not covered by Sub-Section IIB of this 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***).*

CAN/20/2 **MOD** 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 2850 and ~~17970~~ 22000 kHz (see No.500).

[**589** § 30. (1) *Frequency Bands allocated exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz.*

CAN/20/3 **MOD** 589 § 30.(1) Frequency Bands allocated exclusively to the Aeronautical Mobile (R) Service between 2850 and ~~17970~~ 22000 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.

USA/4/56 MOD 590 (2) If the finding is favourable with respect to Nos. 554 to
D/8/4 557 the date of ~~29 April 1966~~ (the date of signing
F/22/1-97 of the AWARC Agreement Geneva, 1978) shall be entered
MAU/33/1-97 in Column 2a.
G/43/50

---

591 (3) If the finding is favourable with respect to No. **558**, the
Aer date of 29 April 1966 shall be entered in Column 2b.

USA/4/57 MOD 591 (3) If the finding is favourable with respect to No. 558,
D/8/5 the date of ~~29 April 1966~~ (the date of signing of the
F/22/1-98 AWARC Agreement Geneva, 1978) shall be entered in
MAU/33/1-98 Column 2b.
G/43/51

ARTICLE 28

Conditions to be Observed by Mobile Stations

Section II. Special Provisions regarding Safety

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**).

USA/4/58 MOD 969A
D/8/6
F/22/1-99
MAU/33/1-99
G/43/52

(3) The aeronautical frequencies ~~3023·5~~ 3023 kHz and 5680 kHz may be used by mobile stations for search and rescue scene-of-action co-ordination 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).

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ARTICLE 35

Use of Frequencies for Radiotelephony in the Maritime Mobile Service

Section II. Bands between 1 605 and 4 000 kHz

C. Search and Rescue

1326C § 3A. The frequency 3 023·5 kHz may be used for intercom-
Mar2 munication 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.

USA/4/59 MOD 1326C 3A The aeronautical frequency ~~3023·5~~ 3023 kHz may be used
F/22/1-100 for intercommunication between mobile stations when
MAU/33/1-100 engaged in coordinated search and rescue operations,
G/43/53 including communication between these stations and participating land stations, ~~with the carrier frequencies, classes of emission and conditions of operation defined in~~ in accordance with the provisions of Appendix 27 (Rev).

D/8/7 MOD 1326C 3A. The frequency ~~3023·5~~ 3023 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~~ in accordance with the provisions of Appendix 27 (Rev).

Mar2 *D. Search and Rescue*

1353B § 15A. The frequency 5 680 kHz may be used for intercommunica-
Mar2 tion 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.

USA/4/60 MOD 1353B 15A. The aeronautical frequency 5680 kHz may be used for
F/22/1-101 intercommunication between mobile stations when engaged
MAU/33/1-101 in coordinated search and rescue operations, including
G/43/54 communication between these stations and participating land stations, ~~with the carrier frequencies, classes of emission and conditions of operation defined in~~ in accordance with the provisions of Appendix 27 (Rev).

D/8/8 MOD 1353B 15A. The frequency 5680 kHz may be used for inter-communication 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~~ in accordance with the provisions of Appendix 27 (Rev).

APPENDIX 3

Mar Mar2

Table of Frequency Tolerances*

(See Article 12)

1. Frequency tolerance is defined in Article 1 and is expressed in parts in 10^6 or, in some cases, in hertz.

2. The power shown for the various categories of stations is the mean power as defined in Article 1.

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1966* to transmitters in use and to those to be installed before 1st January, 1964	Tolerances applicable to new transmitters installed after 1st January, 1964 and to all transmitters after 1st January, 1966*
	* 1st January, 1970 in the case of all tolerances marked with an asterisk.	
- - - - -		
Band: **1605 to 4000 kHz**		
- - - - -		
2. *Land Stations*		
— power 200 W or less	100	100 *h) l)*
— power above 200 W	50	50 *h) l)*
3. *Mobile Stations*		
a) Ship Stations	200	200 *i) k)*
b) Survival Craft Stations	—	300
b A) Emergency Position-Indicating Radiobeacons	—	300
c) Aircraft Stations	200 *	100 *
d) Land Mobile Stations	200	200
4. *Radiodetermination Stations :*		
—power 200 W or less	100	100
—power above 200 W	50	50
5. *Broadcasting Stations*	50	20
Band: **4 to 29·7 MHz**		
- - - - -		
2. *Land Stations:*		
- - - - -		
b) Aeronautical Stations:		
—power 500 W or less	100	100
—power above 500 W	50	50

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1966* to transmitters in use and to those to be installed before 1st January, 1964	Tolerances applicable to new transmitters installed after 1st January, 1964 and to all transmitters after 1st January, 1966*
	* 1st January, 1970 in the case of all tolerances marked with an asterisk.	
— — — — —		
3. *Mobile Stations:*		
— — — — —		
c) Aircraft Stations	200 *	100 *
— — — — —		
— — — — —		

* Certain services may need tighter tolerances for technical and operational reasons.

CAN/20/4
F/24/1
J/44/7

MOD

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1966* to transmitters in use and to those to be installed before 1st January, 1964	Tolerances applicable to new transmitters installed after 1st January, 1964 and to all transmitters after 1st January, 1966*
	*) 1st January, 1970 in the case of all tolerances marked with an asterisk.	
. . . . .		
Band: 1605 to 4000 kHz		
. . . . .		
2. *Land Stations*		
— power 200 W or less	100	100 *h) l)* r)
— power above 200 W	50	50 *h) l)* r)

USA/4/61
CAN/20/5
F/24/2
J/44/7 MOD

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1966* to transmitters in use and to those to be installed before 1st January, 1964	Tolerances applicable to new transmitters installed after 1st January, 1964 and to all transmitters after 1st January, 1966*
	* 1st January, 1970 in the case of all tolerances marked with an asterisk.	
3. *Mobile Stations*		
a) Ship Stations	200	200 *i) k)*
b) Survival Craft Stations	—	300
b A) Emergency Position-Indicating Radiobeacons	—	300
c) Aircraft Stations	200 *	100 * r)
d) Land Mobile Stations	200	200

USA/4/61	ADD	4. Aeronautical Stations:	100	
		- power 500 W or less	50	100 r)
		- power above 500 W		50 r)
USA/4/61	MOD 5.	~~4.~~ Radiodetermination Stations:		
		- power 200 W or less	100	100
		- power above 200 W	50	50
USA/4/61	MOD 6.	~~5.~~ Broadcasting Stations:	50	20

USA/4/61
CAN/20/6 MOD
F/24/3
J/44/7

Band: 4 to 29·7 MHz		
. . . . .		
2. *Land Stations:*		
. . . . .		
b) Aeronautical Stations:		
—power 500 W or less	100	100 r)
—power above 500 W	50	50 r
. . . . .		
3. *Mobile Stations:*		
. . . . .		

USA/4/61
CAN/20/7 MOD
F/24/4
J/44/7

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1966* to transmitters in use and to those to be installed before 1st January, 1964	Tolerances applicable to new transmitters installed after 1st January, 1964 and to all transmitters after 1st January, 1966*
	* 1st January, 1970 in the case of all tolerances marked with an asterisk.	
c) Aircraft Stations	200 *	100 * r)
. . . . .		

*) Certain services may need tighter tolerances for technical and operational reasons.

USA/4/62 **ADD**

r) For single sideband transmitters operating in the Aeronautical Mobile (R) Service, the tolerance is:

1) In the band 1605 - 4000 kHz:

Aeronautical stations	10 Hz
Aircraft stations	20 Hz

2) In the band 4 to 29.7 MHz:

Aeronautical stations	10 Hz
Aircraft stations	20 Hz

CAN/20/8 **ADD** r) For aircraft and aeronautical single sideband radiotelephone transmitters the tolerance is 20 and 10 Hz respectively.

F/24/5 ADD r) For single sideband transmitting stations in the Aeronautical Mobile (R) Service, the tolerance is :

1) aeronautical stations : 10 Hz

2) aircraft stations :

a) on board high-speed aircraft (above 400 km/h) : 20 Hz

b) on board aircraft of a speed of 400 km/h or less : 40 Hz

AUS/31/1 ADD

r) For single sideband transmitters operating in the aeronautical mobile (R) service the tolerance is

1) In the band 1 605-4 000 kHz

Aeronautical stations	± 10 Hz
Aircraft stations	± 75 Hz

2) In the band 4 to 29.7 MHz

Aeronautical stations	± 10 Hz
Aircraft stations	± 75 Hz

J/44/8 ADD r) For single sideband transmitter operating in the frequency bands allocated exclusively to the Aeronautical Mobile (R) service,

the tolerance is:

Aeronautical Station 10 Hz

Aircraft Station 20 Hz

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APPENDIX 27

Frequency Allotment Plan for the Aeronautical Mobile (R) Service and Related Information

(See Article 7)

PART I

General Provisions

Section I

Definitions

CAN/20/9 **ADD** 27/8A Aeronautical Operational Control Communications in the aeronautical mobile (R) service are intended to permit communications related to regularity of flight.

URS/29/14 ADD 27/8A Communications for flight control in the Aeronautical Service are communications used in the Aeronautical Mobile (R) Service for all flight control operations from take-off to landing.

J/44/14 ADD 27/8A 8a A Long-distance Operational Control Communications (OPECON) Area is an area where long-distance communication facilities are required to permit aeronautical operational control communications with aircraft in flight at any time and over any distance on one or more families of frequencies common to the area.

27/9 9. *A Family of Frequencies in the Aeronautical Mobile Service* is a group of frequencies selected from different aeronautical mobile bands and intended to permit communication at any time and over any distance between aircraft in flight and appropriate aeronautical stations.

USA/4/1 MOD 27/9 A Family of Frequencies in the Aeronautical Mobile (R) Service ~~is a group of~~ contains two or more frequencies selected from different Aeronautical Mobile (R) bands and is intended to permit communication at any time ~~and~~ within ~~ever any distance~~ the authorized area of use (See Nos. 27/189 - 27/207 between aircraft ~~in flight~~ stations and appropriate aeronautical stations.

D/5/1
F/22/1-1
MAU/33/1-1
G/43/1
J/44/2

MOD 27/9 9. 'A Family of Frequencies in the Aeronautical Mobile (R) Service ~~is a group of~~ contains two or more frequencies selected from different Aeronautical Mobile (R) bands and is intended to permit communication at any time ~~and~~ within ~~ever any distance~~ the authorized area of use (27/189 - 27/207) between aircraft ~~in flight~~ stations and appropriate aeronautical stations.'

CAN/20/10 MOD 27/9 9. A Family of Frequencies in the Aeronautical Mobile Service ~~is a group~~ consists of frequencies selected from different aeronautical mobile bands and intended to permit communication at any time within the authorized area of use (27/189-27/207) ~~and over any distance~~ between aircraft ~~in flight~~ stations and appropriate aeronautical stations.

URS/29/15 MOD 27/9 A Family of Frequencies in the Aeronautical Mobile (R) Service is a group of 2 to 5 frequencies selected from different bands of the Aeronautical Mobile (R) Service and intended to permit communication between aircraft stations and appropriate aeronautical stations within the boundaries of an established operational area (cf. Nos. 27/189 - 27/207).

URS/29/16 ADD 27/9A A "common channel" is a channel allotted in common to <u>two or more</u> areas within interference distance of each other and its use is subject to agreement between the administrations concerned.

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Section II

Technical and Operational Principles used for the Establishment of the Plan of Allotment of Frequencies in the Aeronautical Mobile (R) Service

GENERAL REMARKS

USA	See Document No. 27	Worldwide Aeronautical Operational Control
URS	See Document No. 29 (para. 4)	Characteristics of single sideband equipment
AUS	See Document No. 31	Frequency tolerances
SUI	See Document No. 34	Universal single sideband operation
AUS	See Document No. 42	Adjacent channel protection criteria

A. Determination of Channel Width

USA/4/2
D/5/2
CAN/20/11
F/22/1-2
MAU/33/1-2
G/43/2

MOD of title A. ~~Determination of Channel Width~~ A. Channel Characteristics

1. *Frequency Separation*

27/10 The frequency separations indicated in the following table are adequate to permit communications using the classes of emission referred to in Nos. **27/49-27/53**.

Band kc/s	Separation kc/s	Band kc/s	Separation kc/s
2850-3025	7	8815-8965	7
3400-3500	7	10 005-10 100	8
4650-4700	7	11 275-11 400	8
5450-5480 (Region 2)	7	13 260-13 360	8
5480-5680	7	17 900-17 970	8
6525-6685	7		

USA/4/3
D/5/3
F/22/1-3
MAU/33/1-3
G/43/2

MOD 27/10 ~~The~~ A frequency ~~separations~~ separation between carrier (reference) frequencies of 3 kHz is ~~indicated in the following table are~~ adequate to permit communications using the classes of emission referred to in Nos. 27/49-~~27/53~~ 27/52 in the frequency bands between 2850 kHz and 17970 kHz allocated exclusively to the Aeronautical Mobile (R) Service. The carrier (reference) frequency of the channels in the Plan shall be on integral multiples of 1 kHz.

CAN/20/12 **MOD 27/10** **~~The~~ A frequency ~~separations~~ separation between carrier frequencies of 3 kHz is ~~indicated in the following table are~~ adequate to permit communications using the classes of emission referred to in Nos. 27/49-~~27/53~~ and 27/50 in the frequency bands between 2850 kHz and 22000 kHz allocated exclusively to the Aeronautical Mobile (R) service. The carrier frequency of the channels in the Plan should be on integral multiples of 1 kHz.**

Band kc/s	Separation kc/s	Band kc/s	Separation kc/s
2850-3025	7	8815-8965	7
3400-3500	7	10 005-10 100	8
4650-4700	7	11 275-11 400	8
5450-5480 (Region 2)	7	13 260-13 360	8
5480-5680	7	17 900-17 970	8
6525-6685	7		

27/11 *a)* It is assumed that for radiotelephone emissions the modulating frequencies will be limited to 3000 cycles per second and that the occupied bandwidth of other authorized emissions will not exceed that of A3 emissions.

USA/4/4 MOD 27/11
D/5/4
F/22/1-4
MAU/33/1-4
G/43/5

~~It is assumed that~~ For radiotelephone emissions the ~~modulating~~ audio frequencies will be limited to between 300 and ~~3000~~ 2700 Hz ~~cycles per second~~ and ~~that~~ the occupied bandwidth of other authorized emissions will not exceed the upper limit of A3J emissions. In specifying these limits, however, no restriction in their extension is implied in so far as emissions other than A3J are concerned, provided that the limits of unwanted emissions are met (see ADD 27/66A and ADD 27/66B)

Note: For aircraft station transmitter types first installed before 1 February 1983 the audio frequencies will be limited to 3000 Hz.

CAN/20/13 **MOD 27/11** 'a) ~~It is assumed that~~ For radiotelephone emissions the ~~modulating~~ audio frequencies will be limited to between 300 and ~~3000~~ 2700 Hz ~~cycles per second~~ and ~~that~~ the occupied bandwidth of other authorized emissions will not exceed the upper limit of A3J emissions. In specifying these limits, however, no restriction in their extension is implied insofar as emissions other than A3J are concerned, provided that the limits of unwanted emissions are met.

USA/4/5 ADD 27/11A
D/5/6
CAN/20/14
F/22/1-5
MAU/33/1-5
G/43/5

For reasons of possible interference potential a given channel should not be used in the same allotment area for radiotelephony and data transmissions.

[**27/12** *b)* The use of channels, as derived from the above table (No. **27/10**), for the various classes of emissions will be subject to special arrangements by the administrations concerned in order to avoid the harmful interference which may result from the simultaneous use of the same channel for several classes of emission, no inherent priority being given to any particular class of emission.

USA/4/6 MOD 27/12
D/5/7
F/22/1-6
MAU/33/1-6

The use of channels, indicated in 27/16 ~~as derived from the above table (No. 27/10)~~, for the various classes of emissions other than A3J and A2H will be subject to special arrangements by the administrations concerned in order to avoid ~~the~~ harmful interference which may result from the simultaneous use fo the same channel for several classes of emission. ~~No inherent priority being given to any particular class of emission.~~ / USA/4/10 /.

G/43/6 **MOD 27/12**

(b) The use of channels, indicated in 27/16 ~~as derived from the above table (No. 27/10)~~, for the various classes of emissions other than A3J and A2H will be subject to special arrangements by the administrations concerned and affected in order to avoid harmful interference which may result from the simultaneous use of the same channel for several classes of emission. ~~no inherent priority being given to any particular class of emission.~~

[**27/13** *c)* It is recognized that two or more channels can be derived from each of the channels provided under this frequency separation plan.

USA/4/7 **SUP 27/13**
D/5/8
CAN/20/15
F/22/1-7
MAU/33/1-7
G/43/7

27/14 *d)* The grouping of adjacent channels derived from the above table (No. **27/10**), to permit the satisfaction of particular requirements will be subject to special arrangements by the administrations concerned.

USA/4/8 **SUP 27/14**
D/5/9
CAN/20/16
F/22/1-8
MAU/33/1-8

G/43/8 **MOD 27/14** (d) ~~The grouping of adjacent channels derived from the above table (No. 27/10), to permit the satisfaction of particular requirements will be subject to special arrangements by the administrations concerned~~. For the avoidance of potential interference, adjacent frequencies in the list of frequencies at 27/16 should not be allotted to the same Major World Air Route, Volmet or RDARA areas or to adjoining Major World Air Route, Volmet or RDARA areas where a particular potential interference problem may arise.

27/15 *e)* The arrangements contemplated in Nos. **27/12** and **27/14** should be made under the Articles of the International Telecommunication Convention and the Radio Regulations entitled " Special Agreements ".

G/43/9 **SUP 27/15**

USA/4/9 MOD 27/15
D/5/10
CAN/20/17
F/22/1-9
MAU/33/1-9

The arrangements contemplated in ~~Nos. 27/12 and 27/14~~ No. 27/12 should be made under the Articles of the International Telecommunication Convention and the Radio Regulations entitled ~~"Special Agreements"~~ "Special Arrangements".

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2. *Frequencies to be Allotted*

27/16 The list of frequencies to be allotted in the bands allocated exclusively to the Aeronautical Mobile (R) Service, on the basis of the frequency separation provided for under No. **27/10**, will be found in the following table:

kc/s				
2850-3025	**4650-4700**	**6525-6685**	**10 005-10 100**	**17 900-17 970**
2854, 2861, 2868, 2875, 2882, 2889, 2896, 2903, 2910, 2917, 2924, 2931, 2938, 2945, 2952, 2959, 2966, 2973, 2980, 2987, 2994, 3001, 3008, 3015 — 24 channels	4654, 4661, 4668, 4675, 4682, 4689, 4696 — 7 channels	6526 **, 6533, 6540, 6547, 6554, 6561, 6568, 6575, 6582, 6589, 6596, 6603, 6610, 6617, 6624, 6631, 6638, 6645, 6652, 6659, 6666, 6673, 6680 — 23 channels	10 009, 10 017, 10 025, 10 033, 10 041, 10 049, 10 057, 10 065, 10 073, 10 081, 10 089, 10 093 ** — 12 channels	17 909, 17 917, 17 925, 17 933, 17 941, 17 949, 17 957, 17 965 — 8 channels
3023.5 (R) & (OR)	**5450-5480**		**11 275-11 400**	
3400-3500	*Region 2*	**8815-8965**		
3404, 3411, 3418, 3425, 3432, 3439, 3446, 3453, 3460, 3467, 3474, 3481, 3488, 3495, 3499 * — 15 channels	5454, 5461, 5469, 5477 — 4 channels	8819, 8826, 8833, 8840, 8847, 8854, 8861, 8868, 8875, 8882, 8889, 8896, 8903, 8910, 8917, 8924, 8931, 8938, 8945, 8952, 8959, 8963 * — 22 channels	11 279, 11 287, 11 295, 11 303, 11 311, 11 319, 11 327, 11 335, 11 343, 11 351, 11 359, 11 367, 11 375, 11 383, 11 391 — 15 channels	
	5480-5680		**13 260-13 360**	
	5484, 5491, 5498, 5505, 5512, 5519, 5526, 5533, 5540, 5547, 5554, 5561, 5568, 5575, 5582, 5589, 5596, 5603, 5610, 5617, 5624, 5631, 5638, 5645, 5652, 5659, 5666, 5673 — 28 channels		13 264, 13 272, 13 280, 13 288, 13 296, 13 304, 13 312, 13 320, 13 328, 13 336, 13 344, 13 352, 13 356 ** — 13 channels	
	5680 (R) & (OR)			

* Available for A1 emission only.

** Available for A1, A3A, A3H and A3J emissions only.

USA/4/10 MOD 27/16 The list of carrier (reference) frequencies to be allotted in the bands allocated exclusively to the Aeronautical Mobile (R) Service, on the basis of the frequency separation provided for under No. 27/10, will be found in the following table.

USA/4/11

kHz

2850 - 3025		3400 - 3500	4650 - 4700	5480 - 5680		6525 - 6685	
2851	2953	3401	4651	5481	5583	6526	6628
2854	2956	3404	4654	5484	5586	6529	6631
2857	2959	3407	4657	5487	5589	6532	6634
2860	2962	3410	4660	5490	5592	6535	6637
2863	2965	3413	4663	5493	5595	6538	6640
2866	2968	3416	4666	5496	5598	6541	6643
2869	2971	3419	4669	5499	5601	6544	6646
2872	2974	3422	4672	5502	5604	6547	6649
2875	2977	3425	4675	5505	5607	6550	6652
2878	2980	3428	4678	5508	5610	6553	6655
2881	2983	3431	4681	5511	5613	6556	6658
2884	2986	3434	4684	5514	5616	6559	6661
2887	2989	3437	4687	5517	5619	6562	6664
2890	2992	3440	4690	5520	5622	6565	6667
2893	2995	3443	4693	5523	5625	6568	6670
2896	2998	3446	4696	5526	5628	6571	6673
2899	3001	3449	(16) CHNLS	5529	5631	6574	6676
2902	3004	3452	*4699	5532	5634	6577	6679
2905	3007	3455		5535	5637	6580	6682
2908	3010	3458		5538	5640	6583	(53)CHNLS
2911	3013	3461	5450 - 5480	5541	5643	6586	
2914	3016	3464	REGION 2	5544	5646	6589	
2917	3019	3467	5451	5547	5649	6592	
2920	3023(R/OR)	3470	5454	5550	5652	6595	
2923	(58) CHNLS	3473	5457	5553	5655	6598	
2926		3476	5460	5556	5658	6601	
2929		3479	5463	5559	5661	6604	
2932		3482	5466	5562	5664	6607	
2935		3485	5469	5565	5667	6610	
2938		3488	5472	5568	5670	6613	
2941		3491	5475	5571	5673	6616	
2944		3494	(9) CHNLS	5574	5676	6619	
2947		3497	*5478	5577	5680(R/OR)	6622	
2950		(33) CHNLS		5580	(67) CHNLS	6625	

* Guard Band

USA/4/11
(cont.)

8815 - 8965		10005 - 10100	11275 - 11400		13260 - 13360	17900 - 17970
8816	8921	10006	11276	11384	13261	17901
8819	8924	10009	11279	11387	13264	17904
8822	8927	10012	11282	11390	13267	17907
8825	8930	10015	11285	11393	13270	17910
8828	8933	10018	11288	11396	13273	17913
8831	8936	10021	11291		13276	17916
8834	3939	10024	11294	(41) CHNLS	13279	17919
8837	8942	10027	11297	*11399	13282	17922
8840	8945	10030	11300		13285	17925
8843		10033	11303		13288	17928
8846	8948	10036	11306		13291	17931
8849	8951	10039	11309		13294	17934
8852	8954	10042	11312		13297	17937
8855	8957	10045	11315		13300	17940
8858	8960	10048	11318		13303	17943
8861		10051	11321		13306	17946
8864	(49)CHNLS	10054	11324		13309	17949
8867	*8963	10057	11327		13312	17952
8870		10060	11330		13315	17955
8873		10063	11333		13318	17958
8876		10066	11336		13321	17961
8879		10069	11339		13324	17964
8882		10072	11342		13327	17967
8885		10075	11345		13330	(23) CHNLS
8888		10078	11348		13333	
8891		10081	11351		13336	
8894		10084	11354		13339	
8897		10087	11357		13342	
8900		10090	11360		13345	
8903		10093	11363		13348	
8906		10096	11366		13351	
8909		(31) CHNLS	11369		13354	
8912		*10099	11372		13357	
8915			11375		(33) CHNLS	
8918			11378			
			11381			

* Guard Band

D/5/11
G/43/10

MOD 27/16 'The list of carrier (reference) frequencies to be allotted in the bands allocated exclusively to the Aeronautical Mobile (R) Service, on the basis of the frequency separation provided for under No. 27/10, will be found in the following table.'

D/5/12
F/22/1-11
MAU/33/1-11
G/43/10

The following table is illustrative only. The final table will follow the format of the existing table and specify each channel carrier (reference) frequency. The final table will also include those channels which are near band edges and have less than 3 kHz bandwidth.

kHz

D/5/12
G/43/10

2850 - 3025	5450 - 5480	8815 - 8965	13260 - 13360
2851 to 3019 in steps of 3 kHz 3023*(R) & (OR) 58 CHANNELS	Region 2 5451 to 5475 in steps of 3 kHz 9 CHANNELS	8816 to 8960 in steps of 3 kHz 49 CHANNELS	13261 to 13357 in steps of 3 kHz 33 CHANNELS
3400 - 3500	5480 - 5680	10005 - 10100	17900 - 17970
3401 to 3497 in steps of 3 kHz 33 CHANNELS	5481 to 5676 in steps of 3 kHz 5680*(R)&(OR) 67 CHANNELS	10006 to 10096 in steps of 3 kHz 31 CHANNELS	17901 to 17967 in steps of 3 kHz 23 CHANNELS
4650 - 4700	6525 - 6685	11275 - 11400	
4651 to 4696 in steps of 3 kHz 16 CHANNELS	6526 to 6682 in steps of 3 kHz 53 CHANNELS	11276 to 11396 in steps of 3 kHz 41 CHANNELS	

* A3 and A3H emissions may also be used.

CAN/20/18 MOD 27/16 The list of frequencies to be allotted in the bands allocated exclusively to the Aeronautical Mobile (R) Service on the basis of frequency separation provided for under ~~No. 27/10~~ No. MOD 27/10 will be found in the following table: / CAN/20/12 /

kHz							
2850-3025 (57 Channels)				3400-3500 (33 Channels)		4650-4700 (16 Channels)	
Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency
*2852.0	*2853.4	2951.0	2952.4	*3401.0	3402.4	*4651.0	4652.4
2855.0	2856.4	2954.0	2955.4	3404.0	3405.4	4654.0	4655.4
2858.0	2859.4	2957.0	2958.4	3407.0	3408.4	4657.0	4658.4
2861.0	2862.4	2960.0	2961.4	3410.0	3411.4	4660.0	4661.4
2864.0	2865.4	2963.0	2964.4	3413.0	3414.4	4663.0	4664.4
2867.0	2868.4	2966.0	2967.4	3416.0	3417.4	4666.0	4667.4
2870.0	2871.4	2969.0	2970.4	3419.0	3420.4	4669.0	4670.4
2873.0	2874.4	2972.0	2973.4	3422.0	3423.4	4672.0	4673.4
2876.0	2877.4	2975.0	2976.4	3425.0	3426.4	4675.0	4676.4
2879.0	2880.4	2978.0	2979.4	3428.0	3429.4	4678.0	4679.4
2882.0	2883.4	2981.0	2982.4	3431.0	3432.4	4681.0	4682.4
2885.0	2886.4	2984.0	2985.4	3434.0	3435.4	4684.0	4685.4
2888.0	2889.4	2987.0	2988.4	3437.0	3438.4	4687.0	4688.4
2891.0	2892.4	2990.0	2991.4	3440.0	3441.4	4690.0	4691.4
2894.0	2895.4	2993.0	2994.4	3443.0	3444.4	4693.0	4694.4
2897.0	2898.4	2996.0	2997.4	3446.0	3447.4	*4696.0	4697.4
2900.0	2901.4	2999.0	3000.4	3449.0	3450.4		
2903.0	2904.4	3002.0	3003.4	3452.0	3453.4		
2906.0	2907.4	3005.0	3006.4	3455.0	3456.4	5450-5480 (9 Channels)	
2909.0	2910.4	3008.0	3009.4	3458.0	3459.4		
2912.0	2913.4	3011.0	3012.4	3461.0	3462.4		
2915.0	2916.4	3014.0	3015.4	3464.0	3465.4	Region 2	
2918.0	2919.4	3017.0	3018.4	3467.0	3468.4		
2921.0	2922.4			3470.0	3471.4	*5451.0	5452.4
2924.0	2925.4	3023.0	3024.4	3473.0	3474.4	5454.0	5455.4
2927.0	2928.4			3476.0	3477.4	5457.0	5458.4
2930.0	2931.4			3479.0	3480.4	5460.0	5461.4
2933.0	2934.4			3482.0	3483.4	5463.0	5464.4
2936.0	2937.4			3485.0	3486.4	5466.0	5467.4
2939.0	2940.4			3488.0	3489.4	5469.0	5470.4
2942.0	2943.4			3491.0	3492.4	5472.0	5473.4
2945.0	2946.4			3494.0	3495.4	*5475.0	5476.4
2948.0	2949.4			3497.0	3498.4		

*These channels may be extended to the band edge, if required, to provide for wider emission. The assigned frequencies will then be 2852.5, 3402.0, 4652.0, 4698.0, 5452.0 and 5477.5 kHz.

CAN/20/18 (cont.)

5480-5680 (66 Channels)				6525-6685 (53 Channels)			
Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency
*5481.0	5482.4	5583.0	5584.4	*6526.0	6527.4	6628.0	6629.4
5484.0	5485.4	5586.0	5587.4	6529.0	6530.4	6631.0	6632.4
5487.0	5488.4	5589.0	5590.4	6532.0	6533.4	6634.0	6635.4
5490.0	5491.4	5592.0	5593.4	6535.0	6536.4	6637.0	6638.4
5493.0	5494.4	5595.0	5596.4	6538.0	6539.4	6640.0	6641.4
5496.0	5497.4	5598.0	5599.4	6541.0	6542.4	6643.0	6644.4
5499.0	5500.4	5601.0	5602.4	6544.0	6545.4	6646.0	6647.4
5502.0	5503.4	5604.0	5605.4	6547.0	6548.4	6649.0	6650.4
5505.0	5506.4	5607.0	5604.4	6550.0	6551.4	6652.0	6653.4
5508.0	5509.4	5610.0	5611.4	6553.0	6554.4	6655.0	6656.4
5511.0	5512.4	5613.0	5614.4	6556.0	6557.4	6658.0	6659.4
5514.0	5515.4	5616.0	5617.4	6559.0	6560.4	6661.0	6662.4
5517.0	5518.4	5619.0	5620.4	6562.0	6563.4	6664.0	6665.4
5520.0	5521.4	5622.0	5623.4	6565.0	6566.4	6667.0	6668.4
5523.0	5524.4	5625.0	5626.4	6568.0	6569.4	6670.0	6671.4
5526.0	5527.4	5628.0	5629.4	6571.0	6572.4	6673.0	6674.4
5529.0	5530.4	5631.0	5632.4	6574.0	6575.4	6676.0	6677.4
5532.0	5533.4	5634.0	5635.4	6577.0	6578.4	6679.0	6680.4
5535.0	5536.4	5637.0	5638.4	6580.0	6581.4	6682.0	6683.4
5538.0	5539.4	5640.0	5641.4	6583.0	6564.4		
5541.0	5542.4	5643.0	5644.4	6586.0	6587.4		
5544.0	5545.4	5646.0	5647.4	6589.0	6590.4		
5547.0	5548.4	5649.0	5650.4	6592.0	6593.4		
5550.0	5551.4	5652.0	5653.4	6595.0	6596.4		
5553.0	5554.4	5655.0	5656.4	6598.0	6599.4		
5556.0	5557.4	5658.0	5659.4	6601.0	6602.4		
5559.0	5560.4	5661.0	5662.4	6604.0	6605.4		
5562.0	5563.4	5664.0	5665.4	6607.0	6608.4		
5565.0	5566.4	5667.0	5668.4	6610.0	6611.4		
5568.0	5569.4	5670.0	5671.4	6613.0	6614.4		
5571.0	5572.4	5673.0	5674.4	6616.0	6617.4		
5574.0	5575.4			6619.0	6620.4		
5577.0	5578.4	5680.0	5681.4	6622.0	6623.4		
5580.0	5581.4			6625.0	6626.4		

*These channels may be extended to the band edge, if required, to provide for wider emission. The assigned frequencies will then be 5482.0 and 6527.0 kHz.

CAN/20/18 (cont.)

8815-8965 (50 Channels)				10005-10100 (31 Channels)		11275-1140 (41 Channels)	
Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency
*8816.0	8817.4	8924.0	8925.4	*10006.0	10007.4	*11276.0	11277.4
8819.0	8820.4	8927.0	8928.4	10009.0	10010.4	11279.0	11280.4
8822.0	8823.4	8930.0	8931.4	10012.0	10013.4	11282.0	11283.4
8825.0	8826.4	8933.0	8934.4	10015.0	10016.4	11285.0	11286.4
8828.0	8829.4	8936.0	8937.4	10018.0	10019.4	11288.0	11289.4
8831.0	8832.4	8939.0	8940.4	10021.0	10022.4	11291.0	11292.4
8834.0	8835.4	8942.0	8943.4	10024.0	10025.4	11294.0	11295.4
8837.0	8838.4	8945.0	8943.4	10027.0	10028.4	11297.0	11298.4
8840.0	8841.4	8948.0	8949.4	10030.0	10031.4	11300.0	11301.4
8843.0	8844.4	8951.0	8952.4	10033.0	10034.4	11303.0	11304.4
8846.0	8847.4	8954.0	8955.4	10036.0	10037.4	11306.0	11307.4
8849.0	8850.4	8957.0	8958.4	10039.0	10040.4	11309.0	11310.4
8852.0	8853.4	*8960.0	8961.4	10042.0	10043.4	11312.0	11313.4
8855.0	8856.4			10045.0	10046.4	11315.0	11316.4
8858.0	8859.4			10048.0	10049.4	11318.0	11319.4
8861.0	8862.4			10051.0	10052.4	11321.0	11322.4
8864.0	8865.4			10054.0	10055.4	11324.0	11325.4
8867.0	8868.4			10057.0	10058.4	11327.0	11328.4
8870.0	8871.4			10060.0	10061.4	11330.0	11331.4
8873.0	8874.4			10063.0	10064.4	11333.0	11334.4
8876.0	8877.4			10066.0	10067.0	11336.0	11337.4
8879.0	8880.4			10069.0	10070.4	11339.0	11340.4
8882.0	8883.4			10072.0	10073.4	11342.0	11343.4
8885.0	8886.4			10075.0	10076.4	11345.0	11346.4
8888.0	8889.4			10078.0	10079.4	11348.0	11349.4
8891.0	8892.4			10081.0	10082.4	11351.0	11352.4
8894.0	8895.4			10084.0	10085.4	11354.0	11355.4
8897.0	8898.4			10087.0	10088.4	11357.0	11358.4
8900.0	8901.4			10090.0	10091.4	11360.0	11361.4
8903.0	8904.4			10093.0	10094.4	11363.0	11364.4
8906.0	8907.4			*10096.0	10097.4	11366.0	11367.4
8909.0	8910.4					11369.0	11370.4
8912.0	8913.4					11372.0	11373.4
8915.0	8916.4					11375.0	11376.4
8918.0	8919.4					11378.0	11379.4
8921.0	8922.4					11381.0	11382.4
						11384.0	11385.4
						11387.0	11388.4
						11390.0	11391.4
						11393.0	11394.4
						*11396.0	11397.4

*These channels may be extended to the band edge, if required, to provide for wider emission. The assigned frequencies will then be 8817.0, 8962.5, 10007.0, 10098.0, 11277.0 and 11398.0 kHz.

CAN/20/18 (cont.)

13260-13360 (33 Channels)		17900-17970 (23 Channels)		21960-22000 (13 Channels)	
Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency	Carrier Frequency	Assigned Frequency
*13261.0	13262.4	*17901.0	17902.4	*21961.0	21962.4
13264.0	13265.4	17904.0	17905.4	21964.0	21965.4
13267.0	13268.4	17907.0	17908.4	21967.0	21968.4
13270.0	13271.4	17910.0	17911.4	21970.0	21971.4
13273.0	13274.4	17913.0	17914.4	21973.0	21974.4
13276.0	13277.4	17916.0	17917.4	21976.0	21977.4
13279.0	13280.4	17919.0	17920.4	21979.0	21980.4
13282.0	13283.4	17922.0	17923.4	21982.0	21983.4
13285.0	13286.4	17925.0	17926.4	21985.0	21986.4
13288.0	13289.4	17928.0	17929.4	21988.0	21989.4
13291.0	13292.4	17931.0	17932.4	21991.0	21992.4
13294.0	13295.4	17934.0	17935.4	21994.0	21995.4
13297.0	13298.4	17937.0	17938.4	21997.0	21998.4
13300.0	13301.4	17940.0	17941.4		
13303.0	13304.4	17943.0	17944.4		
13306.0	13307.4	17946.0	17947.4		
13309.0	13310.4	17949.0	17950.4		
13312.0	13313.4	17952.0	17953.4		
13315.0	13316.4	17955.0	17956.4		
13318.0	13319.4	17958.0	17959.4		
13321.0	13322.4	17961.0	17962.4		
13324.0	13325.4	17964.0	17965.4		
13327.0	13328.4	17967.0	17968.4		
13330.0	13331.4				
13333.0	13334.4				
13336.0	13337.4				
13339.0	13340.4				
13342.0	13343.4				
13345.0	13346.4				
13348.0	13349.4				
13351.0	13352.4				
13354.0	13355.4				
13357.0	13358.4				

*These channels may be extended to the band edge, if required, to provide for wider emission. The assigned frequencies will then be 13262.0, 17902.0 and 21962.0 kHz.

F/22/1-10 MOD 27/16
MAU/33/1-10

'The list of carrier (reference) frequencies to be allotted in the bands allocated exclusively to the Aeronautical Mobile (R) Service, on the basis of the frequency separation provided for under No. 27/10, will be found in the following table.'

MOD 27/16

kHz			
2850 - 3025	5450 - 5480	8815 - 8965	13 260 - 13 360
2851 to 3019 in steps of 3 kHz 3023[a] (R) & (OR) 58 CHANNELS	Region 2 5451 to 5475 in steps of 3 kHz 9 CHANNELS	8816 to 8960 in steps of 3 kHz 49 CHANNELS	13 261 to 13 357 in steps of 3 kHz 33 CHANNELS
3400 - 3500	5480 - 5680	10 005 - 10 100	17 900 - 17 970
3401 to 3497 in steps of 3 kHz 33 CHANNELS	5481 to 5676 in steps of 3 kHz 5680[a] (R) & (OR) 67 CHANNELS	10 006 to 10 096 in steps of 3 kHz 31 CHANNELS	17 901 to 17 967 in steps of 3 kHz 23 CHANNELS
4650 - 4700	6525 - 6685	11 275 - 11 400	
4651 to 4696 in steps of 3 kHz 16 CHANNELS	6526 to 6682 in steps of 3 kHz 53 CHANNELS	11 276 to 11 396 in steps of 3 kHz 41 CHANNELS	

[a] A3 and A3H emissions may also be used.

URS/29/17 MOD 27/16 The list of (reference) carrier and assigned frequencies allotted in the bands allocated exclusively to the Aeronautical Mobile (R) Service, on the basis of the frequency separation provided for under No. 27/10, will be found in the following table :

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3. *Channels common to (R) and (OR) Services*

27/17 3.1 The channels common to the (R) and (OR) Services, centred at 3023.5 and 5680 kc/s are authorized for world-wide use as shown in Nos. **27/196** and **27/201**. Notwithstanding these provisions, the frequency 5680 kc/s may also be used at aeronautical stations for communication with aircraft stations when other frequencies of the aeronautical stations are either unavailable or unknown. However, this use shall be restricted to such areas and conditions that harmful interference cannot be caused to other authorized operations of stations in the aeronautical mobile service.

USA/4/12 MOD 27/17
D/5/13
F/22/1-12
MAU/33/1-12

The ~~channels~~ carrier (reference) frequencies common to the (R) and (OR) Services, ~~centered at 3023.5~~ 3023 and 5680 ~~kc/s~~ kHz, are authorized for world-wide use as shown in Nos. 27/196 and 27/201. Notwithstanding these provisions, the carrier (reference) frequency 5680 ~~kc/s~~ kHz may also be used at aeronautical stations for communication with aircraft stations when other frequencies of the aeronautical stations are either unavailable or unknown. However, this use shall be restricted to such areas and conditions that harmful interference cannot be caused to other authorized operations of stations in the aeronautical mobile service.

CAN/20/19 MOD 27/17

3.1 The ~~channels~~ carrier frequencies common to the (R) and (OR) Services, ~~centred at 3023.5~~ 3023 and 5680 ~~kc/s~~ kHz are authorized for world-wide use as shown in Nos. 27/196 and 27/201. Notwithstanding these provisions, the carrier frequency 5680 ~~kc/s~~ kHz may also be used at aeronautical stations for communication with aircraft stations when other frequencies of the aeronautical stations are either unavailable or unknown. However, this use shall be restricted to such areas and conditions that harmful interference cannot be caused to other authorized operations of stations in the aeronautical mobile service.

G/43/11 **MOD 27/17**

The ~~channels~~ carrier (reference) frequencies common to the (R) and (OR) Services, ~~centered at 3023.5~~ 3023 and 5680 ~~kc/s~~ kHz, are authorized for ~~world-wide~~ use as shown in Nos. 27/196 and 27/201. ~~Notwithstanding these provisions, the frequency 5680 kc/s may also be used at aeronautical stations for communication with aircraft stations when other frequencies of the aeronautical stations are either unavailable or unknown. However, this use shall be restricted to such areas and conditions that harmful interference cannot be caused to other authorized operations of stations in the aeronautical service.~~

27/18 3.2 All stations using 3023.5 and 5680 kc/s for search and rescue purposes and employing single sideband (SSB) shall transmit a carrier at a level sufficient to permit reception on a double sideband (DSB) receiver and shall be able to receive DSB transmissions.

CAN/20/20 SUP 27/18

USA/4/13 MOD 27/18
D/5/14
F/22/1-13
MAU/33/1-13
G/43/12

'All stations directly involved in co-ordinated search and rescue operations using ~~3024.5~~ 3023 and 5680 ~~kc/s~~ kHz ~~for search and rescue purposes and employing single sideband (SSB)~~ shall transmit ~~a carrier at a level sufficient to permit reception on a double sideband (DSB) receiver and shall be able to receive DSB transmissions~~ only in the upper sideband mode (See also MOD 27/73).

27/19 3.3 Subject to appropriate co-ordination, stations of the Aeronautical Mobile (R) Service using the common (R) and (OR) channel centred at 3023.5 kc/s may operate with their carrier frequency at 3023 kc/s.

USA/4/14 SUP 27/19
D/5/15
CAN/20/21
F/22/1-14
MAU/33/1-14
G/43/13

27/20 4. The International Civil Aviation Organization (I.C.A.O.) co-ordinates communications of the Aeronautical Mobile (R) Service with international air operations for a large part of the world and this Organization should be consulted in appropriate cases, particularly in the operational use of the frequencies in the Plan.

USA/4/15 MOD 27/20 The International Civil Aviation Organization ~~(I.C.A.O.)~~ (ICAO) coordinates communications in the Aeronautical Mobile (R) Service with international aeronautical ~~air~~ operations ~~for a large part of the world~~, and this Organization ~~should~~ shall be consulted ~~in appropriate cases, particularly~~ in any international aeronautical operational use of the frequencies in the Plan.

D/5/16 MAU/33/1-15 MOD 27/20 4. 'The International Civil Aviation Organization ~~(I.C.A.O.)~~ (ICAO) coordinates communications in the Aeronautical Mobile (R) Service with international aeronautical ~~air~~ operations ~~for a large part of the world~~, and this Organization ~~should~~ shall be consulted ~~in appropriate cases, particularly~~ in any international aeronautical operational use of the frequencies in the Plan, including the coordination of the operational use of frequencies allotted for world-wide use. The ICAO shall effect the necessary coordination in collaboration with the IFRB with the view to facilitating the application of the notification and registration procedures described in Article 9 of the Radio Regulations.'

F/22/2 MOD 27/20 "The International Civil Aviation Organization (~~I.C.A.O.~~) (ICAO) coordinates communications in the Aeronautical Mobile (R) Service with international aeronautical ~~air~~ operations in matters of air navigational safety ~~for a large part of the world~~, and this Organization ~~should~~ shall be consulted ~~in appropriate cases~~, ~~particularly~~ in the operational use of the frequencies in the Plan".

G/43/14 **MOD 27/20** The International Civil Aviation Organization ~~(I.C.A.O.)~~ (ICAO) co-ordinates communications in the Aeronautical Mobile (R) Service ~~with~~ for international aeronautical ~~air~~ operations ~~for a large part of the world~~, and this Organization ~~should~~ shall be consulted ~~in appropriate cases, particularly~~ in ~~the~~ any international aeronautical operational use of the frequencies in the Plan, including the co-ordination of the operational use of frequencies allotted for world-wide use.

J/44/1 With respect to the provision No. 27/20, this Administration is of the opinion that that provision should be retained as it is.

5. *Adaptation of Allotment Procedure*

[**27/23** 7. Resort to the co-ordination described in No. **27/20** shall be made where appropriate and desirable for the efficient utilization of the frequencies in question.

USA/4/16
D/5/17
F/22/1-15
MAU/33/1-16
G/43/15

MOD 27/23 7. Resort to the co-ordination described in No. 27/20 shall be made where appropriate and desirable for the efficient utilization of the frequencies in question, and especially when the procedures of No. 27/22 are not satisfactory.

B. Interference Range Contours

1. *Definition of Contours*

G/43/16 **MOD to heading** preceding 27/24 1 ~~**Definition of Contours**~~ General

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27/24 1.1 The transparencies associated with this Appendix show, for the frequencies stated, contours which indicate the minimum acceptable distance separating two aeronautical stations each having a mean effective radiated power of 1.0 kW (for emissions such as A1, F1, F2 and unmodulated emissions A3 and A3H) producing a protection ratio of 15 db of desired signal to interfering signal on the same frequency at an aircraft operating at the limit of the service range of the desired aeronautical station transmitter. This limit is generally assumed to be at the boundary of the area concerned, and the service range is not included in the contour.

CAN/20/22 SUP 27/24
G/43/17

USA/4/17 MOD 27/24
D/5/8
F/22/1-16
MAU/33/1-17

The transparencies associated with this Appendix show for the frequencies stated, contours which indicate the minimum acceptable distance separating two aeronautical stations each having a mean effective radiated power of 1.0 kW ~~(for emissions such as A1, F1, F2, and unmodulated emission A3 and A3H)~~ producing a protection ratio of 15 dB of desired signal to interference signal on the same frequency at an aircraft operating at the limit of the service range of the desired aeronautical station transmitter. This limit is generally assumed to be at the boundary of the area concerned, and the service range is not included in the contour.

1.1 General Provisions

(a) Service Range - Due to factors such as the power of the transmitter, propagation loss, noise level, etc., there is a limit to the distance at which reliable communications can be effected between an aeronautical station and an aircraft station. This limiting distance, based on the weakest path, is the service range. Often, the boundary of the air route area is assumed to be the limiting distance.

(b) Interference Range - This is the minimum distance from the limit of the service range of a wanted station to an interfering station, needed to produce a protection ratio of 15 dB. This protection ratio is between the wanted signal at an aircraft station at the limit of the service range and the signal from an interfering aeronautical station operating on the same frequency. The interference range has been calculated for the orders of frequencies indicated on the data tables, for day and night conditions, for various latitudes, for conditions of median sunspot activity and for a mean effective radiated power of 1.0 kW at the aeronautical station.

(c) Repetition Distance - This is the distance at which a frequency may be successfully shared and is equal to the sum of the service range and the interference range.

(d) Figure 1 illustrates the use of the concept of interference range in frequency planning through the determination of repetition distance.

(see the following page)

1.1A Transparencies

The transparencies associated with this Appendix show, for the frequencies stated, the interference range described in 1.1(b) which would be required between an interfering aeronautical station and an aircraft station operating at the limit of its service range. Because of the variability of propagation conditions not only from hour to hour within the day-time and night-time periods but also from day-to-day, with season, with solar activity level and geographic location the 15 dB protection ratio may be expected to have marked variations and accordingly a greater protection may be available much of the time especially when the aircraft is not operating at the limit of its service range.

→

CAN/20/23 (cont.)
G/43/18

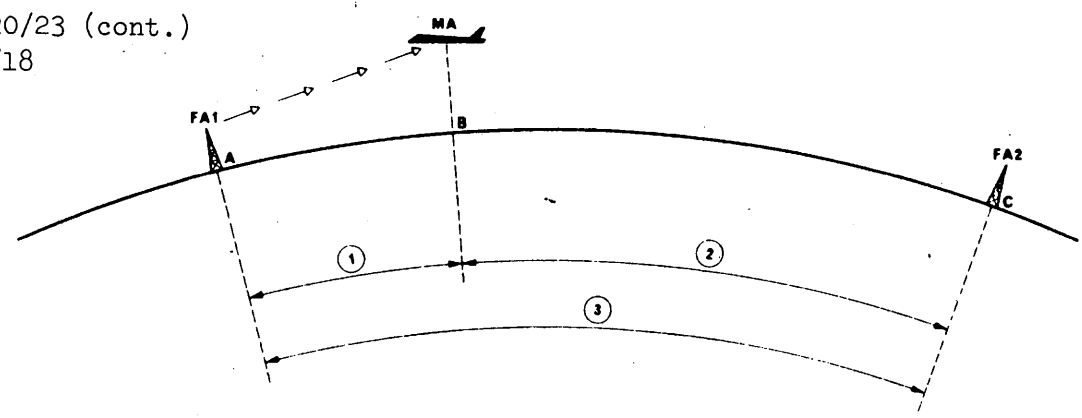

FIGURE 1

Service range, interference range, repetition distance

FA1 : aeronautical station in communication with aircraft station MA
FA2 : aeronautical station in communication with aircraft stations other than MA
MA : aircraft station in communication with aeronautical station FA1
(1) : service range AB
(2) : interference range CB
(3) : repetition distance AC

G/43/18 **ADD 27/24A** 1.1 (a) Service Range – Due to factors such as the power of the transmitters, propagation loss, noise level, etc, there is a limit to the distances at which reliable communications can be effected between an aeronautical station and an aircraft station. This limiting distance is the service range.

(b) Interference Range – This is the minimum separation distance needed to produce a protection ratio of 15 dB between the wanted signal at an aircraft station and an interfering signal from an aeronautical station operating on the same frequency. This interfering range has been calculated for the orders of frequencies indicated on the data tables, for day and night conditions and conditions of median sunspot activity corresponding to a latitude of about 40° N, for average values of service range and for a mean effective radiated power of 1·0 kW at the aeronautical station.

(c) Repetition Distance – This is the distance at which a frequency may be successfully shared and is equal to the sum of service range and interference range in the direction of interest.

(see Figure 1 above)

G/43/18 (cont.)

(d) Transparencies – The transparencies associated with this Appendix show, for the frequencies stated, the interference range between a potentially interfering aeronautical station and an aircraft station operating at the limit of its service range. This is normally assumed to be at the boundary of the Area in question nearest to the potentially interfering aeronautical station.

1.2 The following table shows the values of the service ranges, interference ranges and repetition distances corresponding to the allotment plans for the (R) Service.

Frequency Band MHz	*Service Range km*		*Interference Range km*		*Repetition Distance km*	
	Day	*Night*	*Day*	*Night*	*Day*	*Night*
3	100	500	700	3500	800	4000
3·5	100	800	700	3500	800	4300
4·7	350	1400	1200	5500	1550	6900
5·6	450	1800	1500	6500	1950	8300
6·6	650	2200	1900	8000	2550	10200
9	1000	3400	3800	11000	4800	14400
10	1250	–	5500	–	6750	–
11·3	1500	–	6000	–	7500	–
13·3	1900	–	7700	–	9600	–
18·0	2600	–	10000	–	12600	–

2. *Type of maps used*

27/26 The transparencies mentioned in Nos. **27/24** and **27/25**, can be used only on a world or polar map of the projection and scales given on each transparency and will not be suitable for use on any other projection or scale. The world and polar maps associated with this Appendix, depicting MWARA, RDARA and VOLMET areas, are to the correct scale so that the transparencies carrying the interference range contours can be directly used on these maps. The auroral zones are marked on the polar maps.

DDR/19/3 Maps I to III

1. Application of the official name "German Democratic Republic".

2. Graphic representation of the border between the German Democratic Republic and the Federal Republic of Germany in the same way as between other countries.

4. *Sharing Conditions between Areas*

27/30 4.1 The transparencies are constructed on the basis of the following sharing conditions:

Areas	Bands between: Mc/s	Sharing conditions
MWARA or VOLMET area to MWARA or VOLMET area	3- 6.6 9-11.3 13-18	night propagation day propagation time separation *Note:* 6.6 Mc/s and 5.6 Mc/s sharing conditions are considered to be the same
MWARA or VOLMET area to RDARA	3 - 5.6 6.6-11.3 13 -18	night propagation day propagation time separation
RDARA to RDARA	3 - 4.7 5.6-11.3 13 -18	night propagation day propagation time separation

CAN/20/24 MOD 27/30 **4.1 The transparencies are constructed on the basis of the following sharing conditions:**

Areas	Bands between: Mc/s	Sharing conditions
MWARA or VOLMET area to MWARA or VOLMET area	3- 6.6 9-11.3 13-~~18~~22	night propagation day propagation time separation (no transparencies) *Note:* 6.6 Mc/s and 5.6 Mc/s sharing conditions are considered to be the same
MWARA or VOLMET area to RDARA	3 - 5.6 6.6-11.3 13 -~~18~~22	night propagation day propagation time separation (no transparencies)
RDARA to RDARA	3 - 4.7 5.6-11.3 13 -~~18~~22	night propagation day propagation time separation (no transparencies)

5. *Method of Use*

[27/32 5.1 Take the MWARA, RDARA or VOLMET area maps associated with this Appendix and select the transparency for the frequency order and sharing conditions under consideration.

USA/4/18 MOD 27/32 5. Method of Use

5.1 Take the MWARA, RDARA or VOLMET area maps associated with this Appendix and select the transparency for the frequency order and sharing conditions under consideration. (Note: MWARA and RDARA transparencies are equally applicable for world-wide use.)

[27/34 5.3 Place the centre of the transparency (i.e., the intersection of the axis of symmetry and the latitude line) over the boundary of the area or at the location of the transmitter. Note the latitude of this point and select the contour corresponding to this latitude.

CAN/20/25 MOD 27/34 5.3 Place the centre of the transparency (i.e. the intersection of the axis of symmetry and the latitude line) over the boundary of the area ~~or at the location of the transmitter~~ at a point on the boundary nearest to the potentially interfering transmitter or at the location of the potentially interfering transmitter. Note the latitude of this point and select the contour corresponding to this latitude.

G/43/19 **MOD 27/34** 5.3 Place the centre of the transparency (ie the intersection of the axis of symmetry and the latitude line) over the boundary of the area ~~or at the location of the transmitter~~ at the point on the boundary nearest to the interfering transmitter or at the location of the interfering transmitter. Note the latitude of ~~this point~~ the selected point and ~~select~~ use the interference range contour corresponding to this latitude.

C. Classes of Emission and Power

URS/29/4 4. Characteristics of single sideband equipment

The growing needs of the Aeronautical Mobile (R) Service for additional frequency channels make it essential to use the single sideband radiotelephony technique and at the same time to upgrade the transmission and reception parameters of radio equipment so as to reduce separation between adjacent channels.

For reduced adjacent channel separation, an audio frequency band between 300 and 2 700 Hz must be established on newly-developed single sideband transmitters and the out-of-band and spurious emissions must be reduced to the following levels :

- 30 dB for deviations of 1.5 to 4.5 kHz from the assigned frequency;
- 38 dB for deviations of 4.5 to 7.5 kHz from the assigned frequency.

At deviations of over 7.5 kHz, suppression of unwanted emissions should amount to -43 dB + $10^{\log}$ P(W) at a transmitter power below 50 W and 60 dB at a transmitter power above 50 W.

The USSR Administration considers that single sideband transmitters in the Aeronautical Mobile (R) Service should have the following classes of emission in addition to the basic class of emission A3J :

- A3H - for the period of transition to the Plan in Appendix 27 MOD and for communications on search and rescue frequencies 3 023 (3 023.5) kHz and 5 680 kHz;
- A3A - for supersonic aircraft;
- A2H - for selective calling systems and, if the Administration so wishes, classes of emission AI, FI, A7J and A9J for telegraphy and data transmission.

In view of the introduction of the single sideband technique, coupled with the possibility of using other classes of emission (e.g. F1) on the frequency channels given in Appendix 27, it would be convenient, for purposes of radio station operation and registration, to list in the frequency tables of the revised Appendix 27 both the nominal (reference) carrier frequency and the assigned frequency, which under the single sideband system is separated by 1 400 Hz from the carrier.

1. *Classes of emission*

27/50 1.1 *Telephony—Amplitude modulation:*

— double sideband	(A3)
— single sideband, reduced carrier	(A3A)
— single sideband, full carrier	(A3H)
— single sideband, suppressed carrier	(A3J)
— two independent sidebands	(A3B)

USA/4/19 D/5/19 F/22/1-17 MAU/33/1-18 MOD 27/50 1.1 Telephony - Amplitude modulation:

- double sideband	(A3)*
- ~~single sideband, reduced carrier~~	~~(A3A)~~
- single sideband, full carrier	(A3H)*
- single sideband, suppressed carrier	(A3J)
- ~~two independent sidebands~~	~~(A3B)~~

*A3 and A3H to be used only on 3023 kHz and 5680 kHz and in accordance with proposed ITU Resolution Aer2-(A), paragraph 4.4

CAN/20/26 MOD 27/50 1.1 Telephony - Amplitude Modulation:

- ~~double sideband~~	~~(A3)~~
- ~~single sideband, reduced carrier~~	~~(A3A)~~
- ~~single sideband, full carrier~~	~~(A3H)~~
- single sideband, suppressed carrier	(A3J)
- ~~two independent sidebands~~	~~(A3B)~~

Classes of emission A3 and A3H should be retained only for stations directly involved in coordinated search and rescue operations using the frequencies 3 023 kHz and 5 680 kHz. See 27/17. / CAN/20/19 /

URS/29/18 MOD 27/50 1.1 Telephony - Amplitude modulation :

- double sideband	(A3) 1)
- single sideband, reduced carrier	(A3A)
- single sideband, full carrier	(A3H) 1)
- single sideband, suppressed carrier	(A3J)
- ~~two independent sidebands~~	~~(A3B)~~

G/43/20 **MOD 27/50** 1.1 Telephony – Amplitude modulation:

– double sideband	(A3)*
– ~~single sideband, reduced carrier~~	~~(A3A)~~
– single sideband, full carrier	(A3H)*
– single sideband, suppressed carrier	(A3J)
– ~~two independent sidebands~~	~~(A3B)~~

* A3 and A3H to be used only on 3023 kHz and 5680 kHz

URS/29/19 ADD 27/50.1 1) Classes of emission A3 and A3H may be used only on frequencies 3 023 (3 023.5) kHz and 5 680 kHz and on working channels of RDARAs until 1 February 1987 for domestic purposes, provided no harmful interference is caused to the operation of MWARA channels.

1.2 *Telegraphy (including automatic data transmissions)*

27/51 1.2.1 *Amplitude modulation:*

— 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	(A2)
— multichannel voice frequency telegraphy, single sideband, reduced carrier	(A7A)
— multichannel voice frequency telegraphy, single sideband, full carrier	(A7H)
— multichannel voice frequency telegraphy, single sideband, suppressed carrier	(A7J)

USA/4/20 MOD 27/51 1.2.1 Amplitude modulation:
D/5/20
F/22/1-18
MAU/33/1-19
G/43/21

- 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~~ ~~(A2)~~
- 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 and including selective calling - single sideband - full carrier A2H
- ~~multichannel voice frequency telegraphy, single sideband, reduced carrier~~ ~~(A7A)~~
- ~~multichannel voice frequency telegraphy, single sideband, full carrier~~ ~~(A7H)~~
- multichannel voice frequency telegraphy - single sideband - suppressed carrier A7J
- other transmissions such as automatic data transmission - single sideband - suppressed carrier. A9J

CAN/20/27 MOD 27/51 1.2.1 Amplitude modulation:

- ~~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 an on-off keying of the modulated emission and including selective calling - single sideband - full carrier (A2H)
- ~~multichannel voice frequency telegraphy, single sideband, reduced carrier~~ ~~(A7A)~~
- ~~multichannel voice frequency telegraphy, single sideband, full carrier~~ ~~(A7H)~~
- multichannel voice frequency telegraphy, single sideband, suppressed carrier (A7J)
- other transmissions such as automatic data transmission - single sideband, suppressed carrier (A9J)

Classes of emission such as the following should not be permitted unless appropriate precautions are taken to ensure that harmful interference is not caused to the classes of emission given above :

A1, A7A, A7H, and F1

27/52 1.2.2 *Frequency 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 (F2)

CAN/20/28 **SUP 27/52**

USA/4/21 MOD 27/52 1.2.2 Frequency modulation:
D/5/21

- 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 (F2)~~

**A1 and F1 are permitted provided they do not cause harmful interference to the classes of emission A2H, A3J, A7J and A9J. In addition, A1 and F1 emissions shall be in accordance with the provisions in MOD 27/65 and MOD 27/66 and care should be taken not to place these emissions at or near the edges of the channel

MOD 27/52 **1.2.2 Frequency modulation:**
F/22/1-19
MAU/33/1-20
G/43/22

- **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 (F2)**~~

** A1 and F1 are permitted provided they do not cause harmful interference to the classes of emission A2H, A3J, A7J and A9J. In addition A1 and F1 emissions shall be in accordance with the provisions in ADD 27/66A and ADD 27/66B and care should be taken not to place these emissions at or near the edges of the channel.

27/53 1.3 *Facsimile*

— with modulation of the main carrier either directly or by a frequency-modulated sub-carrier (A4)

USA/4/22 SUP 27/53
D/5/22
CAN/20/29
F/22/1-20
MAU/33/1-21
G/43/23

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2. *Power*

27/54 2.1 Unless otherwise specified in Part II of this Appendix, the peak envelope powers supplied to the antenna transmission line shall not exceed the maximum values indicated in the table below; the corresponding peak effective radiated powers being assumed to be equal to two-thirds of these values:

Class of emission	Stations	Maximum peak envelope power
A1 F1 F2	Aeronautical stations Aircraft stations	1.5 kW 75 W
A3 A3H (100% modulated)	Aeronautical stations Aircraft stations	6 kW 300 W
Other emissions such as A2 A3A A3B A3J A4 A7A A7H A7J	Aeronautical stations Aircraft stations	6 kW 300 W

USA/4/23 MOD 27/54
D/5/23
G/43/24 2.1 Unless otherwise specified in Part II of this Appendix, the peak envelope powers supplied to the antenna transmission line shall not exceed the maximum values indicated in the table below; the corresponding peak effective radiated powers being assumed to be equal to two-thirds of these values:

Class of emission	Stations	Maximum peak envelope power
A1 F1 F2	Aeronautical stations Aircraft stations	1.5 kW 75 W
A3 A3H (100% modulated)	Aeronautical stations Aircraft stations	6 kW 300 W
Other emissions such as A2 A3A A3B A3J A4 A7A A7H A7J	Aeronautical stations Aircraft stations	6 kW 300 W

USA/4/24 Replace table by:
D/5/24
F/22/1-21
MAU/33/1-22
G/43/24

Class of emission	Stations	Maximum peak envelope power
A2H, A3J, A7J, A9J (100% modulation)	Aeronautical stations Aircraft stations	6 kW 400 W
A3* A3H* (100% modulation)	Aeronautical stations Aircraft stations	6 kW 400 W
Other emissions such as A1, F1	Aeronautical stations Aircrafts	1.5 kW 75 W

*A3 and A3H to be used only on 3023 kHz and 5680 kHz, and in accordance with proposed ITU Resolution Aer2(A), paragraph 4.4

G/43/24 * A3 and A3H to be used only on 3023 kHz and 5680 kHz

CAN/20/30 **MOD 27/54**

2.1 Unless otherwise specified in Part II of this Appendix, the peak envelope powers supplied to the antenna transmission line shall not exceed the maximum values indicated in the table below; the corresponding peak effective radiated powers being assumed to be equal to two-thirds of these values:

~~Class of emission~~	~~Stations~~	~~Maximum peak envelope power~~
~~A1 F1 F2~~	~~Aeronautical stations~~ ~~Aircraft stations~~	~~1.5 kW~~ ~~75 W~~
~~A3 — A3H~~ ~~(100% modulated)~~	~~Aeronautical stations~~ ~~Aircraft stations~~	~~6 kW~~ ~~300 W~~
~~Other emissions such as~~ ~~A2 A3A A3B A3J~~ ~~A4 A7A A7H A7J~~	~~Aeronautical stations~~ ~~Aircraft stations~~	~~6 kW~~ ~~300 W~~

Station	Class of emission*	maximum Peak envelope power (P_p)
aeronautical	A3J, A2H, A7J, A9J	6 kW
aircraft	A3J, A2H, A7J, A9J	400 W

* For other classes of emission the maximum P_p should not exceed

- 1.5 kW for aeronautical stations and
- 75 W for aircraft stations

J/44/3 MOD 27/54

2. Power

2.1 Unless otherwise specified in Part II of this Appendix, the peak envelope powers supplied to the antenna transmission line shall not exceed the maximum values indicated in the table below; the corresponding peak effective radiated powers being assumed to be equal to two-thirds of these values:'

Class of emission	Stations	Maximum peak envelope power
A1 F1 F2	Aeronautical stations Aircraft stations	1.5 kW 75 W
A3 A3H (100% modulated)	Aeronautical stations Aircraft stations	6 kW 300 W
Other emissions such as A2 A3A A3B A3J A4 A7A A7H A7J	Aeronautical stations Aircraft stations	6 kW 300 W

Replace table by:

Class of emission	Stations	Maximum peak envelope power
A2H, A3J, A7J, A9J (100% modulation)	Aeronautical stations Aircraft stations	6 kW 400 W
A3* A3H* (100% modulation)	Aeronautical stations Aircraft stations	6 kW 400 W
Other emissions such as A1, F1	Aeronautical stations Aircrafts	1.5 kW 100 W

*A3 and A3H to be used only on 3023 kHz and 5680 kHz, and in accordance with proposed ITU Resolution Aer2(A), paragraph 4.4 .

27/55 2.2 It is assumed that the maximum peak envelope powers specified above for aeronautical stations will produce the mean effective radiated power of 1 kW (for emissions such as A1, F1, F2 and unmodulated A3 and A3H emissions) used as a basis for the interference range contours.

USA/4/25 MOD 27/55
D/5/25
CAN/20/31
F/22/1-22
MAU/33/1-23
G/43/25

2.2 It is assumed that the maximum peak envelope powers specified above for aeronautical stations will produce the mean effective radiated power of 1 kW (for emissions such as A1 and F1 ~~F2 and unmodulated A3 and A3H emissions~~) used as a basis for the interference range contours.

27/56 2.3 In order to provide satisfactory communication with aircraft, aeronautical stations serving MWARAs or VOLMET areas may exceed the power limits specified in No. **27/54**. In each such case, the administration having jurisdiction over the aeronautical station shall ensure:

USA/4/26 MOD 27/56
D/5/26
CAN/20/32
F/22/1-23
MAU/33/1-24
G/43/26

2.3 In order to provide satisfactory communication with aircraft, aeronautical stations serving MWARA, ~~or~~ VOLMET and world-wide areas may exceed the power limits specified in No. 27/54. In ~~each~~ such case, the administration having jurisdiction over the aeronautical station shall note RR 694 and ensure:

27/62 2.4 It is recognized that the power employed by aircraft transmitters may, in practice, exceed the limits specified in No. **27/54**. However, the use of such increased power shall not cause harmful interference to stations using frequencies in accordance with the technical principles on which the Allotment Plan is based.

CAN/20/33 SUP 27/62

D/5/27 MOD 27/62 '2.4 It is recognized that the power employed
F/22/1-24 by aircraft transmitters may, in practice, exceed the
MAU/33/1-25 limits specified in No. 27/54. However, the use in exceptional cases of such increased power, (which should not exceed 600 W Pp) shall not cause harmful interference to stations using frequencies in accordance with the technical principles on which the Allotment Plan is based.'

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3. *Technical provisions relating to the use of single sideband emissions*

27/63 3.1 *Definitions of carrier modes :*

Carrier mode	Level N (db) of the carrier with respect to peak envelope power
Full carrier (A3H)	$0 > N \geqslant -6$
Reduced carrier (A3A)	$-6 > N \geqslant -26$
Suppressed carrier (A3J)	$-26 > N$

USA/4/27 MOD 27/63 3. Technical provisions relating to the use of single
D/5/28 sideband emissions.
F/22/1-25
MAU/33/1-26 3.1 Definitions of carrier modes:
G/43/27

Carrier mode	Level N (dB) of the carrier with respect to peak envelope power
Full carrier (for example ~~(A3H)~~ A2H)	0 > N > - 6
~~Reduced carrier (A3A)~~	~~-6 > N > -26~~
Suppressed carrier (for example A3J)	Aircraft Stations - 26 > N Aeronautical Stations - 40 > N

CAN/20/34 **MOD 27/63** 3.1 *Definitions of carrier modes :*

Carrier mode	Level N (db) of the carrier with respect to peak envelope power
Full carrier ~~(A3H)~~ (A2H)	0 > N > – 6
~~Reduced carrier (A3A)~~	~~–6 > N > –26~~
Suppressed carrier ~~(A3J)~~	– 26 > N for aircraft station – 40 > N for aeronautical stations

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27/64 3.2 *Modes of operation :*

A transmitter equipped only for single sideband operation and operating in an environment including double sideband stations shall be capable of operation in at least both of the following modes:

— full carrier mode (A3H),

— suppressed carrier mode (A3J).

USA/4/28 **SUP 27/64**
D/5/29
CAN/20/35
F/22/1-26
MAU/33/1-27
G/43/28

3.3 *Tolerance for levels of SSB emission outside the necessary bandwidth*

USA/4/29 MOD to subtitle 3.3
D/5/29A
CAN/20/36
F/22/1-27
MAU/33/1-28
G/43/29

Tolerance for levels of ~~SSB~~ emission outside the necessary bandwidth.

27/65 3.3.1 In a single sideband A3H, A3A or A3J transmission, the mean power of any emission supplied to the antenna transmission line of an aeronautical or aircraft station on any discrete frequency, shall be less than the mean power (P_m) of the transmitter in accordance with the following table:

USA/4/30 MOD 27/65 3.3.1 In a ~~single-sideband-A3H,~~ A2H, A3J, A7J or A9J ~~or A3A~~ transmission, the mean power of any emission supplied to the antenna transmission line of an aeronautical or aircraft station on any discrete frequency, shall be less than the mean power (Pm) of the transmitter in accordance with the following table:

D/5/30
F/22/1-28
MAU/33/1-29
G/43/30

CAN/20/37 MOD 27/65 3.3.1. In a single sideband ~~A3H, A3A or A3J~~ transmission, the ~~mean~~ peak envelope power of any emission supplied to the antenna transmission line of an aeronautical or aircraft station on any discrete frequency, shall be less than the mean power ~~(P_m)~~ (P_p) of the transmitter in accordance with the following table:

27/66 3.3.2

Frequency separation Δ from the assigned frequency kc/s	Minimum attenuation below mean power (P_m) db
$2 \leqslant \Delta < 6$	25
$6 \leqslant \Delta < 10$	35
$10 \leqslant \Delta$	Aircraft stations: 40 Aeronautical stations: $43 + 10 \log_{10} P_m$ (watts)

USA/4/31
D/5/31
F/22/1-29
MAU/33/1-30
G/43/31

MOD 27/66 3.3.2 For aircraft station transmitter types and for aeronautical station transmitters first installed before 1 February 1983.

Frequency separation < from the assigned frequency ~~-kc/s~~ kHz	Minimum attenuation below mean Power(Pm) dB
$2 \leq \Delta < 6$	25
$6 \leq \Delta < 10$	35
$10 \leq \Delta$	Aircraft stations: 40 Aeronautical stations $43 + 10 \log_{10} Pm$ (Watts)*

*attenuation need not exceed 60 dB

CAN/20/38 MOD 27/66 3.3.2

Frequency separation Δ from the assigned frequency ~~kC/s~~ kHz	Minimum attenuation below ~~mean power (Pm)~~ peak envelope power (P_p) db
1.5 ~~2~~ < Δ < ~~6~~ 4.5	~~25~~ 30
4.5 ~~6~~ < Δ < ~~10~~ 7.5	~~35~~ 38
7.5 ~~10~~ < Δ	Aircraft stations: ~~40~~ 43 Aeronautical stations: $43 + 10 \log_{10} P_p$ (watts)

J/44/4 MOD 27/66 3.3.2 For aircraft station transmitter types and for aeronautical station transmitters first installed before 1 February 1983.

Frequency separation < from the assigned frequency ~~-kc/s~~ kHz	Minimum attenuation below mean Power(Pm) dB
$2 \leq \Delta < 6$	25
$6 \leq \Delta < 10$	35
$10 \leq \Delta$	Aircraft stations: 40 Aeronautical stations: 43 *

*Without exceeding the power of 50mW

USA/4/32 ADD 27/66A 3.3.3 In an A2H, A3J or A7J transmission, the peak envelope power (Pp) of any emission supplied to the antenna transmission line of an aeronautical or aircraft station on any discrete frequency, shall be less than the peak envelope power (Pp) of the transmitter in accordance with the following table.

D/5/32 ADD 27/66A 3.3.3 In an A2H, A3J or A7J or A9J transmission,
F/22/1-30 the peak envelope power (Pp) of any emission supplied
MAU/33/1-31 to the antenna transmission line of an aeronautical or
G/43/32 aircraft station on any discrete frequency, shall be less than the peak envelope power (Pp) of the transmitter in accordance with the following table.

USA/4/33 ADD 27/66B 3.3.4 For aircraft station transmitters first installed
D/5/33 after 1 February 1983 and for aeronautical station
F/22/1-31 transmitters in use after 1 February 1983.
MAU/33/1-32
G/43/33

Frequency separation Δ from the assigned frequency kHz	Minimum attenuation below peak envelope power (Pp) dB
$1.5 \leq \Delta <$ 4.5	30
$4.5 \leq \Delta <$ 7.5	38
$7.5 \leq \Delta$	Aircraft stations 43 Aeronautical stations $43 + 10 \log_{10}$ Pp (Watts)(*)

*attenuation need not exceed 60 dB

J/44/5 ADD 27/66B 3.3.4 For aircraft station transmitters first installed after 1 February 1983 and for aeronautical station transmitters in use after 1 February 1983.

Frequency separation Δ from the assigned frequency kHz	Minimum attenuation below peak envelope power (Pp) dB
$1.5 \leq \Delta <$ 4.5	30
$4.5 \leq \Delta <$ 7.5	38
$7.5 \leq \Delta$	43*

*Without exceeding the power of 50mW

3.4 *Channel utilization*

27/67 3.4.1 A station using single sideband emissions shall be considered to be operating in accordance with the Allotment Plan if the necessary bandwidth is confined within either the upper or the lower half of the channel provided for double sideband emissions.

27/68 3.4.2 Subject to the provisions of No. **27/12**, and to the following conditions, a station using single sideband emissions may operate either in the upper half or in the lower half of a double sideband channel designated by its centre frequency in the Allotment Plan:

27/69 *a)* when operating in the upper half of the channel, the station shall use upper sideband emissions with the carrier at the channel centre frequency listed in the Allotment Plan;

27/70 *b)* equipment capable of operating only on integral multiples of 1 kc/s shall be restricted to the upper halves of the channels listed in the Allotment Plan, when operated in channels having a width of 7 kc/s;

27/71 *c)* when operating in the lower half of the channel, the station shall use upper sideband emissions with the carrier at the following value below the channel centre frequency listed in the Allotment Plan:

Band	Carrier (reference) frequency relative to centre frequency of channel
2, 3, 4, 5, 6 and 8 Mc/s	3500 c/s below
10, 11, 13 and 17 Mc/s	4000 c/s below

USA/4/34
D/5/34
CAN/2039-43
F/22/1-32/36
MAU/33/1-33/37
G/43/34

SUP 27/67 to 71 inclusive

4. *Assigned frequencies*

27/72 4.1 The assigned frequency for single sideband radiotelephone emissions shall be at a value 1500 cycles above the carrier (reference) frequency.

USA/4/35 MOD 27/72 4.1 ~~The assigned frequency~~ For single sideband ~~radiotelephone~~ emissions, except class of emission A2H, the assigned frequency shall be at a value ~~1500 cycles~~ 1400 Hz above the carrier (reference) frequency.*
D/5/35

*Notes: 1. Aeronautical stations equipped with selective calling systems shall indicate in Supplementary Information column of the Form of Notice (see Appendix 1 to the Radio Regulations) the class of emission A2H.
D/5/36 ADD 27/72A

2. For classes of emission A1 and F1 the assigned frequency shall be chosen in accordance with the provisions of the footnote to MOD 27/51 and MOD 27/52.
D/5/37 ADD 27/72B
F/22/1-37
MAU/33/1-38
G/43/35

CAN/20/44 MOD 27/72 4.1 ~~The assigned frequency~~ For single sideband ~~radiotelephone~~ emissions, except class of emission A2H, the assigned frequency shall be at a value ~~1500 cycles~~ 1400 Hz above the carrier ~~(reference)~~ frequency.*
F/22/1-37
MAU/33/1-38
G/43/35

CAN/20/45 *Notes: 1. Aeronautical stations equipped with selective calling systems shall indicate in Supplementary Information column of the Form of Notice (see Appendix 1 to the Radio Regulations) the class of emission A2H.
F/22/1-37
MAU/33/1-38
G/43/35
CAN/20/46

2. For classes of emission A1 and F1 care should be taken not to place these emissions at the edge of the channel.

27/73 4.2 Stations employing double sideband emissions (A3) shall operate with assigned frequencies at the values listed in the Allotment Plan.

CAN/20/47 SUP 27/73

USA/4/36 MOD 27/73
D/5/38
F/22/1-38
MAU/33/1-39
G/43/36

4.2 Stations employing double sideband emissions (A3) shall operate with an assigned ~~frequencies~~ frequency ~~at the values listed in the Allotment Plan~~ at 3023 kHz or 5680 kHz (see 27/50).

J/44/6 ADD 27/73A 5. The receiver rejection characteristics

The receiver should satisfy the characteristics of the following table.

Frequency range (Hz)	Attenuation (dB)
from 300 to 2,500	less than 6
below -500 and above 3,300	more than 60

Note - The frequencies specified above are relative to the carrier response frequency of the receiver.

PART II

Plan for the Allotment of Frequencies for the Aeronautical Mobile (R) Service in the Exclusive Bands between 2850 and 17 970 kc/s

GENERAL REMARKS

USA	See Document No. 25	A suggested method for the transition to universal single sideband operation in the Aeronautical Mobile (R) service
USA	See Document No. 26	Requirements for "Worldwide" Frequency Allotments to accomodate long-range Aeronautical Operational Control communications
URS	See Document No. 29 (para. 2 and 3)	Method of determining frequency requirements
	(para. 5)	Procedure for reviewing the Frequency Allotment Plan
SUI	See Document No. 34	Channels to accommodate the World-wide long-range operational control service
J	See Document No. 44 (para. 4.1)	Basic Principles of the Frequency Allotment to accomodate Long-distance Aeronautical Operational Control/Communications
AUS	See Document No. 50	Determination of future high frequency AM(R)S RDARA-14 Requirements
USA	See Document No. 51	Adjacent channel interference

USA/4/37 ADD Section 0
D/5/39
F/22/1-39
MAU/33/1-40

USA/4/38 ADD Frequencies allotted for world-wide use
D/5/40
F/22/1-40
MAU/33/1-41

USA/4/39 ADD 27/73A Frequencies designated for Aeronautical Operational Control in the Frequency Allotment Plan are intended to be used anywhere in the world and within any operational area
D/5/41
F/22/1-41
MAU/33/1-42
D/5/42 ADD 27/73B
F/22/1-41
MAU/33/1-42 Note: Where an operational area lies wholly within a RDARA or Sub-RDARA boundary, to the extent possible, frequencies allotted to RDARAs and Sub-RDARAs should be used.

Section I

Description of the Boundaries of the MWARA, RDARA, Sub-RDARA and VOLMET Areas

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Section I

J/44/15 MOD Description of the Boundaries of the MWARA, RDARA, Sub-RDARA, VOLMET and OPECON Areas

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USA/4/41 MOD 27/74 through 27/185 (To be determined by the Conference)

27/77 4. In the description of the Major World Air Route Areas (MWARAs) all lines between points not otherwise specified are defined as great circles.

J/44/16 MOD 27/77 In the description of the Major World Air Route Areas (MWARAs), VOLMET areas and Long-distance Operational Control Communications (OPECON) Areas all lines between points not otherwise specified are defined as great circles.

27/79 In the description of the VOLMET areas all lines between points are defined as great circles.

J/44/17 SUP 27/79

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ARTICLE 1

Description of the Boundaries of the Major World Air Route Areas (MWARAs)

27/82 *Major World Air Route Area—CENTRAL EAST PACIFIC*
(MWARA-CEP)
From the point 50°N 122°W through the points 38°N 120°W, 32°N 117°W, 20°S 145°W, 20°S 152°W, 22°N 159°W, to the point 50°N 122°W.

D/6/1 MOD
F/22/1-42
MAU/33/1-43

27/82 MWARA - Central East Pacific (MWARA-CEP)

Amend delineation to read:

From the point 50°N 122°W through the points 38°N 120°W, ~~32°N-117°W~~, 15°N 110°W, 20°S 145°W, 20°S 152°W, ~~22°N 159°W~~, 30°N 165°W, to the point 50°N 122°W.

27/83 *Major World Air Route Area—CENTRAL WEST PACIFIC*
(MWARA-CWP)
From the point 17°N 155°W through the points 10°N 160°E, 10°N 117°E, 23°N 114°E, 40°N 117°E, 25°N 155°W, to the point 17°N 155°W.

D/6/3 MOD
F/22/1-43
MAU/33/1-44
J/44/9

27/83 MWARA - Central West Pacific (MWARA-CWP)

Amend delineation to read:

From the point 40°N 117°E through the points 25°N 155°W 17°N 155°W, ~~10°N-160°E~~, ~~10°N-117°E~~, ~~23°N-114°E~~, ~~40°N 117°E~~, ~~25°N-155°W~~, ~~to the point 17°N-155°W~~, 00° 165°W, 00° 170°E, 12°S 165°E, 12°S 136°E, 09°N 115°E, 22°N 115°E, to the point 40°N 117°E.

27/84 *Major World Air Route Area—EUROPE*
(MWARA-EU)

From the point 33°N 12°W through the points 54°N 12°W, 70°N 00°, 74°N 40°E, 40°N 40°E, 40°N 36°E, 29°N 35°30′E, 32°N 13°E, to the point 33°N 12°W.

D/6/5
F/22/1-44
URS/29/20
MAU/33/1-45

MOD 27/84 MWARA - Europe (MWARA-EU)

Amend designation to read: MWARA-~~EU~~ EUR

Amend delineation to read:

From the point 33°N 12°W through the points 54°N 12°W, 70°N 00°, 74°N 40°E, ~~40°N-40°E~~, 74°N 52°E, 60°N 52°E, 40°N 36°E, 29°N 35° 30'E, 32°N 13°E, to the point 33°N 12°W.

27/85 *Major World Air Route Area—FAR EAST*
(MWARA-FE)

From the point 24°N 88°E through the points 35°N 132°E, 37°N 143°E, 35°N 143°E, 10°N 126°E, 07°S 106°E, to the point 24°N 88°E.

URS/29/21 SUP 27/85

D/6/6
F/22/1-45
URS/29/21
MAU/33/1-46
CHN/53/1

D/6/7
F/22/1-46

ADD 27/85A MWARA Indian Ocean (MWARA-IO)

D/6/7
F/22/1-46
MAU/33/1-46A

From the South Pole through the points 30°S 26°E, 20°N 35°E, 30°N 60°E, 30°N 90°E, 30°S 120°E, 40°S 160°E to the South Pole

MAU/33/2

A. As regards the proposed amendment under Appendix 27, Part II, Section I, Article 1, creation of new MWARA (ADD 27/85A) to cover the routes between Australia/Asia and Africa, Mauritius proposes the alternative designator MWARA INO instead of MWARA IO, proposed by ICAO.

27/86 *Major World Air Route Area—MIDDLE EAST*
(MWARA-ME)
From the point 50°N 80°E through the points 31°N 80°E, 29°N 85°E, 08°N 75°E, 22°N 56°E, 16°N 42°E, 30°N 30°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

D/6/9 MOD 27/86 MWARA-Middle East (MWARA-ME)
F/22/1-47
MAU/33/1-47 Amend designation to read: MWARA ~~ME~~ MID

Amend delineation to read:

From the point ~~50°N-80°E~~ 51°N 30°E through the points ~~31°N-80°E~~, ~~29°N-85°E~~, ~~08°N-75°E~~, 57°N 37°E, 50°N 80°E, 44°N 94°E, 08°N 76°E, 22°N 56°E, 16°N 42°E, 30°N 30°E to the point 51°N 30°E.

CHN/53/2 MOD 27/86 MWARA-Middle East (MWARA-~~ME~~ MID)

From the point 50°N 80°E through the points ~~31°N-80°E, 29°N-85°E, 08°N-75°E~~, 44°N 94°E, 08°N 76°E, 22°N 56°E, 16°N 42°E, 30°N 30°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

27/87 *Major World Air Route Area—NORTH ATLANTIC*
(MWARA-NA)
From the North Pole through the points 49°N 100°W, 49°N 74°W, 39°N 78°W, 18°N 66°W, 05°N 55°W, 16°N 26°W, 32°N 08°W, 44°N 02°E, 60°N 20°E, to the North Pole.

D/6/10 MOD 27/87 MWARA - North Atlantic (MWARA-NA)
F/22/1-48
MAU/33/1-48 Amend designation to read: MWARA-~~NA~~ NAT

Amend delineation to read:

From the North Pole through the points ~~49°N-100°W~~, 60°N 135°W, 49°N 120°W, 49°N 74°W, 39°N 78°W, 18°N 66°W, 05°N 55°W, 16°N 26°W, 32°N 08°W, 44°N 02°E, 60°N 20°E, to the North Pole.

27/88 *Note :* In order to clarify the frequency allotments in this MWARA, the area has been divided into three sectors designated NA-1, NA-2 and NA-3 for purposes of reference. A description of the NA-1, NA-2 and NA-3 sectors is given below.

27/89 *Sector—NORTH ATLANTIC-1* (NA-1)

From the point 49°N 74°W through the points 49°N 100°W, to the North Pole, to 60°N 20°E, 68°N 20°W, to the point 49°N 74°W.

27/90 *Note :* Only one family of frequencies, which is allotted to MWARA-NA and noted in the Frequency Allotment Plan as (NA-1), is available for use in this sector.

27/91 *Sector—NORTH ATLANTIC-2* (NA-2)

From the point 39°N 78°W through the points 49°N 74°W, 68°N 20°W, 60°N 20°E, 44°N 02°E, 35°N 26°W, to the point 39°N 78°W.

27/92 *Sector—NORTH ATLANTIC-3* (NA-3)

From the point 39°N 78°W through the points 35°N 26°W, 44°N 02°E, 32°N 08°W, 16°N 26°W, 05°N 55°W, 18°N 66°W, to the point 39°N 78°W.

27/93 *Note :* Only one family of frequencies, which is allotted to MWARA-NA and noted in the Frequency Allotment Plan as (NA-3) is available for use in this sector.

D/6/12
F/22/1-49/54
MAU/33/1-49/54

SUP 27/88-93 inclusive

URS/29/22 ADD 27/93A
J/44/10

Major World Air Route Area - NORTHERN CENTRAL ASIA (MWARA-NCA)

From the North Pole through the points 75°N 100°E, 60°N 25°E, 30°N 25°E, 30°N 73°E, 37°N 73°E, 49°N 85°E, 42°N 97°E, 42°N 110°E, 30°N 135°E, 65°N 170°W, to the North Pole.

27/94 *Major World Air Route Area—NORTH PACIFIC*
(MWARA-NP)

From the point 50°N 166°E through the points 75°N 150°W, 75°N 90°W, 55°N 110°W, 46°N 122°W, 50°N 170°W, 33°N 138°E, 52°N 132°E, to the point 50°N 166°E.

D/6/13 MOD 27/94 MWARA-North Pacific (MWARA-NP)
F/22/1-55
URS/29/23
MAU/33/1-55
J/44/11
CHN/53/3

Amend delineation to read:

From the ~~point 50°N 166°E through the point 75°N 150°W, 75°N 90°W, 55°N 110°W, 46°N 122°W, 50°N 170°W, 33°N 138°E, 52°N 132°E, to the point 50°N 166°E~~ North Pole through the points 60°N 135°W, 47°N 118°W, 30°N 165°W, 30°N 115°E, 41°N 116°E, 55°N 135°E to the North Pole.

27/95 *Major World Air Route Area—NORTH-SOUTH AFRICA-1*
(MWARA-NSA-1)

From the point 05°N 03°W through the points 37°N 03°W, 37°N 14°E, 00° 28°E, 11°S 28°E, 20°S 35°E, 31°S 35°E, 31°S 17°E, to the point 05°N 03°W.

D/6/14 MOD 27/95 MWARA - North South Africa-1 (MWARA-NSA-1)
F/22/1-56
MAU/33/1-56

Amend designation to read: MWARA-~~NSA-1~~ AFI.

Amend delineation to read:

~~From the point 05°N 03°W through the points 37°N 03°W 37°N 14°E, 00°-28°E, 11°S-28°E, 20°S-35°E, 31°S-35°E 31°S-17°E, to the point 05°N 03°W.~~

From the point 40°N 35°W through the points 37°N 03°W, 37°N 35°E, 30°N 35°E, 10°N 52°E, 22°S 60°E, 35°S 30°E, 35°S 16°E, 05°N 03°W, 05°N 35°W, to the point 40°N 35°W

27/96 *Major World Air Route Area—NORTH-SOUTH AFRICA-2*
(MWARA-NSA-2)
From the point 00° 24°E through the points 37°N 07°E, 37°N 36°E, 30°N 35°E, 10°N 52°E, 22°S 60°E, 30°S 34°E, 30°S 24°E, to the point 00° 24°E.

D/6/16 SUP 27/96
F/22/1-57
MAU/33/1-57

27/97 *Note :* Only one family of frequencies allotted to this area is available for extension through Cocos Islands to Western Australia.

D/6/17 SUP 27/97
F/22/1-58
MAU/33/1-58

27/98 *Major World Air Route Area—SOUTH ATLANTIC*
(MWARA-SA)
From the point 40°N 03°W through the points 05°N 03°W, 20°S 20°W, 22°30'S 42°W, 15°S 50°W, 00° 38°W, 40°N 15°W, to the point 40°N 03°W.

D/6/18 MOD 27/98 MWARA - South Atlantic (MWARA-SA)
F/22/1-59
MAU/33/1-59 Amend designation to read: MWARA-~~SA~~ SAT

Amend delineation to read:

~~From the point 40°N 03°W through the points 05°N 03°W, 20°S 20°W, 22°30'S 42°W, 15°S 50°W, 00° 38°W, 40°N 15°W to the point 40°N 03°W.~~

From the South Pole through the points 30°S 75°W, 10°S 40°W, 00° 60°W, 20°N 60°W, 25°N 25°W, 41°N 15°W, 41°N 03°W, 15°N 03°W, 20°S 32°E to the South Pole.

27/99 *Note :* Only one family of frequencies allotted to this area is available for extension to Buenos Aires.

D/6/20 SUP 27/99
F/22/1-60
MAU/33/1-60

27/100 *Major World Air Route Area—SOUTH AMERICA-1*
(MWARA-SAM-1)

From the point 36°S 73°W through the points 00° 93°W, 15°N 106°W, 15°N 75°W, 05°N 75°W, 20°S 50°W, 36°S 52°W, to the point 36°S 73°W.

D/6/21 MOD 27/100 MWARA - South America-1 (MWARA-SAM-1)
F/22/1-61
MAU/33/1-61 Amend designation to read: MWARA-SAM-4

Amend delineation to read:

~~From the point 36°S 73°W through the points 00° 93°W, 15°N 106°W, 15°N 75°W, 05°N 75°W, 20°S 50°W, 36°S 52°W to the point 36°S 73°W.~~

From the South Pole through the points 15°N 125°W, 15°N 60°W, 10°N 60°W, 05°S 30°W, 36°S 52°W to the South Pole.

27/101 *Major World Air Route Area—SOUTH AMERICA-2*
(MWARA-SAM-2)

From the point 34°S 74°W through the points 24°S 60°W, 02°N 79°W, 15°N 83°W, 15°N 60°W, 10°N 60°W, 05°S 30°W, 36°S 52°W, to the point 34°S 74°W.

D/6/22 SUP 27/101
F/22/1-62
MAU/33/1-62

27/102 *Major World Air Route Area—SOUTH EAST ASIA*
(MWARA-SEA)

From the point 29°N 85°E through the points 15°N 105°E, 00° 135°E, 00° 168°E, 35°S 150°E, 35°S 116°E, 08°N 75°E, to the point 29°N 85°E.

D/6/23 MOD 27/102
F/22/1-63
MAU/33/1-63
CHN/53/4

~~From the point 29°N 85°E through the points 15°N 105°E 00° 135°E 00° 168°E 35°S 150°E 35°S 116°E 08°N 75°E to the point 29°N 85°E.~~

From the point 26°N 130°E, 00° 130°E, 00° 135°E, 12°S 145°E, 12°S 160°E, 25°S 155°E, 40°S 150°E, 35°S 115°E, 18°N 62°E, 26°N 65°E, to the point 26°N 130°E.

URS/29/24 ADD 27/102A Major World Air Route Area - CENTRAL EAST ASIA (MWARA-CEA)

From the point 55°N 124°E through the points 37°N 145°E, 26°N 130°E, 0°130°E, 0°80°E, 18°N 62°E, 37°N 67°E, 55°N 80°E, to the point 55°N 124°E.

27/103 *Major World Air Route Area—SOUTH PACIFIC*
(MWARA-SP)

From the point 22°N 158°W through the points 22°N 156°W, 00° 120°W, 40°S 120°W, 50°S 170°W, 50°S 145°E, 38°S 145°E, 00° 167°E, 00° 175°W, to the point 22N° 158°W.

D/6/25 MOD 27/103
F/22/1-64
MAU/33/1-64
NZL/45/1

~~From the point 22°N 158°W through the points 22°N 156°W, 00° 120°W, 40°S 120°W, 50°S 170°W, 50°S 145°E, 38°S 145°E, 00° 167°E, 00° 175°W, to the point 22°N 158°W.~~

From the South Pole through the points 38°S 145°E, 00° 167°E, 00° 175°W, 22°N 158°W, 22°N 156°W, 00° 120°W to the South Pole.

D/6/27 **ADD 27/103A** MWARA
CHN/53/5

Delineation: From the point 55°N 124°E, 37°N 145°E, 26°N 130°E, 00° 130°E, 00° 80°E, 18°N 62°E, 37°N 67°E, 55°N 80°E to the point 55°N 124°E.

F/22/1-65 ADD 27/103A Add MWARA contained in Recommendation 2/3 subparagraph 2) once the States concerned take the action referred to in subparagraph b).
MAU/33/1-65

(see Annex to Document No. 21, page 2-9)

D/6/29 **ADD 27/103B** MWARA - NORTH CENTRAL ASIA (MWARA - NCA)

Delineation: From the North Pole through the points 75°N 10°E, 60°N 25°E, 30°N 25°E, 30°N 73°E, 37°N 73°E, 49°N 85°E, 42°N 97°E, 42°N 110°E, 30°N 135°E, 65°N 170°W, to the North Pole.

F/22/1-66 ADD 27/103B Add MWARA-NCA once the States concerned take the action referred to in Recommendation 2/5.
MAU/33/1-66

(see Annex to Document No. 21, page 2-9)

CHN/53/6 ADD 27/103B MWARA-North Central Asia (MWARA-NCA)

From the North Pole through the points 75°N 10°E, 60°N 25°E, 30°N 25°E, 30°N 73°E, 37°N 73°E, 49°N 85°E, 42°N 97°E, 42°N 110°E, 54°N 123°E, 47°N 131°E, 40°N 131°E, 30°N 135°E, 65°N 170°W, to the North Pole.

ARTICLE 2

Description of the Boundaries of the Regional and Domestic Air Route Areas (RDARAs)

27/106 *Sub-Area 1B*

From the North Pole along the 15°W meridian to the point 72°N 15°W, then through the points 65°N 26°W, 60°N 26°W, 60°N 13°W to the point 50°N 13°W; thence east along the territorial waters between the Channel Islands and French coastline, reaching the latter at the meridian 03°W. Thence following the north-east border of France, touching Belgium, Luxembourg and the Federal Republic of Germany. Thence along the border between Switzerland and the Federal Republic of Germany, and along the border between the latter and Austria. Thence along the border between Czechoslovakia and the Federal Republic of Germany, then along the line between the Federal Republic of Germany and Eastern Germany towards the Baltic Sea. Then west along the coastline of the Federal Republic of Germany to the border between the latter and Denmark. Along this border to the North Sea. Thence along the 55°N parallel to a point 55°N 04°E. Thence along the 04°E meridian to the North Pole.

DDR/19/1 No. 27/106 Sub-Area 1B

4th sentence : ..... Thence along the border between the Czechoslovak Socialist Republic and the Federal Republic of Germany, then along the border between the Federal Republic of Germany and the German Democratic Republic towards the Baltic Sea. .....

DNK/37/1 **MOD 27/106** Sub-Area 1B
G/43/37

From the North Pole along the 15°W meridian to the point 72°N 15°W, then through the points 65°N 26°W, 60°N 26°W, 60°N 13°W to the point 50°N 13°W; thence east along the territorial waters between the Channel Islands and the French coastline, reaching the latter at the meridian 03°W. Thence following the north east border of France, touching Belgium, Luxembourg and the Federal Republic of Germany. Thence along the border between Switzerland and the Federal Republic of Germany, and along the border between the latter and Austria. Thence along the border between Czechoslovakia and the Federal Republic of Germany, then along the line between the Federal Republic of Germany and Eastern Germany towards the Baltic Sea. Then west along the coastline of the Federal Republic of Germany to the border between the latter and Denmark. Along this border to the North Sea. Thence along the 55°N parallel to a point 55°N 04°E, then through the points 56°N 03°E, 59°N 02°E, 62°N 01°E. Thence along the ~~04°E~~ 01°E meridian to the North Pole.

27/107 *Sub-Area 1C*

From the North Pole along the meridian 04°E to the 55°N parallel. Thence east along the 55°N parallel and the border between Denmark and the Federal Republic of Germany to the Baltic Sea, then along the Baltic Sea coast of the Federal Republic of Germany to the line between the Federal Republic of Germany and Eastern Germany. Along this line touching the western borders of Czechoslovakia and Austria to the Swiss border. Thence eastward along the southern borders of Austria and Hungary, thence along the border between Hungary and Roumania, thence along the border between the U.S.S.R. and the following countries: Hungary, Czechoslovakia and Poland. Thence to the Baltic Sea along the U.S.S.R. Baltic Sea coast, to the border between Finland and the U.S.S.R. at 70°N 32°E, then along the 32°E meridian to the North Pole.

DDR/19/2 No. 27/107 Sub-Area 1C

2nd and 3rd sentence :

..... Thence east along the 55°N parallel and the border between Denmark and the Federal Republic of Germany to the Baltic Sea, then along the Baltic Sea coast of the Federal Republic of Germany to the border between the Federal Republic of Germany and the German Democratic Republic. Along this border touching the western borders of the Czechoslovak Socialist Republic and Austria to the Swiss border. ...

DNK/37/2 **MOD 27/107** Sub-Area 1C
G/43/38

From the North Pole along the meridian ~~04°E~~ 01°E to the ~~55°N parallel~~ point 62°N 01°E. Thence through the points 59°N 02°E, 56°N 03°E, 55°N 04°E and then east along the 55°N parallel and the border between Denmark and the Federal Republic of Germany to the Baltic Sea, then along the Baltic Sea coast of the Federal Republic of Germany to the line between the Federal Republic of Germany and Eastern Germany. Along this line touching the Western borders of Czechoslovakia and Austria to the Swiss border. Thence eastward along the southern borders of Austria and Hungary, thence along the border between Hungary and Roumania, thence along the border between the USSR and the following countries: Hungary, Czechoslovakia and Poland. Thence to the Baltic Sea along the USSR Baltic Sea coast, to the border between Finland and the USSR at 70°N 32°E, then along the 32°E meridian to the North Pole.

27/128 *Sub-Area 6B*

From approximately 49°N 88°E, along the common border between China and the U.S.S.R. to the point 37°N 75°E. Thence eastward along the southern border of China to the coast of the South China Sea. Thence along the south territorial waters of Hainan Island to the point 20°N 113°E, and through the points 20°N 176°W, 50°N 164°E, to 43°N 147°E. Thence west between the territorial waters of Japan and the U.S.S.R. and then along the border between China and the U.S.S.R. and along the border between China and Mongolia to approximately 49°N 88°E.

CHN/53/7 MOD 27/128 Sub-Area 6B

From the point 39°49'41"N 124°10'06"E through the points 39°31'51"N 124°06'31"E, 39°N 124°E, 32°30'N 124°E, 32°30'N 126°50'E, 26°N 125°E, 25°N 123°E, 21°N 121°30'E, 20°N 120°40'E, 20°N 176°W, 50°N 164°E, 43°N 147°E, thence west between the territorial waters of Japan and the USSR, ~~and along the border between China and the USSR, and along the border between China and Mongolia to approximately 49°N 88°E~~, and along the border between the Democratic People's Republic of Korea and USSR, and then the border between China and the Democratic People's Republic of Korea, to the point 39°49'41"N 124°10'06"E.

27/130 *Sub-Area 6D*

From the junction of the borders of China, India and Burma, south along the India-Burma and Pakistan-Burma borders to the Bay of Bengal. Along the coast of Burma to its southernmost point. Then to Weh Island (off the north coast of Sumatra). Then to the point 02°S 92°E, and through the point 10°S 92°E to 10°S 110°E. Then northward along the 110°E meridian, and thence along the boundary of Sub-Area 6C through the point 20°N 130°E to 20°N 113°E. Thence south around the Island of Hainan, and along the China-North Viet-Nam, China-Laos and China-Burma borders to close the sub-area at the junction of the borders of China, India and Burma.

CHN/53/8 MOD 27/130 Sub-Area 6D

From the junction of the borders of China, India and Burma, south along the India-Burma and ~~Pakistan~~ Bangladesh-Burma borders to the Bay of Bengal. Along the coast of Burma to its southernmost point, then to Weh Island (off the north coast of Sumatra). Then to the point 02°S 92°E, and through the point 10°S 92°E to 10°S 110°E.

→

CHN/53/8 (cont.)

Then northward along the 110°E meridian, and thence along the boundary of Sub-Area 6C ~~through the point 20°N 130°E to 20°N 113°E. Thence south around the Island of Hainan, and~~ to the point 04°N 130°E. Then through the points 20°N 130°E, 21°N 121°E, 18°N 119°E, 14°N 119°E, 10°N 118°E, 08°N 116°E, 04°N 113°E, 03°30'N 112°E, 06°N 108°E, 10°N 110°E, 15°N 110°E, 18°N 108°E, 18°N 107°E, 20°N 107°E, 20°N 108°E, 21°32'52"N 108°E. Thence along the China-~~North~~ Viet-Nam, China-Laos and China-Burma borders to close the sub-area at the junction of the borders of China, India and Burma.

27/132 *Sub-Area 6F*

From the junction of the China-India-Burma borders north-east to the 100°E meridian. North on this meridian to the northern boundary of Sub-Area 6B. Eastward along this boundary to 147°E thence through the points 20°N 130°E, 04°N 130°E. Then west along the boundary of Sub-Area 6D to the junction of the China-India-Burma borders.

CHN/53/9 MOD 27/132 Sub-Area 6F

~~From the junction of the China India Burma borders north east to the 100°E meridian. North on this meridian to the northern boundary of Sub-Area 6B. Eastward along this boundary to 147°E thence through the points 20°N 130°E, 04°N 130°E. Then west along the boundary of Sub-Area 6D to the junction of the China India Burma borders.~~

From the point 39°49'41"N 124°10'06"E through the points 39°31'51"N 124°06'31"E, 39°N 124°E, 32°30'N 124°E, 32°30'N 126°50'E, 26°N 125°E, 25°N 123°E, 21°N 121°30'E, 18°N 119°E, 14°N 119°E, 10°N 118°E, 08°N 116°E, 04°N 113°E, 03°30'N 112°E, 06°N 108°E, 10°N 110°E, 15°N 110°E, 18°N 108°E, 18°N 107°E, 20°N 107°E, 20°N 108°E, 21°32'52"N 108°E. Then

→

CHN/53/9 (cont.) along the China-Viet-Nam, China-Laos and China-Burma borders to the junction of the borders of China, India and Burma. Thence south along the India-Burma and Bangladesh-Burma borders to the Bay of Bengal, following the coast of Burma to its southernmost point, then to Weh Island (off the north coast of Sumatra). Thence through the points 02°S 92°E, 10°S 92°E, 10°S 110°E, then northward along the 110°E meridian, and along the boundary of Sub-Area 6C to the point 04°N 130°E. Then through the points 20°N 130°E, 43°N 147°E, and then westward between the territorial waters of Japan and the USSR, and then along the DPRK-USSR and China-DPRK borders to the point 39°49'41"N 124°10'06"E.

CHN/53/10 ADD 27/132A New Sub-Area 6G

From the point 21°32'52"N 108°E on the China-Viet-Nam border, along the national boundary of the mainland part of the People's Republic of China to the point 39°49'41"N 124°10'06"E on the China-DPRK border, then through the points 39°31'51"N 124°06'31"E, 39°N 124°E, 32°30'N 124°E, 32°30'N 126°50'E, 26°N 125°E, 25°N 123°E, 21°N 121°30'E, 18°N 119°E, 14°N 119°E, 10°N 118°E, 08°N 116°E, 04°N 113°E, 03°30'N 112°E, 06°N 108°E, 10°N 110°E, 15°N 110°E, 18°N 108°E, 18°N 107°E, 20°N 107°E, 20°N 108°E, to the point 21°32'52"N 108°E.

27/137 *Sub-Area 7D*

From the border of Tanzania and Mozambique on Lake Nyasa, south along the west border of Mozambique to the African East coast. Then through the points 27°S 33°E, 40°S 33°E, 40°S 60°E, 11°S 60°E, to 11°S 41°E. Thence along the northern border of Mozambique to Lake Nyasa.

MAU/33/3 MOD 27/137 Sub-Area 7D

From the border of Tanzania and Mozambique on Lake Nyasa, south along the west border of Mozambique to the African east coast, then through the points 27°S 33°E, 40°S 33°E, ~~40°S-60°E~~, 40°S 65°E, ~~11°S-60°E~~, 11°S 65°E, to 11°S 41°E. Thence along the northern border of Mozambique to Lake Nyasa.

27/140 *Sub-Area 8A*

From the South Pole along the 60°E meridian to 02°S. Then through the points 02°S 92°E, 10°S 92°E, to 10°S 110°E. Then along the 110°E meridian to the South Pole.

MAU/33/3A

The Conference may wish to propose consequent amendments to the boundaries of Sub-Area 8A, see MOD 27/137.

27/141 *Regional and Domestic Air Route Area-9* **(RDARA-9)**

From the South Pole along the 110°E meridian to 10°S. Then through the points 10°S 141°E, 00° 141°E, 00° 160°E, 03°30'N 160°E to 03°30'N 120°W. Then along the 120°W meridian to the South Pole.

AUS/32/1 MOD 27/141 Regional and Domestic Air Route Area - 9 (RDARA-9)

From the South Pole along the ~~110°~~ 160° meridian to ~~10°S~~ 27°S. Then through the points 19°S 153°E, 10°S 145°E, 10°S 141°E, 00° 141°E, 00° 160°E, 03° 30'N 160°E, 03° 30'N 120°W. Then along the 120°W meridian to the South Pole.

27/142 *Sub-Area 9A*

From the point 10°S 110°E to the South Pole. Thence along the 139°E meridian to 24°S. Then through the points 24°S 131°E, 10°S 131°E to 10°S 110°E.

AUS/32/2 SUP 27/142

27/143 *Sub-Area 9B*

From the point 00° 141°E to the point 10°S 141°E thence to 10°S 131°E, 24°S 131°E, 24°S 139°E, 27°S 139°E, 27°S 170°W, 03°30′N 170°W, 03°30′N 160°E, 00° 160°E to the point 00° 141°E.

F/23/1 MOD 27/143 Sub-area 9B

The Eastern limit should be moved from 170° W to 157° W.

AUS/32/3 MOD 27/143 Sub-Area 9B

The southern and western limits between the points 27°S 160°E and 10°S 141°E should be moved to 27°S 160°E, 19°S 153°E, 10°S 145°E, 10°S 141°E.

NZL/45/3 MOD 27/143 Sub Area 9B

Amend delineation to read:

~~From the point 00° 141°E to the point 10°S 141°E thence to 10°S 131°E, 24°S 131°E, 24°S 139°E, 27°S 139°E, 27°S 170°W, 03°30'N 170°W, 03°30'N 160°E, 00° 160°E to the point 00° 141°E.~~

From the point 00° 141°E through points 10°S 141°E, 10°S 145°E, 27°S 160°E, 27°S 157°W, 03°30'N 157°W, 03°30'N 160°E, 00° 160°E to the point 00° 141°E.

27/145 *Sub-Area 9D*

From the South Pole along the 139°E meridian to 27°S. Then through the point 27°S 170°W and along the 170°W meridian to the South Pole.

AUS/32/4 MOD 27/145 Sub-Area 9D

The western limit should be moved from 139°E to 160°E.

Regional and Domestic Air Route Area-10
(RDARA-10)

27/146 *Sub-Area 10A*

From the point 50°N 164°E to 66°N 169°W. Then along the 169°W meridian to the North Pole. Then along the 130°W meridian to 57°N. Thence through the points 57°N 150°W, 50°N 175°W, to close the sub-area at 50°N 164°E.

USA/52/1 MOD 27/146 (a) Boundary description: From the point 50N 164E to 66N 169W, then along the 169W meridian to the North Pole, then among the 130W meridian to 50N, thence westward to close the sub-area at 50N 164E.

DNK/37/3 ADD 27/150A Sub-Area 10F

From the North Pole through the points 82°N 30°E, 82°N 00°, 73°N 00°, 73°N 20°W, 70°N 20°W, 63°30'N 39°W, 58°30'N 43°W, 58°30'N 50°W, 63°30'N 55°44'W, 65°30'N 58°39'W, 74°N 68°18'W, 76°N 76°W, 78°N 75°W, 82°N 60°W to the North Pole.

Regional and Domestic Air Route Area-11
(RDARA-11)

27/151 *Sub-Area 11A*

From the point 29°N 180°, along the I.T.U. boundary between Regions 2 and 3, to 50°N 164°E. Then through the points 50°N 150°W, 57°N 139°W, 50°N 127°W, 33°N 127°W, 33°N 153°W, 29°N 153°W, to close the sub-area at 29°N 180°.

USA/52/3 MOD 27/151 (a) RDARA-11A:

(1) Boundary description: From the point 29N 180, through the points 50N 164E, 50N 130W, 33N 153W, 29N 153W, to close the sub-area at 29N 180.

27/152 *Sub-Area 11B*

From the point 50°N 127°W and through the points 33°N 127°W, 33°N 119°W, 25°N 98°W, 25°N 35°W, 40°N 50°W, 40°N 65°W, 46°N 67°W, then along the border between the United States and Canada to close the sub-area at 50°N 127°W.

USA/52/4 MOD 27/152 (b) RDARA-11B:

(1) Boundary description: From the point 50N 130W and through the points 33N 130W, 33N 119W, 25N 98W, 25N 65W, 40N 65W, 46N 67W then along the border between the United States and Canada through 50 N 127W, to close the sub-area at 50N 130W.

USA/52/6 ADD 27/152A

(c) RDARA-11C:

(1) Boundary description: From the point 25N 65W and through the points 40N 65W, 40N 50W, 25N 35W, to close the sub-area at 25N 65W.

AUS/32/5 ADD 27/173A Regional and Domestic Air Route Area - 14 (RDARA-14)

From the South Pole along the 110°E meridian to 10°S. Then through the points 10°S 145°E, 19°S 153°E, 27°S 160°E. Then along the 160°E meridian to the South Pole.

AUS/32/6 ADD 27/173B Sub-Area 14A

From the South Pole along the 110°E meridian to 19°S. Then through the points 19°S 118°E, 24°S 120°E, 24°S 131°E. Then along the 131°E meridian to the South Pole.

AUS/32/7 ADD 27/173C

Sub-Area 14B

From the point 19°S 110°E to the point 10°S 110°E thence to 10°S 131°E, 24°S 131°E, 24°S 120°E, 19°S 118°E to the point 19°S 110°E.

AUS/32/8 ADD 27/173D

Sub-Area 14C

From the point 24°S 131°E to the point 10°S 131°E thence to 10°S 139°E, 24°S 139°E to the point 24°S 131°E.

AUS/32/9 ADD 27/173E

Sub-Area 14D

From the South Pole along the 131°E meridian to 24°S then through the points 24°S 139°E, 27°S 139°E, 27°S 142°E, 34°S 142°E, 34°S 139°E. Then along the 139°E meridian to the South Pole.

AUS/32/10 ADD 27/173F

Sub-Area 14E

From the point 24°S 139°E along the 139°E meridian to 10°S then through the points 10°S 145°E, 19°S 153°E to the point 24°S 139°E.

AUS/32/11 ADD 27/173C

Sub-Area 14F

From the point 27°S 139°E along the 139°E meridian to 24°S then through the points 19°S 153°E, 27°S 160°E to the point 27°S 139°E.

AUS/32/12 ADD 27/173H

Sub-Area 14G

From the South Pole along the 139°E meridian to 34°S then through the points 34°S 142°E, 27°S 142°E, 27°S 160°E. Then along the 160°E meridian to the South Pole.

ARTICLE 3

Description of the Boundaries of the VOLMET Allotment Areas and VOLMET Reception Areas

VOLMET area—AFRICA-INDIAN OCEAN
(AFI-MET)

27/174 The *AFI-MET allotment area* is defined by a line drawn from the point 37°N 03°W, through the points 37°N 36°E, 30°N 35°E, 10°N 52°E, 22°S 60°E, 30°S 34°E, 30°S 24°E, 12°N 20°W, 29°N 20°W, to the point 37°N 03°W.

D/7/1
F/22/1-67
MAU/33/1-67

MOD 27/174. The AFI-MET allotment area is defined by a line drawn from the point 29°N 20°W through the points 37°N 03°W, 37°N 36°E, 30°N 35°E, 10°N 52°E, 22°S 60°E, 35°S 35°E, 35°S 15°E, 08°S 15°W, 12°N 20°W to the point 29°N 20°W.

27/175 The *AFI-MET reception area* is defined by a line drawn from the point 37°N 03°W, through the points 37°N 36°E, 30°N 35°E, 10°N 52°E, 22°S 60°E, 30°S 34°E, 30°S 24°E, 05°N 10°W, 10°S 40°W, 29°N 20°W, to the point 37°N 03°W.

D/7/2
F/22/1-68
MAU/33/1-68

MOD 27/175 The AFI-MET reception area is defined by a line drawn from the point 37°N 03°W through the points 37°N 36°E, 30°N 35°E, 10°N 52°E, 10°N 100°E, the South Pole, 29°N 40°W, 29°N 20°W, to the point 37°N 03°W.

VOLMET area—ATLANTIC
(AT-MET)

D/7
F/22/1-69
MAU/33/1-69

Note: It is proposed to change the nomenclature from ATLANTIC (AT-MET) to NORTH ATLANTIC (NAT-MET)

27/176 The *AT-MET allotment area* is defined by a line drawn from the point 41°N 78°W, through the points 51°N 55°W, 10°S 43°W, 37°S 59°W, to the point 41°N 78°W.

D/7/3
F/22/70
MAU/33/70

MOD 27/176 The NAT-MET allotment area is defined by a line drawn from the point 41°N 78°W through the points 51°N 55°W, 24°N 50°W, 24°N 74°W to the point 41°N 78°W.

27/177 The *AT-MET reception area* is defined by a line drawn from the point 24°N 97°W, through the points 24°N 85°W, 75°N 85°W, 75°N 20°W, 10°S 20°W, 46°S 52°W, 46°S 80°W, to the point 24°N 97°W.

D/7/4
F/22/1-71
MAU/33/1-71

MOD 27/177 The NAT-MET reception area is defined by a line drawn from the point 24°N 97°W through the points 24°N 85°W, 75°N 85°W, 75°N 20°W, 00° 20°W, 00° 95°W to the point 24°N 97°W.

VOLMET area—EUROPE
(EU-MET)

D/7/6
F/22/1-72
MAU/33/1-72

Note : Change the nomenclature from EU-MET to EUR-MET.

27/178 The *EU-MET allotment area* is defined by a line drawn from the point 33°N 12°W, through the points 54°N 12°W, 70°N 00°, 74°N 40°E, 40°N 36°E, 29°N 35°30'E, 32°N 13°E, to the point 33°N 12°W.

D/7/6 MOD 27/178 The EUR-MET allotment area is defined by a line drawn from the point 33°N 12°W, through the points 54°N 12°W, 70°N 00°, 74°N 40°E, 40°N 36°E, 29°N 35°30'E, 32°N 13°E, to the point 33°N 12°W.

27/179 The *EU-MET reception area* is defined by a line drawn from the point 15°N 20°W, through the points 40°N 50°W, 75°N 50°W, 75°N 45°E, 15°N 45°E, to the point 15°N 20°W.

D/7/7 MOD 27/179 The EUR-MET reception area is defined by a line drawn from the point 15°N 20°W, through the points 40°N 50°W, 75°N 50°W, 75°N 45°E, 15°N 45°E, to the point 15°N 20°W.

VOLMET area—MIDDLE EAST
(ME-MET)

D/7/9
F/22/1-73
MAU/33/73

Note: It is proposed to change the nomenclature from ME-MET to MID-MET.

27/180 The *ME-MET allotment area* is defined by a line drawn from the point 50°N 80°E, through the points 29°N 80°E, 27°N 85°E, 16°N 78°E, 22°N 56°E, 16°N 42°E, 30°N 30°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

D/7/9 MOD 27/180 The MID-MET allotment area is defined by a line drawn from the point 50°N 80°E, through the points 29°N 80°E, 27°N 85°E, 16°N 78°E, 22°N 56°E, 16°N 42°E, 30°N 30°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

27/181 The *ME-MET reception area* is defined by a line drawn from the point 50°N 80°E, through the points 29°N 80°E, 27°N 85°E, 16°N 78°E, 15°N 42°E, 20°N 20°E, 40°N 20°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

D/7/10
F/22/1-74
URS/29/25
MAU/33/1-74
CHN/53/12

MOD 27/181 The MID-MET reception area is defined by a line drawn from the point 50°N 80°E, through the points 50°N 90°E, 35°N 90°E, 27°N 85°E, 16°N 78°E, 22°N 56°E, 16°N 42°E, 30°N 30°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

URS/29/26 ADD 27/181A VOLMET area - NORTH CENTRAL ASIA

The NCA-MET allotment area is defined by a line drawn from the point 76°N 32°E through the points 80°N 90°E, 75°N 168°W, 66°N 168°W, 48°N 160°E, 42°N 135° , 50°N 130°E, 50°N 90°E, 35°N 70°E, 45°N 30°E, 60°N 20°E, to the point 76°N 32°E.

URS/29/27 ADD 27/181B The NCA-MET reception area is defined by a line drawn from the North Pole through the points 40°N 168°W, 30°N 140°E, 30°N 20°E, to the North Pole.

VOLMET area—PACIFIC
(PAC-MET)

27/182 The *PAC-MET allotment area* is defined by a line drawn from the point 52°N 132°E, through the points 63°N 149°W, 38°N 120°W, 23°S 180°, 34°S 150°E, 22°N 112°E, to the point 52°N 132°E.

D/7/12
F/22/1-75
MAU/33/1-75
NZL/45/8

MOD 27/182 The PAC-MET allotment area is defined by a line drawn from the point 52°N 132°E, through the points 63°N 149°W, 38°N 120°W, 50°S 120°W, 50°S 145°E, 28°S 145°E, 03°S 129°E, 22°N 112°E to the point 52°N 132°E.

27/183 The *PAC-MET reception area* is defined by a line drawn from the point 60°N 100°E, through the points 80°N 160°W, 75°N 90°W, 60°N 85°W, 20°N 120°W, 40°S 120°W, 50°S 170°W, 50°S 145°E, 28°S 145°E, 03°S 129°E, 05°N 80°E, 40°N 80°E, to the point 60°N 100°E.

D/7/13
F/22/1-76
MAU/33/1-76
NZL/45/9

MOD 27/183 The PAC-MET reception area is defined by a line drawn from the point 60°N 100°E, through the points 80°N 160°W, to the North Pole, to the South Pole along the 110°W meridian, to 28°S 145°E, 03°S 129°E, 05°N 80°E, 40°N 80°E, to the point 60°N 100°E.

VOLMET area—SOUTH EAST ASIA
(SEA-MET)

27/184 The *SEA-MET allotment area* is defined by a line drawn from the point 29°N 86°E, through the points 15°N 105°E, 10°S 155°E, 35°S 155°E, 35°S 116°E, 08°N 75°E, 26°N 65°E, to the point 29°N 86°E.

D/7/15
F/22/1-77
MAU/33/1-77

MOD 27/184 The SEA-MET allotment area is defined by a line drawn from the point 55°N 75°E, through the points 55°N 135°E, 45°N 135°E, 35°N 130°E, 10°N 130°E, 10°S 155°E, 35°S 155°E, 35°S 116°E, 08°N 75°E, 26°N 65°E to the point 55°N 75°E.

URS/29/28 MOD 27/184 VOLMET area - SOUTH EAST ASIA (SEA-MET)

The SEA-MET allotment area is defined by a line drawn from the point ~~29°N-86°E~~ 55°N 75°E through the points ~~15°N-105°E~~ 55°N 135°E, 45°N 135°E, 35°N 155°E, 10°N 130°E, 10°S 155°E, 35°S 155°E, 35°S 116°E, 8°N 75°E, 26°N 65°E to the point 55°N 75°E.

CHN/53/12 MOD 27/184 SEA-MET allotment area is defined by a line drawn from the point ~~29°N-86°E~~, 55°N 75°E, through the points 55°N 135°E, 45°N 135°E, 35°N 130°E, 10°N 130°E, 10°S 155°E, 35°S 155°E, 35°S 116°E, 08°N 75°E, 26°N 65°E, ~~15°N-105°E~~, to the point ~~29°N-86°E~~, 55°N 75°E.

[**27/185** The *SEA-MET reception area* is defined by a line drawn from the point 35°N 50°E, through the points 30°N 90°E, 10°N 180°, 40°S 180°, 48°S 170°E, 35°S 116°E, 08°N 75°E, 10°N 50°E, to the point 35°N 50°E.

D/7/16
F/22/1-78
URS/29/29
MAU/33/1-78
CHN/53/13

MOD 27/185 The SEA-MET reception area is defined by a line drawn from the point 55°N 50°E, through the points 55°N 180°, 50°S 180°, 50°S 70°E, 8°N 70°E, 8°N 50°E to the point 55°N 50°E.

VOLMET - CARIBBEAN (CAR-MET)

D/7/18
F/22/1-79
MAU/33/1-79

ADD 27/185A The CAR-MET allotment area is defined by a line drawn from the point 30°N 110°W, through the points 30°N 75°W, 00° 50°W, following equator to 00° 80°W to the point 30°N 110°W;

D/7/19
F/22/1-80
MAU/33/1-80

ADD 27/185B The CAR-MET reception area is defined by a line drawn from the point 40°N 120°W, through the points 40°N 20°W, 25°S 20°W, 25°S 120°W, to the point 40°N 120°W;

VOLMET Area - SOUTH AMERICA (SAM-MET)

D/7/20
F/22/1-81
MAU/33/1-81

ADD 27/185C The SAM-MET allotment area is defined by a line drawn from the point 15°N 83°W through the points 15°N 60°W, 5°S 35°W, 55°S 60°W, 55°S 83°W to the point 15°N 83°W;

D/7/21
F/22/1-82
MAU/33/1-82

ADD 27/185D The SAM-MET reception area is defined by a line drawn from the point 30°N 120°W through the points 30°N 00°, the South Pole, to the point 30°N 120°W;

VOLMET Area - NORTH CENTRAL ASIA (NCA-MET)

D/7/23
F/22/1-83
MAU/33/1-83

ADD 27/185E The NCA-MET allotment area is defined by a line drawn from the point 76°N 32°E through the points 80°N 90°E, 75°N 168°W, 66°N 168°W, 48°N 160°E, 42°N 135°E, 50°N 130°E, 50°N 90°E, 35°N 70°E, 45°N 30°E, 60°N 20°E to the point 76°N 32°E;

D/7/24
F/22/1-84
MAU/33/1-84

ADD 27/185F The NCA-MET reception area is defined by a line drawn from the North Pole to the point 40°N 168°W, 30°N 140°E, 30°N 20°E, to the North Pole;

J/44/18	ADD	Article 3A Description of the Boundaries of the Long-distance Operational Control Communications Areas (OPECON Areas)
J/44/19	ADD 27/185A	OPECON Area - AFRICA/MIDDLE EAST (OPECON-AF/MID) OPECON AF/MID area is an area embracing RDARA-4, 5 and 7 areas defined in Nos. 27/118 to 27/125 and 27/133 to 27/138.
J/44/20	ADD 27/185B	OPECON Area - EUROPE (OPECON-EUR) OPECON-EUR area is an area embracing RDARA-1, 2 and 3 areas defined in Nos. 27/104 to 27/117.
J/44/21	ADD 27/185C	OPECON Area - NORTH AMERICA (OPECON-NAM) OPECON-NAM area is an area embracing RDARA-10 and 11 areas defined in Nos. 27/146 to 27/152.
J/44/22	ADD 27/185D	OPECON Area - SOUTH AMERICA (OPECON-SAM) OPECON-SAM area is an area embracing RDARA-12 and 13 areas defined in Nos. 27/153 to 27/173.
J/44/23	ADD 27/185E	OPECON Area - SOUTH EAST ASIA (OPECON-SEA) OPECON-SEA area is an area embracing RDARA-6, 8 and 9 areas defined in Nos. 27/126 to 27/132 and 27/139 to 27/145.

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Section II

Allotment of Frequencies to the Aeronautical Mobile (R) Service

ARTICLE 1

27/186

Frequency Allotment Plan

(by MWARAs, RDARAs, Sub-RDARAs and VOLMET Areas)

USA/4/42
D/5/43
F/22/1-85
MAU/33/1-85
G/43/39

MOD 27/186 Frequency Allotment Plan by Areas ~~(by MWARAs, RDARAs, Sub-RDARAs and VOLMET Areas)~~-

J/44/24 MOD 27/186 Frequency Allotment Plan (by MWARAs, RDARAs, Sub-RDARAs, VOLMET Areas and OPECON Areas)

GENERAL REMARK

Frequency requirements

As regards frequency requirements, reference should be made to IFRB Circular-letter No. 400, issued as conference document No. 48.

Reference should also be made to the following documents:

D	Document	No. 6
D	"	No. 7
USA	"	No. 26
URS	"	No. 29
D	"	No. 30
MAU	"	No. 33
DNK	"	No. 37
USA	"	No. 39
J	"	No. 44
NZL	"	No. 45
USA	"	No. 52

27/188 *b)* The following list does not include the world-wide common (R) and (OR) frequencies of 3023.5 and 5680 kc/s, or the world-wide frequencies of 3499, 6526, 8963, 10 093 and 13 356 kc/s. The allotment of these frequencies is shown in Article 2.

USA/4/43 MOD 27/188
D/5/44
F/22/1-86
MAU/33/1-86
G/43/40
J/44/25

The following list does not include the world wide common (R) and (OR) frequencies of ~~3023.5,~~ 3023 and 5680 kHz. ~~or the world wide frequencies of 3499, 6526, 8963, 10 093 and 13 256 kc/s.~~ The allotment of these frequencies is shown in Article 2.

URS/29/30 MOD 27/188

The following plan for frequency allotment by areas does not include frequencies allotted on a world-wide basis (cf. Nos. 27/190 and 27/195-27/207).

27/189

Bands Mc/s		3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas		kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s
CAR		2952 2966			5484 5568	6540 6561	8840 8959	10 017	11 343 11 367	13 320	17 917
CEP			3467		5554 5603		8875 8931			13 336	17 925
CWP		2896		4675	5505	6631	8854		11 303	13 296	17 909
EU		2910	3467	4689	5554	6568 6582	8875 8931		11 303		17 941
FE		2868 2987			5624 5645		8840 8868			13 288 13 312	17 965
ME			3404 3446		5603	6624	8847	10 009		13 336	17 917
NA	NA-1	2868			5624		8910			13 328	17 941
	NA-2	2868 2931 2945 2987			5610 5624 5638 5673		8854 8889 8910 8945			13 288 13 328 13 352	17 941
	NA-3	2931			5610		8945			13 328	17 941
NP		2910			5589		8938			13 264	17 909
NSA-1			3411		5519		8826			13 304	17 949
NSA-2		2966	3481		5505	6540 6561	8959	10 025		13 280 13 336	17 925
SA		2875*	3432			6610 6680	8882	10 049		13 344	17 949
SAM-1		2889		4696		6666	8826		11 343		17 917
SAM-2		2910			5582		8847		11 327	13 320	17 917

→

Bands Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s
SEA	2987			5673		8868 8882			13 288*	17 965
SP	2945			5638		8847			13 304	17 949
1								11 359	13 296	
1B		3453*		5645*			10 065			
1C	2994	3453* 3474		5645* 5659	6533	8938	10 065			
1D	2896	3418*	4668	5568*	6631	8952	10 081			
1E	2861		4654*		6547		10 065			
2							10 033 10 041 10 057 10 089	11 287 11 319 11 335 11 351 11 367 11 383	13 320	17 957
2A	2875 2882 2903 2973 3008	3425 3439 3460 3495	4661 4696	5512 5568 5596 5666	6540 6561 6575 6589 6610	8840 8861 8868 8903 8917	10 017* 10 049			
2B	2854* 2868* 2875 2924 2938 2952 2980*	3425 3439 3460 3488	4654 4661 4668* 4696	5484 5498 5540 5596 5638* 5645* 5666	6533 6589 6603 6638 6645 6673	8861 8917				
2C	2882 2903 2917 2924 2938 2952 2959 2987* 3008	3418 3425 3439 3460 3474 3495	4654 4661 4675 4696	5491 5547 5582 5589 5596 5617 5631 5652* 5666	6554 6603 6617 6645 6652 6659 6666	8840 8861 8903 8917*	10 017*			
3							10 033 10 073 10 089	11 327 11 375 11 391*	13 272	17 941* 17 957
3A	2861 2875 2924	3411* 3432* 3439 3481	4661 4675*	5631 5659	6547 6589 6617 6631 6673 6680	8840 8861 8868* 8882* 8917 8959*				
3B	2854 2903 2931 2938 2959 2966	3404 3495	4661 4689*	5484 5533 5540 5575	6533 6589 6624 6659	8819* 8826* 8833* 8847* 8861 8875* 8882 8889 8896 8910 8931* 8945*	10 025			

→

Bands Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s
3C	2854 2882 2917 2994 3008	3425 3453 3474*	4654 4661 4682* 4696	5498 5526 5554* 5568	6603 6652 6666	8861 8896 8910 8945*	10 025			
4								11 375		17 933
4A	2854				6638	8896	10 081			
4B	2924				6589 6638	8924				
5								11 295		17 933
5A		3453		5526	6610	8896				
5B	2966		4682	5659	6547	8854 8896				
5C			4682	5659	6547	8896				
5D			4682	5659	6547 6645	8861				
6							10 049	11 311	13 328 13 352	
6A	2910 2931 2945	3411*		5512 5547 5568 5582		8889 8924 8938	10 065			
6B	2889 2952*	3418* 3460*		5491 5610* 5631*	6540 6575	8952				
6C	2924 3015	3439		5659	6554 6617	8819 8833 8945			13 320	
6D		3411 3474 3488 3495	4668 4689	5526 5533 5596 5652	6589 6617 6659	8826 8833 8861* 8875 8931 8959		11 359		
6E	2861 2931	3411* 3467		5547 5617	6533	8889 8917				
6F	2973 3001*	3481*			6568 6582 6673*		10 065 10 081		13 280	
7				5498			10 041	11 335		
7A	2868					8840			13 264	
7B	2868					8840			13 264	
7C	2868					8840			13 264	
7D	2868					8840			13 264	
7E	2917	3425	4675	5491	6603	8875				

Bands Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s
9								11 335 11 383		
9A		3404 3418 3453			6610 6638 6652	8938 8952		11 319		
9B	2861 2959 3008	3425 3446 3460		5498 5526 5666	6533 6540 6575 6645 6666	8889 8896 8910 8917 8924		11 319		17 933
9C	2861 2973	3425 3446 3460		5498 5526 5666	6533	8896 8910 8917 8924 8952 8959				17 933
9D	2917 2938 2973 3008	3467* 3481*	4661 4682	5498 5526	6561	8826 8840 8889 8931* 8952 8959		11 319		17 933
10							10 041 10 057	11 295 11 319 11 359 11 383	13 280	
10A	2861 2875* 2924 2987*	3411 3446 3481	4668 4696*	5454 5547 5631	6568 6617	8868 8917 8924				
10B	2896 2917 2973 3015	3418 3432 3453	4654 4682	5461 5469 5491 5526 5659	6596 6645	8896 8952		11 311		
10C	2854 2889	3474	4689*	5498 5512 5575	6533 6582 6624 6638 6673	8826		11 311		
10D	2903 3008	3425 3432 3439 3488 3495	4661 4675	5477 5540 5561 5596 5617 5645 5666	6554 6610 6659 6666 6680			11 311		
10E	2882 2924 2938	3460 3495	4675 4682	5454 5505* 5631	6631	8861 8903		11 311		
12								11 351		

→

Bands Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s
12C	2875	3404 3453 3460	4661 4689	5454 5533 5617 5666	6547 6589 6603 6652	8861	10 025 10 073 10 089			
12D	2861			5461	6575	8924				
12E	2959 3015	3425 3446		5575 5631	6533	8875 8938				
12F	2959 3015	3425 3446 3467		5491 5589 5631	6533 6673	8861* 8875 8938				
12G	2959 2980* 3015	3425 3446		5477 5512	6596					
12H	2959 3015	3425 3446		5589	6533					
13									13 280	17 957
13C	2854 2987	3474		5540 5617	6603 6652	8819		11 295		
13D	2868 2924	3411 3495		5454 5469	6617 6638	8910 8917	10 033 10 065			
13E	2917	3488	4654			8945				
13F	2917 2952	3439	4654	5666	6624	8861 8896 8945		11 359		
13G	2938 2980 2994 3008		4668	5491	6554 6645	8903 8952	10 025 10 041 10 081			
13H	2861 2966	3425		5477 5498 5547		8840 8938		11 287 11 319	13 312	
13I	2931			5659		8924				
13J	2882 2903 2973	3418	4675 4682	5461 5526	6547 6568 6582	8889 8931	10 009 10 057			
13K	2896 2945	3460 3481	4661	5505 5596	6631 6659	8833 8854	10 089			
AFI-MET		3488* 3495*			6575 6617*		10 073*	11 279		17 909*
AT-MET	3001			5652		8868			13 272	
EU-MET	2889* 2980			5533 5575		8833		11 391	13 312	
ME-MET	3001 3015			5561	6596	8819		11 343		
SEA-MET		3432			6680		10 017			
PAC-MET	2980			5519	6610*	8903		11 279*	13 344	

USA/4/44 MOD 27/189

Bands ~~Mc/s~~- MHz	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz	~~kc/s~~ kHz
CAR										
CEP										
CMN(R) & (OR)										
World-wide A										
World-wide B (etc.)										

(Note: Frequencies to be inserted in above table to be determined by the Conference).

G/43/41 **MOD 27/189** Revised table to be determined by the Conference.

D/5/45 F/22/1-87 MAU/33/1-87 MOD 27/189 Table to be established by the Conference including provision for the Aeronautical Operational Control frequencies.

URS/29/31 ADD 27/190 A list of frequencies allotted on a world-wide basis is given below.

J/44/26 ADD 27/191A

After 27/191, add the following new Table.

Bands MHz	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz
AF/MID -1										
AF/MID -2										
AF/MID -:										
E U R -1										
E U R -2										
E U R -:										
N A M -1										
N A M -2										
N A M -:										
S A M -1										
S A M -2										
S A M -:										
S E A -1										
S E A -2										
S E A -:										

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ARTICLE 2

Frequency Allotment Plan
(in numerical order of frequencies)

General Notes :

27/192 1. *Class of stations :* **FA.**

Classes of emission : see Nos. **27/49-27/53.**

Power : unless otherwise indicated in the Plan, the power values for aeronautical and aircraft stations are those shown in Nos. **27/54-27/62.**

Hours : H24 unless otherwise indicated.

General Notes:

USA/4/45 MOD 27/192
D/5/46
F/22/1-88
MAU/33/1-88
G/43/42

1. Class of stations: FA.

Classes of emission: see Nos. 27/49-~~27/53~~ 27/52.

Power: Unless otherwise indicated in the Plan, the power values for aeronautical and aircraft stations are those shown in Nos 27/54-27/62.

Hours: H24 unless otherwise indicated.

27/193 2. A frequency allotted on a " day-time basis " may be used during the period one hour after sunrise to one hour before sunset when the same channel is alloted in the Plan to Major World Air Route Areas, Regional and Domestic Air Route Areas, Sub-Regional and Domestic Air Route Areas or VOLMET Areas which receive full protection during the twenty-four hours.

USA/4/46
D/5/47
F/22/1-89
MAU/33/1-89

MOD 27/193

2. A frequency allotted on a "day-time basis" may be used during the period one hour after sunrise to one hour before sunset when the same channel is allotted in the Plan to Major World Air Route Areas, Regional and Domestic Air Route Areas, Sub-Regional and Domestic Air Route Areas, VOLMET Areas or Aeronautical Operational Control which receive full protection during the twenty-four hours.

G/43/43

MOD 27/193

2. A frequency allotted on a 'day-time basis' may be used during the period one hour after sunrise to one hour before sunset when the same channel is allotted in the Plan to Major World Air Route Areas, Regional and Domestic Air Route Areas, Sub-Regional and Domestic Air Route Areas, VOLMET areas or world-wide which receive full protection during the twenty-four hours.

J/44/27

MOD 27/193

A frequency allotted on a "day-time basis" may be used during the period one hour after sunrise to one hour before sunset when the same channel is alloted in the Plan to Major World Air Route Areas, Regional and Domestic Air Route Areas, Sub-Regional and Domestic Air Route Areas, VOLMET Areas or OPECON Areas which receive full protection during the twenty-four hours.

27/194 3. A " common channel " is a channel alloted in common to areas within interference distance of each other and its use is subject to agreement between the administrations concerned.

URS/29/32 SUP 27/194

USA/4/47 ADD 27/194A 3A. The frequency allotment for aeronautical operational control use is for assignment by administrations for the purpose of serving one or more aircraft operating agencies, operating under authority granted by the administration(s) concerned. Such assignments are to provide communications between an appropriate aeronautical station and an aircraft station for exercising authority over regularity of flight, and are not to be assigned by administrations for MWARA, RDARA or VOLMET purposes.

D/5/48 F/22/1-90 MAU/33/1-90 **ADD 27/194A** The frequency allotment for aeronautical operational control use is for assignment by administrations for the purpose of serving one or more aircraft operating agencies, operating under authority granted by the administration(s) concerned. Such assignments are to provide communications between an appropriate aeronautical station and an aircraft station for exercising authority over regularity of flight.

G/43/44 **ADD 27/194A** The frequency allotment for world-wide use except for the frequencies 3023 kHz and 5680 kHz is for assignment by administrations for the purpose of serving one or more aircraft operating agencies operating under authority granted by the administration(s) concerned. Such assignments are to provide communications between an appropriate aeronautical station and an aircraft station for exercising authority over regularity of flight.

J/44/28 ADD 27/194A 4. Frequencies designated for Long-distance Operational Control Communications in the Frequency Allotment Plan (see No. 27/191A) are intended to be used by the aircraft in flight anywhere in the world.

J/44/29 ADD note: Where an operational area lies wholly within a RDARA or Sub-RDARA boundary, those frequencies allotted to RDARAs and Sub-RDARAs should be used to the extent possible.

G/43/45 **ADD 27/194B** Frequencies designated World-Wide in the Frequency Allotment Plan are intended to be used anywhere in the world and within any operational area which does not lie wholly within a RDARA or Sub-RDARA boundary.

Frequency kc/s 1	Authorized area of use 2	Remarks 3
2854	RDARA: 2B, 3B, 3C, 4A, 10C, 13C	In 2B, use limited to North of 40° North and East of 60° East. Common channel to 2B, 3B and 3C.
2861	RDARA: 1E, 3A, 6E, 9B, 9C, 10A, 12D, 13H	Common channel to 9B and 9C.
2868	MWARA: FE, NA-1, NA-2 RDARA: 2B, 7A, 7B, 7C, 7D, 13D	Common channel to NA-1 and NA-2. In 2B, limited to use on a day-time basis. Common channel to 7A, 7B, 7C and 7D.
2875	MWARA: SA RDARA: 2A, 2B, 3A, 10A, 12C	In SA, use limited to South of 30° North. Common channel to 2A, 2B and 3A. In 10A, limited to use on a day-time basis.
2882	RDARA: 2A, 2C, 3C, 10E, 13J	Common channel to 2A, 2C and 3C.
2889	MWARA: SAM-1 RDARA: 6B, 10C VOLMET: EU-MET	In EU-MET, use limited to North of 50° North.
2896	MWARA: CWP RDARA: 1D, 10B, 13K	
2903	RDARA: 2A, 2C, 3B, 10D, 13J	Common channel to 2A, 2C and 3B.
2910	MWARA: EU, NP, SAM-2 RDARA: 6A	Common channel to EU and 6A.
2917	RDARA: 2C, 3C, 7E, 9D, 10B, 13E, 13F	Common channel to 2C and 3C. Common channel to 13E and 13F.
2924	RDARA: 2B, 2C, 3A, 4B, 6C, 10A, 10E, 13D	Common channel to 2B, 2C and 3A.
2931	MWARA: NA-2, NA-3 RDARA: 3B, 6A, 6E, 13I	Common channel to NA-2 and NA-3. Common channel to 6A and 6E.
2938	RDARA: 2B, 2C, 3B, 9D, 10E, 13G	Common channel to 2B, 2C and 3B.
2945	MWARA: NA-2, SP RDARA: 6A, 13K	
2952	MWARA: CAR RDARA: 2B, 2C, 6B, 13F	Common channel to 2B and 2C. In 6B, use limited to East of 125° East.
2959	RDARA: 2C, 3B, 9B, 12E, 12F, 12G, 12H	Common channel to 2C and 3B. Common channel to 12E, 12F, 12G and 12H.
2966	MWARA: CAR, NSA-2 RDARA: 3B, 5B, 13H	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti.
2973	RDARA: 2A, 6F, 9C, 9D, 10B, 13J	Common channel to 9C and 9D.
2980	RDARA: 2B, 12G, 13G VOLMET: EU-MET, PAC-MET	In 2B, limited to use on a day-time basis. In 12G, power limited to 500 W mean power during night-time. In 12G, night-time protection 12 db.

1	2	3
2987	MWARA: FE, NA-2, SEA RDARA: 2C, 10A, 13C	Common channel to FE and SEA. In 2C, limited to use on a day-time basis. In 10A, use limited to East of 180°.
2994	RDARA: 1C, 3C, 13G	
3001	RDARA: 6F VOLMET: AT-MET, ME-MET	In 6F, use limited to East of 120° East.
3008	RDARA: 2A, 2C, 3C, 9B, 9D, 10D, 13G	Common channel to 2A, 2C and 3C. Common channel to 9B and 9D.
3015	RDARA: 6C, 10B, 12E, 12F, 12G, 12H VOLMET: ME-MET	Common channel to 12E, 12F, 12G and 12H.

USA/4/48 MOD 27/195 through 27/207, as follows:

USA/4/49 Add new 3 kHz channels. (See MOD 27/16)

USA/4/50
F/22/1-91
MAU/33/1-91

In the table (Pages (45) thru (55)), it is recommended that frequencies allotted for world-wide use be designated as follows:

Column 1 - "Frequency ~~kc/s~~ kHz" - ( )
Column 2 - "Authorized Area of Use" - World-wide
Column 3 - "Remarks" - Aeronautical Operational Control (AOC) (See ADD 27/194A)

D/5/49 MOD 27/195 - 27/207 Table to be established by the Conference with a channelling based on 3 kHz separation. (See No. 27/16).

G/43/47 **MOD 27/195–27/207 inclusive**

As follows:

Add new 3 kHz channels (see MOD 27/16). In the table (pages 45 to 55), it is proposed that the frequencies allotted for world-wide use be designated as follows:

Column 1 Frequency ~~kc/s~~ kHz

Column 2 Authorized Area of Use – World-Wide

Column 3 Remarks – see ADD 194A and ADD 194B

J/44/30 MOD 27/195 (Insert the appropriate frequencies, remarks, etc. in each column)

FREQUENCY ~~kc/s~~- kHz 1	AUTHORIZED AREA OF USE 2	REMARKS (Subject to change) 3
2851		
2854 NOC	RDARA: 2B,3B,3C,4A,10C,13C	In 2B, use limited to North of 40° North and East of 60° East. Common channel to 2B,3B and 3C.
2857		
~~2861~~ 2860	RDARA: 1E,3A,6E,9B,9C,10A, 12D,13H	Common channel to 9B and 9C.
2863		
2866		
~~2868~~ 2869	MWARA: FE, NA-1, NA-2 RDARA: 2B,7A,7B,7C,7D,13D	Common channel to NA-1 and NA-2. In 2B, limited to use on a day-time basis. Common channel to 7A,7B,7C and 7D.
2872		
2875 NOC	MWARA: SA RDARA: 2A,2B,3A,10A,12C	In SA, use limited to South of 30° North. Common channel to 2A,2B and 3A. In 10A, limited to use on a day-time basis.
2878		
~~2882~~ 2881	RDARA: 2A,2C,3C,10E,13J	Common channel to 2A,2C and 3C.
2884		
2887		
~~2889~~ 2890	MWARA: SAM-1 RDARA: 6B,10C VOLMET: EU-MET	In EU-MET, use limited to North of 50° North.
2893		
2896 NOC	MWARA: CWP RDARA: 1D,10B,13K	
2899		
~~2903~~ 2902	RDARA: 2A,2C,3B,10D,13J	Common channel to 2A,2C and 3B.
2905		

Band 2850-3025 ~~kc/s~~ kHz

(cont.)

1	2	
2908		
~~2910~~ 2911	MWARA: EU, NP, SAM-2 RDARA: 6A	Common channel to EU and 6A.
2914		
2917 NOC	RDARA: 2C,3C,7E,9D,10B,13E, 13F	Common channel to 2C and 3C. Common channel to 13E and 13F.
2920		
~~2924~~ 2923	RDARA: 2B,2C,3A,4B,6C,10A, 10E,13D	Common channel to 2B,2C and 3A.
2926		
2929		
~~2931~~ 2932	MWARA: NA-2, NA-3 RDARA: 3B,6A,6E,13I	Common channel to NA-2 and NA-3. Common channel to 6A and 6E.
2935		
2938 NOC	RDARA: 2B,2C,3B,9D,10E,13G	Common channel to 2B,2C and 3B.
2941		
~~2945~~ 2944	MWARA: NA-2, SP RDARA: 6A, 13K	
2947		
2950		
~~2952~~ 2953	MWARA: CAR RDARA: 2B,2C,6B,13F	Common channel to 2B and 2C. In 6B, use limited to East of 125° East.
2956		
2959 NOC	RDARA: 2C,3B,9B,12E,12F, 12G,12H	Common channel to 2C and 3B. Common channel to 12E,12F,12G and 12H.
2962		

Band 2850-3025 ~~kc/s~~ kHz (end)

1	2	3
~~2966~~ 2965	MWARA: CAR,NSA-2 RDARA: 3B, 5B, 13H	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti.
2968		
2971		
~~2973~~ 2974	RDARA: 2A,6F,9C,9D,10B,13J	Common channel to 9C and 9D.
2977		
2980 NOC	RDARA: 2B,12G,13G VOLMET: EU-MET, PAC-MET	In 2B, limited to use on a day-time basis. In 12G, power limited to 500 W mean power during night-time. In 12G, night-time protection 12 db.
2983		
~~2987~~ 2986	MWARA: FE, NA-2, SEA RDARA: 2C,10A,13C	Common channel to FE and SEA. In 2C, limited to use on a day-time basis. In 10A, use limited to East of 180°.
2989		
2992		
~~2994~~ 2995	RDARA: 1C, 3C, 13G	
2998		
3001 NOC	RDARA: 6F, CEP-5 VOLMET: AT-MET, ME-MET	In 6F, use limited to East of 120° East.
3004		
~~3008~~ 3007	RDARA: 2A,2C,3C,9B,9D, 10D,13G	Common channel to 2A,2C and 3C. Common channel to 9B and 9D.
3010		
3013		
~~3015~~ 3016	RDARA: 6C,10B,12E,12F, 12G,12H	Common channel to 12E,12F,12G and 12H.
3019		

	1	2	3
27/196	3023.5	World-wide	Authorized for world-wide use; 1. aboard aircraft for: *a)* communications with approach and aerodrome control; *b)* communications with an aeronautical station when other frequencies of the station are either unavailable or unknown; 2. at aeronautical stations for aerodrome and approach control under the following conditions: *a)* with mean power limited to a value of not more than 20 watts in the antenna circuit; *b)* special attention must be given in each case to the type of antenna used in order to avoid harmful interference; *c)* the power of aeronautical stations which use this frequency in accordance with the above conditions, may be increased to the extent necessary to meet certain operational requirements subject to co-ordination between the Administrations directly concerned and those whose services may be adversely affected. 3. the specific application of this frequency for the above purposes may be decided at regional aeronautical conferences; 4. the use of this frequency is also authorized for intercommunication between mobile stations engaged in co-ordinated search and rescue operations including communication between these stations and participating land stations; 5. this channel may be used for A1 or A3 emission, in accordance with special arrangements. It shall not be subdivided.

USA/4/51
F/22/1-92
MAU/33/1-92
G/43/46

MOD 27/196 & 27/201 In the table, MOD Column 2 with regard to 27/196 and 27/201 to read: world-wide, (R) and (OR)

USA/4/52
F/22/1-92
MAU/33/1-92
G/43/46

In the table MOD Column 3 for both 27/196 and 27/201 as follows:

3) the specific application of this frequency for the above purposes may be decided at ICAO regional ~~aeronautical conferences;~~ air navigation meetings;

4) The use of this frequency is also authorized for inter-communication between stations in the aeronautical mobile service and mobile stations engaged in coordinated air-surface search and rescue operations including communication between these stations and participating land stations.

D/5/50 MOD 27/196 - 27/201 In the new plan MOD Column 3 for both 27/196 and 27/201 as follows:

3) the specific application of this frequency for the above purposes may be decided at ICAO regional ~~aeronautical conferences~~ air navigation meetings;

		1	2	3
USA/25/4	27/196	~~3023-5~~ 3023	Worldwide R & OR.	Authorized for worldwide use: 1. aboard aircraft for: a) communications with approach and aerodrome control; b) communications with an aeronautical station when other frequencies of the station are either unavailable or unknown; 2. at aeronautical stations for aerodrome and approach control under the following conditions: a) with mean power limited to a value of not more than 20 watts in the antenna circuit; b) special attention must be given in each case to the type of antenna used in order to avoid harmful interference; c) the power of aeronautical stations which use this frequency in accordance with the above conditions, may be increased to the extent necessary to meet certain operational requirements subject to coordination between the Administrations directly concerned and those whose services may be adversely affected; 3. the specific application of this frequency for the above purposes may be decided at regional aeronautical conferences. 4. the use of this frequency is also authorized for intercommunication between mobile stations engaged in coordinated search and rescue operations including communication between these stations and participating land stations; 5. this channel may be used for A1 or A3 emission, in accordance with special arrangements. It shall not be subdivided.

1	2	3
3404	MWARA: ME RDARA: 3B, 9A, 12C	
3411	MWARA: NSA-1 RDARA: 3A, 6A, 6D, 6E, 10A, 13D	In 3A, limited to use on a day-time basis. In 6A, reduced to 250 W mean power during night-time operation. In 6E, use limited to West of 82°30' East and reduced to 250 W mean power during night-time operation.
3418	RDARA: 1D, 2C, 6B, 9A, 10B, 13J	In 1D, use limited to East of 21° East. In 6B, use limited to East of 120° East.
3425	RDARA: 2A, 2B, 2C, 3C, 7E, 9B, 9C, 10D, 12E, 12F 12G, 12H, 13H	Common channel to 2A, 2B, 2C and 3C. Common channel to 9B and 9C. Common channel to 12E, 12F, 12G and 12H.
3432	MWARA: SA RDARA: 3A, 10B, 10D VOLMET: SEA-MET	SA: use extended on air route to Buenos Aires. In 3A, reduced to 250 W mean power during night-time operation.
3439	RDARA: 2A, 2B, 2C, 3A, 6C, 10D, 13F	Common channel to 2A, 2B, 2C and 3A.
3446	MWARA: ME RDARA: 9B, 9C, 10A, 12E, 12F, 12G, 12H	Common channel to 9B and 9C. Common channel to 12E, 12F, 12G and 12H.
3453	RDARA: 1B, 1C, 3C, 5A, 9A, 10B, 12C	Common channel for use only in the North Sea area of 1B and 1C.
3460	RDARA: 2A, 2B, 2C, 6B, 9B, 9C, 10E, 12C, 13K	Common channel to 2A, 2B and 2C. In 6B, use limited to East of 120° East. Common channel to 9B and 9C.
3467	MWARA: CEP, EU RDARA: 6E, 9D, 12F	In 9D, use limited to West of 160° East.
3474	RDARA: 1C, 2C, 3C, 6D, 10C, 13C	Common channel to 1C and 2C. In 3C, limited to use on a day-time basis.
3481	MWARA: NSA-2 RDARA: 3A, 6F, 9D, 10A, 13K	NSA-2: use extended to Western Australia and the Cocos Islands. Common channel to 6F and the extension of NSA-2. In 6F, use limited to South of 25° North and to 250 W mean power during night-time operation. In 9D, use limited to East of 160° East.
3488	RDARA: 2B, 6D, 10D, 13E VOLMET: AFI-MET	In AFI-MET, use limited to West of 10° East and South of 20° North.
3495	RDARA: 2A, 2C, 3B, 6D, 10D, 10E, 13D VOLMET: AFI-MET	Common channel to 2A and 2C. Common channel to 10D and 10E. In AFI-MET, use limited to South of the Equator.
3499	World-wide	A1 only.

1	2	3
3401		
3404 NOC	MWARA: ME RDARA: 3B, 9A, 12C	
3407		
~~3411~~ 3410	MWARA: NSA-1 RDARA: 3A,6A,6D,6E,10A,13D	In 3A, limited to use on a day-time basis. In 6A, reduced to 250 W mean power during night-time operation. In 6E, use limited to West of 82°30° East and reduced to 250 W mean power during night-time operation.
3413		
3416		
~~3418~~ 3419	RDARA: 1D,2C,6B,9A,10B,13J	In 1D, use limited to East of 21° East. In 6B, use limited to East of 120° East.
3422		
3425 NOC	RDARA: 2A,2B,2C,3C,7E,9B, 9C,10D,12E,12F, 12G,12H,13H	Common channel to 2A,2B,2C and 3C. Common channel to 9B and 9C. Common channel to 12E,12F,12G and 12H.
3428		
~~3432~~ 3431	MWARA: SA RDARA: 3A,10B,10D VOLMET: SEA-MET	SA: use extended on air route to Buenos Aires. In 3A, reduced to 250 W mean power during night-time operation.
3434		
3437		
~~3439~~ 3440	RDARA: 2A,2B,2C,3A,6C, 10D,13F	Common channel to 2A,2B,2C and 3A.
3443		
3446 NOC	MWARA: ME RDARA: 9B,9C,10A,12E,12F, 12G,12H	Common channel to 9B and 9C. Common channel to 12E,12F,12G and 12H.
3449		
~~3453~~ 3452	RDARA: 1B,1C,3C,5A,9A,10B, 12C	Common channel for use only in the North Sea area of 1B and 1C.

Band 3400-3500 ~~kc/s~~ kHz (end)

1	2	3
3455		
3458		
~~3460~~ 3461	RDARA: 2A,2B,2C,6B,9B,9C, 10E,12C,13K	Common channel to 2A,2B and 2C. In 6B, use limited to East of 120° East. Common channel to 9B and 9C.
3464		
3467 NOC	MWARA: CEP, EU RDARA: 6E,9D,12F	In 9D, use limited to West of 160° East
3470		
3473	RDARA: 1C,2C,3C,6D,10C,13C	Common channel to 1C and 2C. In 3C, limited to use on a day-time basis.
3476		
3479		
~~3481~~ 3482	MWARA: NSA-2 RDARA: 3A,6F,9D,10A,13K	NSA-2: use extended to Western Australia and the Cocos Islands. Common channel to 6F and the extension of NSA-2. In 6F, use limited to South of 25° North and to 250 W mean power during night-time operation. In 9D, use limited to East of 160° East.
3485		
3488 NOC	RDARA: 2B,6D,10D,13E VOLMET: AFI-MET	In AFI-MET, use limited to West of 10° East and South of 20° North.
3491		
3494	RDARA: 2A,2C,3B,6D,10D, 10E,13D VOLMET: AFI-MET	Common channel to 2A and 2C. Common channel to 10D and 10E. In AFI-MET, use limited to South of the Equator.
~~3499~~ 3497	Worldwide	~~A1-only~~

1	2	3
4654	RDARA: 1E, 2B, 2C, 3C, 10B, 13E, 13F	In 1E, limited to use on a day-time basis. Common channel to 2B, 2C and 3C. Common channel to 13E and 13F.
4661	RDARA: 2A, 2B, 2C, 3A, 3B, 3C, 9D, 10D, 12C, 13K	Common channel to 2A, 2B, 2C, 3A, 3B and 3C.
4668	RDARA: 1D, 2B, 6D, 10A, 13G	In 2B, limited to use on a day-time basis.
4675	MWARA: CWP RDARA: 2C, 3A, 7E, 10D, 10E, 13J	In 3A, limited to use on a day-time basis. Common channel to 10D and 10E.
4682	RDARA: 3C, 5B, 5C, 5D, 9D, 10B, 10E, 13J	In 3C, limited to use on a day-time basis. Common channel to 5B, 5C and 5D.
4689	MWARA: EU RDARA: 3B, 6D, 10C, 12C	In 3B and 10C, limited to use on a day-time basis.
4696	MWARA: SAM-1 RDARA: 2A, 2B, 2C, 3C, 10A	Common channel to 2A, 2B, 2C and 3C. In 10A, limited to use on a day-time basis.

USA/25/6 27/198 Band 4650-4700 ~~kc/s~~ kHz

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
4651		
4654 NOC.	RDARA: 1E,2B,2C,3C,10B,13E, 13F	In 1E, limited to use on a day-time basis. Common channel to 2B,2C and 3C. Common channel to 13E and 13F.
4657		
~~4661~~ 4660	RDARA: 2A,2B,2C,3A,3B,3C, 9D,10D,12C,13K	Common channel to 2A,2B,2C,3A,3B and 3C.
4663		
4666		
~~4668~~ 4669	RDARA: 1D,2B,6D,10A,13G	In 2B, limited to use on a day-time basis.

Band 4650-4700 ~~kc/s~~ kHz (end)

1	2	3
4672		
4675 NOC	MWARA: CWP RDARA: 2C,3A,7E,10D,10E,13J	In 3A, limited to use on a day-time basis. Common channel to 10D and 10E.
4678		
4682 4681	RDARA: 3C,5B,5C,5D,9D,10B, 10E,13J	In 3C, limited to use on a day-time basis. Common channel to 5B,5C and 5D.
4684		
4687		
4689 4690	MWARA: EU RDARA: 3B,6D,10C,12C	In 3B and 10C, limited to use on a day-time basis.
4693		
4696 NOC	MWARA: SAM-1 RDARA: 2A,2B,2C,3C,10A	Common channel to 2A,2B,2C and 3C. In 10A, limited to use on a day-time basis.
4699	Worldwide	A1 only

27/199 **Band 5450–5480 kc/s (Region 2)**

1	2	3
5454	RDARA: 10A, 10E, 12C, 13D	
5461	RDARA: 10B, 12D, 13J	
5469	RDARA: 10B, 13D	
5477	RDARA: 10D, 12G, 13H	

USA/25/7 **27/199**

Band 5450-5480 ~~kc/s~~ kHz

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
5451		
5454 NOC	RDARA: 10A, 10E, 12C, 13D	
5457		
~~5461~~ 5460	RDARA: 10B, 12D, 13J	
5463		
5466		
5469 NOC	RDARA: 10B, 13D	
5472		
~~5477~~ 5475	RDARA: 10D, 12G, 13H	
5478	Worldwide	A1 only

1	2	3
5484	MWARA: CAR RDARA: 2B, 3B	Common channel to 2B and 3B.
5491	RDARA: 2C, 6B, 7E, 10B, 12F, 13G	
5498	RDARA: 2B, 3C, 7, 9B, 9C, 9D, 10C, 13H	Common channel to 2B and 3C. Common channel to 9B, 9C and 9D.
5505	MWARA: CWP, NSA-2 RDARA: 10E, 13K	In 10E, use limited to East of 60° West and to 250 W mean power.
5512	RDARA: 2A, 6A, 10C, 12G	
5519	MWARA: NSA-1 VOLMET: PAC-MET	
5526	RDARA: 3C, 5A, 6D, 9B, 9C, 9D, 10B, 13J	Common channel to 9B, 9C and 9D.
5533	RDARA: 3B, 6D, 12C VOLMET: EU-MET	
5540	RDARA: 2B, 3B, 10D, 13C	Common channel to 2B and 3B.
5547	RDARA: 2C, 6A, 6E, 10A, 13H	Common channel to 6A and 6E.
5554	MWARA: CEP, EU RDARA: 3C	In 3C, limited to use on a day-time basis.
5561	RDARA: 10D VOLMET: ME-MET	
5568	MWARA: CAR RDARA: 1D, 2A, 3C, 6A	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. In 1D, limited to use on a day-time basis. Common channel to 2A and 3C.
5575	RDARA: 3B, 10C, 12E VOLMET: EU-MET	
5582	MWARA: SAM-2 RDARA: 2C, 6A	
5589	MWARA: NP RDARA: 2C, 12F, 12H	Common channel to 12F and 12H.
5596	RDARA: 2A, 2B, 2C, 6D, 10D, 13K	Common channel to 2A, 2B and 2C.
5603	MWARA: CEP, ME	

1	2	3
5610	MWARA: NA-2, NA-3 RDARA: 6B	Common channel to NA-2 and NA-3. In 6B, use limited to East of 100° East.
5617	RDARA: 2C, 6E, 10D, 12C, 13C	
5624	MWARA: FE, NA-1, NA-2	Common channel to NA-1 and NA-2.
5631	RDARA: 2C, 3A, 6B, 10A, 10E, 12E, 12F	Common channel to 2C and 3A. In 6B, use limited to East of 100° East and South of 40° North. Common channel to 12E and 12F.
5638	MWARA: NA-2, SP RDARA: 2B	In 2B, limited to use on a day-time basis.
5645	MWARA: FE RDARA: 1B, 1C, 2B, 10D	Common channel for use only in the North Sea area of 1B and 1C. In 2B, limited to use on a day-time basis.
5652	RDARA: 2C, 6D VOLMET: AT-MET	In 2C, limited to use on a day-time basis.
5659	RDARA: 1C, 3A, 5B, 5C, 5D, 6C, 10B, 13I	Common channel to 5B, 5C and 5D.
5666	RDARA: 2A, 2B, 2C, 9B, 9C, 10D, 12C, 13F	Common channel to 2A, 2B and 2C. Common channel to 9B and 9C.
5673	MWARA: NA-2, SEA	

USA/25/8 **27/200**

Band 5480-5680 ~~kc/s~~ kHz

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
5481		
5484 NOC	MWARA: CAR RDARA: 2B, 3B	Common channel to 2B and 3B.
5487		
~~5491~~ 5490	RDARA: 2C,6B,7E,10B,12F,13G	
5493		
5496		
~~5498~~ 5499	RDARA: 2B,3C,7,9B,9C,9D,10C, 13H	Common channel to 2B and 3C. Common channel to 9B,9C and 9D.
5502		

Band 5480-5680 ~~kc/s~~ kHz (cont.)

1	2	3
5505 NOC	MWARA: CWP, NSA-2 RDARA: 10E,13K	In 10E, use limited to East of 60° West and to 250 W mean power.
5508		
~~5512~~ 5511	RDARA: 2A, 6A, 10C,12G	
5514		
5517		
~~5519~~ 5520	MWARA: NSA-1 VOLMET: PAC-MET	
5523		
5526 NOC	RDARA: 3C,5A,6D,9B,9C, 9D,10B,13J	Common channel to 9B,9C and 9D.
5529		
~~5533~~ 5532	RDARA: 3B, 6D, 12C VOLMET: EU-MET	
5535		
5538		
5541	RDARA: 2B,3B,10D,13C	Common channel to 2B and 3B.
5544		
5547 NOC	RDARA: 2C,6A,6E,10A,13H	Common channel to 6A and 6E.
5550		
~~5554~~ 5553	MWARA: CEP, EU RDARA: 3C	In 3C, limited to use on a day-time basis.
5556		
5559		

Band 5480-5680 ~~kc/s~~ kHz (cont.)

1	2	3
~~5561~~ 5562	RDARA: 10D VOLMET: ME-MET	
5565		
5568 NOC	MWARA: CAR RDARA: 1D,2A,3C.6A	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. In 1D, limited to use on a day-time basis. Common channel to 2A and 3C.
5571		
~~5575~~ 5574	RDARA: 3B, 10C, 12E VOLMET: EU-MET	
5577		
5580		
~~5582~~ 5583	MWARA: SAM-2 RDARA: 2C, 6A	
5586		
5589 NOC	MWARA: NP RDARA: 2C, 12F, 12H	Common channel to 12F and 12H.
5592		
~~5596~~ 5595	RDARA: 2A,2B,2C,6D,10D,13K	Common channel to 2A,2B and 2C.
5598		
5601		
~~5603~~ 5604	MWARA: CEP, ME	
5607		
5610 NOC	MWARA: NA-2, NA-3 RDARA: 6B	Common channel to NA-2 and NA-3. In 6B, use limited to East of 100° East.
5613		
~~5617~~ 5616	RDARA: 2C,6E,10D,12C,13C	

Band 5480-5680 kHz (end)

1	2	3
5619		
5622		
~~5624~~ 5625	MWARA: FE, NA-1, NA-2	Common channel to NA-1 and NA-2.
5628		
5631 NOC	RDARA: 2C,3A,6B,10A,10E, 12E, 12F	Common channel to 2C and 3A. In 6B, use limited to East of 100° East and South of 40° North. Common channel to 12E and 12F.
5634		
~~5638~~ 5637	MWARA: NA-2, SP RDARA: 2B	In 2B, limited to use on a day-time basis.
5640		
5643		
~~5645~~ 5646	MWARA: FE RDARA: 1B,1C,2B,10D	Common channel for use only in the North Sea area of 1B and 1C. in 2B, limited to use on a day-time basis.
5649		
5652 NOC	RDARA: 2C, 6D VOLMET: AT-MET	In 2C, limited to use on a day-time basis.
5655		
~~5659~~ 5658	RDARA: 1C,3A,5B,5C,5D,6C, 10B,13I	Common channel to 5B,5C and 5D.
5661		
5664		
~~5666~~ 5667	RDARA: 2A,2B,2C,9B,9C, 10D,12C,13F	Common channel to 2A,2B and 2C. Common channel to 9B and 9C.
5670		
5673 NOC	MWARA: NA-2, SEA	
5676		

	1	2	3
27/201	5680	World-wide	Authorized for world-wide use, 1. aboard aircraft for: *a)* communications with approach and aerodrome control; *b)* communication with an aeronautical station when other frequencies of the station are either unavailable or unknown; 2. at aeronautical stations for aerodrome and approach control under the following conditions: *a)* with mean power limited to a value of not more than 20 watts in the antenna circuit; *b)* special attention must be given in each case to the type of antenna used in order to avoid harmful interference; *c)* the power of aeronautical stations which use this frequency in accordance with the above conditions may be increased to the extent necessary to meet certain operational requirements subject to co-ordination between the administrations directly concerned and those whose services may be adversely affected; 3. the specific application of this frequency for the above purposes may be decided at regional aeronautical conferences; 4. the use of this frequency is also authorized for intercommunication between mobile stations engaged in co-ordinated search and rescue operations including communication between these stations and participating land stations; 5. this channel may be used for A1 or A3 emission, in accordance with special arrangements. It shall not be subdivided.

GENERAL REMARK

USA/4/51 see MOD 27/196
F/22/1-92
MAU/33/1-92
G/43/46

	1	2	3
USA/25/9 **27/201**	5680 NOC	Worldwide (R & OR)	Authorized for worldwide use, 1. aboard aircraft for: a) communications with approach and aerodrome control; b) communication with an aeronautical station when other frequencies of the station are either unavailable or unknown; 2. at aeronautical stations for aerodrome and approach control under the following conditions: a) with mean power limited to a value of not more than 20 watts in the antenna circuit; b) special attention must be given in each case to the type of antenna used in order to avoid harmful interference; c) the power of aeronautical stations which use this frequency in accordance with the above conditions may be increased to the extent necessary to meet certain operational requirements subject to coordination between the administrations directly concerned and those whose services may be adversely affected; 3. the specific application of this frequency for the above purposes may be decided at regional aeronautical conferences; 4. the use of this frequency is also authorized for intercommunication between mobile stations engaged in coordinated search and rescue operations including communication between these stations and participating land stations; 5. this channel may be used for A1 or A3 emission, in accordance with special arrangements. It shall not be subdivided.

1	2	3
6526	World-wide	A1, A3A, A3H and A3J only.
6533	RDARA: 1C, 2B, 3B, 6E, 9B, 9C, 10C, 12E, 12F, 12H	Common channel to 9B and 9C. Common channel to 12E, 12F and 12H.
6540	MWARA: CAR, NSA-2 RDARA: 2A, 6B, 9B	
6547	RDARA: 1E, 3A, 5B, 5C, 5D, 12C, 13J	Common channel to 5B, 5C and 5D.
6554	RDARA: 2C, 6C, 10D, 13G	
6561	MWARA: CAR, NSA-2 RDARA: 2A, 9D	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. NSA-2: use extended to Western Australia and the Cocos Islands.
6568	MWARA: EU RDARA: 6F, 10A, 13J	
6575	RDARA: 2A, 6B, 9B, 12D VOLMET: AFI-MET	
6582	MWARA: EU RDARA: 6F, 10C, 13J	
6589	RDARA: 2A, 2B, 3A, 3B, 4B, 6D, 12C	Common channel to 2A, 2B, 3A and 3B.
6596	RDARA: 10B, 12G VOLMET: ME-MET	
6603	RDARA: 2B, 2C, 3C, 7E, 12C, 13C	Common channel to 2B, 2C and 3C.
6610	MWARA: SA RDARA: 2A, 5A, 9A, 10D VOLMET: PAC-MET	In PAC-MET, use limited to North of 30° North and West of 160° East.
6617	RDARA: 2C, 3A, 6C, 6D, 10A, 13D VOLMET: AFI-MET	In AFI-MET, use limited to South of the Equator. Common channel to 2C and 3A. Common channel to 6C and 6D.
6624	MWARA: ME RDARA: 3B, 10C, 13F	
6631	MWARA: CWP RDARA: 1D, 3A, 10E, 13K	
6638	RDARA: 2B, 4A, 4B, 9A, 10C, 13D	Common channel to 4A and 4B.

Band 6525–6685 kc/s (end)

1	2	3
6645	RDARA: 2B, 2C, 5D, 9B, 10B, 13G	Common channel to 2B and 2C.
6652	RDARA: 2C, 3C, 9A, 12C, 13C	Common channel to 2C and 3C.
6659	RDARA: 2C, 3B, 6D, 10D, 13K	
6666	MWARA: SAM-1 RDARA: 2C, 3C, 9B, 10D	Common channel to 2C and 3C.
6673	RDARA: 2B, 3A, 6F, 10C, 12F	Common channel to 2B and 3A. In 6F, use limited to East of 120° East and South of 43° North.
6680	MWARA: SA RDARA: 3A, 10D VOLMET: SEA-MET	SA: use extended on the air route to Buenos Aires.

USA/25/10 **27/202** **Band 6525-6685 ~~kc/s~~ kHz**

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
6526 NOC	Worldwide	A1,A3A,A3H and A3J only.
6529		
~~6533~~ 6532	RDARA: 1C,2B,3B,6E,9B,9C, 10C,12E,12F,12H	Common channel to 9B and 9C.
6535		
6538		
~~6540~~ 6541	MWARA: CAR, NSA-2 RDARA: 2A, 6B, 9B	
6544		

Band 6525-6685 ~~kc/s~~ kHz (cont.)

1	2	3
6547 NOC	RDARA: 1E,3A,5B,5C,5D, 12C,13J	Common channel to 5B,5C and 5D.
6550		
~~6554~~ 6553	RDARA: 2C, 6C, 10D, 13G	
6556		
6559		
~~6561~~ 6562	MWARA: CAR, NSA-2 RDARA: 2A, 9D	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. NSA-2: use extended to Western Australia and the Cocos Islands.
6565		
6568 NOC	MWARA: EU W/CAR RDARA: 6F, 10A, 13J	
6571		
~~6575~~ 6574	RDARA: 2A,6B,9B,12D VOLMET: AFI-MET	
6577		
6580		
~~6582~~ 6583	MWARA: EU RDARA: 6F,10C,13J	
6586		
6589 NOC	RDARA: 2A,2B,3A,3B,4B,6D 12C	Common channel to 2A,2B,3A and 3B.
6592		
~~6596~~ 6595	RDARA: 10B, 12G VOLMET: ME-MET	
6598		

Band 6525-6685 kHz (cont.)

1	2	3
6601		
~~6603~~ 6604	RDARA: 2B,2C,3C,7E,12C,13C	Common channel to 2B,2C and 3C.
6607		
6610 NOC	MWARA: SA RDARA: 2A,5A,9A,10D VOLMET: PAC-MET	In PAC-MET, use limited to North of 30° North and West of 160° East.
6613		
~~6617~~ 6616	RDARA: 2C,3A,6C,6D,10A,13D VOLMET: AFI-MET	In AFI-MET, use limited to South of the Equator. Common channel to 2C and 3A. Common channel to 6C and 6D.
6619		
6622		
~~6624~~ 6625	MWARA: ME RDARA: 3B, 10C, 13F	
6628		
6631 NOC	MWARA: CWP RDARA: 1D, 3A, 10E, 13K	
6634		
~~6638~~ 6637	RDARA: 2B,4A,4B,9A,10C,13D	Common channel to 4A and 4B.
6640		
6643		
~~6645~~ 6646	RDARA: 2B,2C,5D,9B,10B,13G	Common channel to 2B and 2C.
6649		
6652 NOC	RDARA: 2C,3C,9A,12C,13C	Common channel to 2C and 3C.

→

Band 6525-6685 ~~kc/s~~ kHz (end)

1	2	3
6655		
~~6659~~ 6658	RDARA: 2C,3B,6D,10D,13K	
6661		
6664		
~~6666~~ 6667	MWARA: SAM-1 RDARA: 2C,3C,9B,10D	Common channel to 2C and 3C.
6670		
6673 NOC	RDARA: 2B,3A,6F,10C,12F	Common channel to 2B and 3A. In 6F, use limited to East of 120° East and South of 43° North.
6676		
~~6680~~ 6679	MWARA: SA RDARA: 3A, 10D VOLMET: SEA-MET	SA: use extended on the air route to Buenos Aires.
6682		

1	2	3
8819	RDARA: 3B, 6C, 13C VOLMET: ME-MET	In 3B, use limited to East of 140° East.
8826	MWARA: NSA-1, SAM-1 RDARA: 3B, 6D, 9D, 10C	In 3B, use limited to East of 130° East.
8833	RDARA: 3B, 6C, 6D, 13K VOLMET: EU-MET	In 3B, use limited to North of 50° North. Common channel to 6C and 6D.
8840	MWARA: CAR, FE RDARA: 2A, 2C, 3A, 7A, 7B, 7C, 7D, 9D, 13H	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. Common channel to 2A, 2C and 3A. Common channel to 7A, 7B, 7C and 7D.
8847	MWARA: ME, SAM-2, SP RDARA: 3B	In 3B, use limited to East of 140° East.
8854	MWARA: CWP, NA-2 RDARA: 5B, 13K	
8861	RDARA: 2A, 2B, 2C, 3A, 3B, 3C, 5D, 6D, 10E, 12C, 12F, 13F	Common channel to 2A, 2B, 2C, 3A, 3B and 3C. In 6D, use limited to South of 10° North. In 12F, use limited to North of 04° North and to 300 W mean power.
8868	MWARA: FE, SEA RDARA: 2A, 3A, 10A VOLMET: AT-MET	Common channel to FE and SEA. Common channel to 2A and 3A. In 3A, use limited to North of 60° North.
8875	MWARA: CEP, EU RDARA: 3B, 6D, 7E, 12E, 12F	In 3B, use limited to East of 120° East. Common channel to 12E and 12F.
8882	MWARA: SA, SEA RDARA: 3A, 3B	SA: use extended on the air route to Buenos Aires. Use outside the SEA boundaries is authorized in India and Pakistan. In 3A, use limited to North of 60° North. Common channel to 3A and 3B.
8889	MWARA: NA-2 RDARA: 3B, 6A, 6E, 9B, 9D, 13J	Common channel to 6A and 6E. Common channel to 9B and 9D.
8896	RDARA: 3B, 3C, 4A, 5A, 5B, 5C, 9B, 9C, 10B, 13F	Common channel to 3B and 3C. Common channel to 4A, 5A, 5B and 5C. Common channel to 9B and 9C.
8903	RDARA: 2A, 2C, 10E, 13G VOLMET: PAC-MET	Common channel to 2A and 2C.
8910	MWARA: NA-1, NA-2 RDARA: 3B, 3C, 9B, 9C, 13D	Common channel to NA-1 and NA-2. Common channel to 3B and 3C. Common channel to 9B and 9C.

1	2	3
8917	RDARA: 2A, 2B, 2C, 3A, 6E, 9B, 9C, 10A, 13D	Common channel to 2A, 2B, 2C and 3A. In 2C, use limited to West of 40° East. Common channel to 9B and 9C.
8924	RDARA: 4B, 6A, 9B, 9C, 10A, 12D, 13I	Common channel to 9B and 9C.
8931	MWARA: CEP, EU RDARA: 3B, 6D, 9D, 13J	In 3B, use limited to West of 180°. In 9D, use limited to West of 160° East.
8938	MWARA: NP RDARA: 1C, 6A, 9A, 12E, 12F, 13H	Common channel to 12E and 12F.
8945	MWARA: NA-2, NA-3 RDARA: 3B, 3C, 6C, 13E, 13F	Common channel to NA-2 and NA-3. In 3B and 3C, use limited to North of 50° North. Common channel to 3B and 3C. Common channel to 13E and 13F.
8952	RDARA: 1D, 6B, 9A, 9C, 9D, 10B, 13G	Common channel to 9A, 9C and 9D.
8959	MWARA: CAR, NSA-2 RDARA: 3A, 6D, 9C, 9D	In 3A, use limited to East of 80° East. Common channel to 9C and 9D.
8963	World-wide	Al only.

USA/25/11 **27/203**

Band 8815-8965 ~~kc/s~~ kHz

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
8816		
8819 NOC	RDARA: 3B, 6C, 13C VOLMET: ME-MET	In 3B, use limited to East of 140° East.
8822		
8826 8825	MWARA: NSA-1, SAM-1 RDARA: 3B,6D,9D,10C	In 3B, use limited to East of 130° East.
8828		

Band 8815-8965 ~~kc/s~~ kHz (cont.)

1	2	3
8831		
~~8833~~ 8834	RDARA: 3B,6C,6D,13K VOLMET: EU-MET	In 3B, use limited to North of 50° North. Common channel to 6C and 6D.
8837		
8840 NOC	MWARA: CAR, FE RDARA: 2A,2C,3A,7A,7B,7C,7D, 9D,13H	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. Common channel to 2A,2C and 3A. Common channel to 7A,7B,7C and 7D.
8843		
~~8847~~ 8846	MWARA: ME, SAM-2, SP RDARA: 3B	In 3B, use limited to East of 140° East
8849		
8852		
~~8854~~ 8855	MWARA: CWP, NA-2 RDARA: 5B, 13K	
8858		
8861 NOC	RDARA: 2A,2B,2C,3A,3B,3C,5D, 6D,10E,12C,12F,13F	Common channel to 2A,2B,2C,3A,3B and 3C. In 6D, use limited to South of 10° North. In 12F, use limited to North of 04° North and to 300 W mean power.
8864		
~~8868~~ 8867	MWARA: FE, SEA RDARA: 2A, 3A, 10A VOLMET: AT-MET	Common channel to FE and SEA. Common channel to 2A and 3A. In 3A, use limited to North of 60° North.
8870		
8873		
~~8875~~ 8876	MWARA: CEP, EU RDARA: 3B, 6D, 7E, 12E, 12F	In 3B, use limited to East of 120° East. Common channel to 12E and 12F.
8879		
8882 NOC	MWARA: SA, SEA RDARA: 3A, 3B	SA: use extended on the air route to Buenos Aires. Use outside the SEA boundaries is authorized in India and Pakistan. Common channel to 3A and 3B.
8885		

Band 8815-8965 kHz (cont.)

1	2	3
~~8889~~ 8888	MWARA: NA-2 RDARA: 3B,6A,6E,9B,9D,13J	Common channel to 6A and 6E. Common channel to 9B and 9D.
8891		
8894		
~~8896~~ 8897	RDARA: 3B,3C,4A,5A,5B,5C,9B, 9C,10B,13F	Common channel to 3B and 3C. Common channel to 4A,5A,5B and 5C. Common channel to 9B and 9C.
8900		
8903 NOC	RDARA: 2A,2C,10E,13G VOLMET: PAC-MET	Common channel to 2A and 2C.
8906		
~~8910~~ 8909	MWARA: NA-1, NA-2 RDARA: 3B,3C,9B,9C,13D	Common channel to NA-1 and NA-2. Common channel to 3B and 3C. Common channel to 9B and 9C.
8912		
8915		
~~8917~~ 8918	RDARA: 2A,2B,2C,3A,6E,9B,9C, 10A,13D	Common channel to 2A,2B,2C and 3A. In 2C, use limited to West of 40° East. Common channel to 9B and 9C.
8921		
8924 NOC	RDARA: 4B,6A,9B,9C,10A,12D, 13I	Common channel to 9B and 9C.
8927		
~~8931~~ 8930	MWARA: CEP, EU RDARA: 3B,6D,9D,13J	In 3B, use limited to West of 180° In 9D, use limited to West of 160° East.

Band 8815-8965 (end)

1	2	3
8933		
8936		
8938 8939	MWARA: NP RDARA: 1C,6A,9A,12E,12F,13H	Common channel to 12E and 12F.
8942		
8945 NOC	MWARA: NA-2, NA-3 RDARA: 3B,3C,6C,13E,13F	Common channel to NA-2 and NA-3. In 3B and 3C, use limited to North of 50° North. Common channel to 3B and 3C. Common channel to 13E and 13F.
8948		
8952 8951	RDARA: 1D,6B,9A,9C,9D,10B,13G	Common channel to 9A,9C and 9D.
8954		
8959 8957	MWARA: CAR, NSA-2 RDARA: 3A,6D,9C,9D	In 3A, use limited to East of 80° East. Common channel to 9C and 9D.
8960		
8963	Worldwide	A1 only

1	2	3
10 009	MWARA: ME RDARA: 13J	
10 017	MWARA: CAR RDARA: 2A, 2C VOLMET: SEA-MET	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. Common channel to 2A and 2C with use of directional antennae to protect SEA-MET.
10 025	MWARA: NSA-2 RDARA: 3B, 3C, 12C, 13G	NSA-2: use extended to Western Australia and the Cocos Islands. Common channel to 3B and 3C.
10 033	RDARA: 2, 3, 13D	Common channel to 2 and 3.
10 041	RDARA: 2, 7, 10, 13G	
10 049	MWARA: SA RDARA: 2A, 6	SA: use extended on the air route to Buenos Aires.
10 057	RDARA: 2, 10, 13J	
10 065	RDARA: 1B, 1C, 1E, 6A, 6F, 13D	Common channel to 1B, 1C and 1E. Common channel to 6A and 6F.
10 073	RDARA: 3, 12C VOLMET: AFI-MET	In AFI-MET, use limited to South of the Equator.
10 081	RDARA: 1D, 4A, 6F, 13G	Common channel to 1D and 4A.
10 089	RDARA: 2, 3, 12C, 13K	Common channel to 2 and 3.
10 093	World-wide	A1, A3A, A3H and A3J only.

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
10 006		
10 009 NOC	MWARA: ME RDARA: 13J	
10 012		
10 015		
~~10-017~~ 10 018	MWARA: CAR RDARA: 2A, 2C VOLMET: SEA-MET	CAR: use extended to the mid-point of the air route between Mexico City and Tahiti. Common channel to 2A and 2C with use of directional antennae to protect SEA-MET.
10 021		
~~10-025~~ 10 024	MWARA: NSA-2 RDARA: 3B,3C,12C,13G	NSA-2: use extended to Western Australia and the Cocos Islands. Common channel to 3B and 3C.
10 027		
10 030		
10 033 NOC	RDARA: 2,3,13D	Common channel to 2 and 3.
10 036		
10 039		
~~10-041~~ 10 042	RDARA: 2,7,10,13G	
10 045		
~~10-049~~ 10 048	MWARA: SA RDARA: 2A, 6	SA: use extended on the air route to Buenos Aires.
10 051		
10 054		
10 057 NOC	RDARA: 2,10,13J	

Band 10 005-10 100 ~~kc/s~~ kHz (end)

1	2	3
10 060		
10 063		
~~10-065~~ 10 066	RDARA: 1B,1C,1E,6A,6F,13D	Common channel to 1B,1C and 1E. Common channel to 6A and 6F.
10 069		
~~10-073~~ 10 072	RDARA: 3, 12C VOLMET: AFI-MET	In AFI-MET, use limited to South of the Equator.
10 075		
10 078		
10 081 NOC	RDARA: 1D,4A,6F,13G	Common channel to 1D and 4A.
10 084		
10 087		
~~10-089~~ 10 090	RDARA: 2,3,12C,13K	Common channel to 2 and 3.
10 093 NOC	Worldwide	A1, A3A, A3H and A3J only.
10 096		
10 099	Worldwide	A1

1	2	3
11 279	VOLMET: AFI-MET, PAC-MET	In PAC-MET, use limited to North of 30° North and West of 160° East.
11 287	RDARA: 2, 13H	
11 295	RDARA: 5, 10, 13C	
11 303	MWARA: CWP, EU	
11 311	RDARA: 6, 10B, 10C, 10D, 10E	Common channel to 10B, 10C, 10D and 10E.
11 319	RDARA: 2, 9A, 9B, 9D, 10, 13H	Common channel to 9A, 9B and 9D.
11 327	MWARA: SAM-2 RDARA: 3	
11 335	RDARA: 2, 7, 9	
11 343	MWARA: CAR, SAM-1 VOLMET: ME-MET	Common channel to CAR and SAM-1.
11 351	RDARA: 2, 12	
11 359	RDARA: 1, 6D, 10, 13F	
11 367	MWARA: CAR RDARA: 2	
11 375	RDARA: 3, 4	
11 383	RDARA: 2, 9, 10	
11 391	RDARA: 3 VOLMET: EU-MET	In 3, use limited to East of 90° East.

Band 11 275-11 400 ~~kc/s~~ kHz

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
11 276		
11 279 NOC	VOLMET: AFI-MET, PAC-MET	In PAC-MET, use limited to North of 30° North and West of 160° East.
11 282		
11 285		
~~11-287~~ 11 288	RDARA: 2, 13H	
11 291		
~~11-295~~ 11 294	RDARA: 5, 10, 13C	
11 297		
11 300		
11 303 NOC	MWARA: CWP, EU	
11 306		
11 309		
~~11-311~~ 11 312	RDARA: 6, 10B, 10C, 10 D, 10E	Common channel to 10B,10C,10D and 10E.
11 315		
~~11-319~~ 11 318	RDARA: 2,9A,9B,9D,10,13H	Common channel to 9A,9B and 9D.
11 321		
11 324		
11 327 NOC	MWARA: SAM-2 RDARA: 3	
11 330		
11 333		

Band 11 275-11 400 ~~kc/s~~ kHz (end)

1	2	3
~~11-335~~ 11 336	RDARA: 2, 7, 9	
11 339		
~~11-343~~ 11 342	MWARA: CAR, SAM-1 VOLMET: ME-MET	Common channel to CAR and SAM-1.
11 345		
11 348		
11 351 NOC	RDARA: 2, 12	
11 354		
11 357		
~~11-359~~ 11 360	RDARA: 1, 6D, 10, 13F	
11 363		
~~11-367~~ 11 366	MWARA: CAR RDARA: 2	
11 369		
11 372		
11 375 NOC	RDARA: 3, 4	
11 378		
11 381		
~~11-383~~ 11 384	RDARA: 2, 9, 10	
11 387		
~~11-391~~ 11 390	RDARA: 3 VOLMET: EU-MET	In 3, use limited to East of 90° East.
11 393		
11 396		
11 399	Worldwide	A1

1	2	3
13 264	MWARA: NP RDARA: 7A, 7B, 7C, 7D	Common channel to 7A, 7B, 7C, 7D.
13 272	RDARA: 3 VOLMET: AT-MET	
13 280	MWARA: NSA-2 RDARA: 6F, 10, 13	
13 288	MWARA: FE, NA-2, SEA	Common channel to FE and SEA. Use outside the SEA boundaries is authorized in India and Pakistan, provided that adequate protection is ensured between 300° and 340° (clockwise) from True North.
13 296	MWARA: CWP RDARA: 1	
13 304	MWARA: NSA-1, SP	
13 312	MWARA: FE RDARA: 13H VOLMET: EU-MET	
13 320	MWARA: CAR, SAM-2 RDARA: 2, 6C	Common channel to CAR and SAM-2.
13 328	MWARA: NA-1, NA-2, NA-3 RDARA: 6	Common channel to NA-1, NA-2, NA-3.
13 336	MWARA: CEP, ME, NSA-2	NSA-2: use extended to Western Australia and the Cocos Islands. Common channel to ME and NSA-2.
13 344	MWARA: SA VOLMET: PAC-MET	
13 352	MWARA: NA-2 RDARA: 6	
13 356	World-wide	A1, A3A, A3H and A3J only.

USA/25/14 **27/206**

Band 13 260-13 360 ~~kc/s~~ kHz

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
13 261		
13 264 NOC	MWARA: NP RDARA: 7A,7B,7C,7D	Common channel to 7A,7B,7C and 7D.
13 267		
13 270		
~~13-272-~~ 13 273	RDARA: 3 VOLMET: AT-MET	
13 276		
~~13-280~~ 13 279	MWARA: NSA-2 RDARA: 6F, 10, 13	
13 282		
13 285		
13 288 NOC	MWARA: FE, NA-2, SEA	Common channel to FE and SEA. Use outside the SEA boundaries is authorized in India and Pakistan, provided that adequate protection is ensured between 300° and 340° (clockwise) from True North.
13 291		
13 294		
~~13-296~~ 13 297	MWARA: CWP RDARA: 1	
13 300		
~~13-304~~ 13 303	MWARA: NSA-1, SP	
13 306		
13 309		
13 312 NOC	MWARA: FE RDARA: 13H VOLMET: EU-MET	
13 315		

Band 13 260-13 360 ~~kc/s~~ kHz (end)

1	2	3
13 318		
~~13-320~~ 13 321	MWARA: CAR, SAM-2 RDARA: 2, 6C	Common channel to CAR and SAM-2.
13 324		
~~13-328~~ 13 327	MWARA: NA-1, NA-2, NA-3 RDARA: 6	Common channel to NA-1, NA-2, NA-3.
13 330		
13 333		
13 336 NOC	MWARA: CEP, ME, NSA-2	NSA-2: use extended to Western Australia and the Cocos Islands. Common channel to ME and NSA-2.
13 339		
13 342		
~~13-344~~ 13 345	MWARA: SA, AFI-2 VOLMET: PAC-MET	
13 348		
~~13-352~~ 13 351	MWARA: NA-2 RDARA: 6	
13 354		
~~13-356~~ 13 357	Worldwide	*A~~1~~, A3A, A3H and A3J only.

1	2	3
17 909	MWARA: CWP, NP VOLMET: AFI-MET	Common channel to CWP and NP. In AFI-MET, use limited to South of the Equator.
17 917	MWARA: CAR, ME, SAM-1, SAM-2	Common channel to CAR, SAM-1 and SAM-2. CAR: use extended to the mid-point on the air route between Mexico City and Tahiti.
17 925	MWARA: CEP, NSA-2	NSA-2: use extended to Western Australia and the Cocos Islands.
17 933	RDARA: 4, 5, 9B, 9C, 9D	Common channel to 4 and 5. Common channel to 9B, 9C, 9D.
17 941	MWARA: EU, NA-1, NA-2, NA-3 RDARA: 3	Common channel to EU, NA-1, NA-2 and NA-3. In 3, use limited to East of 100° East.
17 949	MWARA: NSA-1, SA, SP	Common channel to NSA-1 and SA.
17 957	RDARA: 2, 3, 13	Common channel to 2 and 3.
17 965	MWARA: FE, SEA	Common channel to FE and SEA.

FREQUENCY 1	AUTHORIZED AREA OF USE 2	REMARKS 3
17 901		
17 904		
17 907		
~~17-909~~ 17 910	MWARA: CWP, NP VOLMET: AFI-MET	Common channel to CWP and NP. In AFI-MET, use limited to South of the Equator.
17 913		
~~17-917~~ 17 916	MWARA: CAR, ME SAM-1, SAM-2	Common channel to CAR, SAM and SAM-2. CAR: use extended to the mid-point on the air route between Mexico City and Tahiti.
17 919		

Band 17 910-17 970 kc/s
(end)

1	2	3
17 922		
17 925 NOC	MWARA: CEP, NSA-2	NSA-2: use extended to Western Australia and the Cocos Islands.
17 928		
17 931		
~~17-933~~ 17 934	RDARA: 4,5,9B,9C,9D	Common channel to 4 and 5. Common channel to 9B,9C,9D.
17,937		
~~17-941~~ 17 940	MWARA: EU, NA-1, NA-2, NA-3 RDARA: 3	Common channel to EU, NA-1, NA-2 and NA-3. In 3, use limited to East of 100° East.
17 943		
17 946		
17 949 NOC	MWARA: NSA-1, SA, SP	Common channel to NSA-1 and SA.
17 952		
17 955		
~~17-957~~ 17 958	RDARA: 2, 3, 13	Common channel to 2 and 3.
17 961		
~~17-965~~ 17 964	MWARA: FE, SEA	Common channel to FE and SEA.
17 967		

G/43/69 **Dates of coming into force of the Final Acts of the Conference and of the revised Frequency Allotment Plan (Appendix 27 to the Radio Regulations).**

The United Kingdom Administration proposes that the Final Acts of the Conference shall enter into force on 1 January 1980.

The United Kingdom further proposes that in order to enable Administrations to carry out the necessary changes which will arise from the revision of Appendix 27 (Edition 1968) the revised Frequency Allotment Plan to be prepared by the Conference shall enter into force on 1 February 1983.

CAN/20/53 **ADD** Resolution No. B

Relating to the Adoption of a New Frequency Allotment Plan for the Aeronautical Mobile (R) Service (Appendix 27 MOD)

The World Administrative Radio Conference, Geneva, 1978

considering

a) that it has revised the frequency allotment plan for the aeronautical mobile (R) service based on new technical criteria;

resolves

1. that the Final Acts of this Conference will enter into force on April 1, 1979;

2. that the revised frequency allotment plan contained in Appendix 27 will enter into force on February 1, 1983.

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RESOLUTIONS

RESOLUTION No. 13

Relating to the Preparation of revised Allotment Plans for the Aeronautical Mobile Service

USA/4/65
G/43
F/22/1-114
MAU/33/1-114

Note : Although the World Administrative Radio Conference Aeronautical Mobile (R) Service 1978 will not be competent to address this Resolution because of the interest of the (OR) service, the Resolution is no longer necessary in so far as the (R) service is concerned.

SUP USA/4/65
CAN/20/48
F/22/1-114
MAU/33/1-114

RESOLUTION No. 14

Relating to the Use of Frequencies of the Aeronautical Mobile (R) Service

The Administrative Radio Conference, Geneva, 1959,

considering

a) that the Plan developed for the use of high frequency channels for the Aeronautical Mobile (R) Service (Appendix 26 to the Radio Regulations, Geneva, 1959) has been substantially implemented ;

b) that air operations are subject to continuous changes ;

c) that these changes require attention by the administrations concerned, but

d) that, in seeking to satisfy new communication requirements, no decision should be taken that will prevent or handicap the co-ordinated utilization of those high frequency (R) band allotments as prescribed in the Plan ;

e) that the families of high frequencies allotted to the Major World Air Route Areas (MWARA), Regional and Domestic Air Route Areas (RDARA) and Sub-Areas have been chosen considering propagation conditions which allow for the selection of the most suitable frequencies for the distance involved ;

f) that it is essential to distribute the communication traffic load as uniformly as possible over frequencies of the same order ;

g) that specific steps should be taken to ensure that the correct order of frequency is used ;

resolves

that administrations, individually or in collaboration, take the necessary steps :

1. to make as great a use as possible of very high frequencies in order to lessen the load on the high frequency (R) bands ;

2. to make as great a use as possible of antennae of appropriate directivity and efficiency in order to minimise possibilities of mutual interference within an area or between areas ;

3. to co-ordinate the use of families of frequencies necessary for a given route segment in accordance with the technical principles in Appendix 26 and, in the light of the propagation data available, in order that the most appropriate frequencies be used with an aircraft at a given distance from the aeronautical station providing service over the route segment concerned ;

4. to improve operating techniques and procedures and to use equipment which will make it possible to attain the highest possible efficiency in handling air-ground high frequency communications ;

5. to collect precise data on the operation of their high frequency communication systems, particularly that having a bearing on technical and operating standards, so as to facilitate re-examination of this Plan:

6. to establish, through regional agreements, the best method to provide the required communications for any new long-distance international or regional air operation which is not or cannot be accommodated within the system of MWARA and RDARA, in such a manner as not to cause harmful interference to the utilization of frequencies as prescribed in the Aeronautical Mobile (R) Frequency Plan.

SUP USA/4/66
CAN/20/52

D/16/1 MOD
F/22/1-115
MAU/133/1-115
G/43/59
J/44/32-13

RESOLUTION 14
Relating to the Use of Frequencies of the Aeronautical Mobile (R) Service

The World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978,

considering

a) that the previous Allotment Plan developed for the use of high frequency channels for the Aeronautical Mobile (R) Service (Appendix 27 to the Radio Regulations, Geneva, edition of 1968) has been substantially revised by this conference;

b) that air operations are subject to continuous changes;

c) that these changes require attention by the administrations concerned, but,

d) that, in seeking to satisfy new communication requirements, no decision should be taken that will prevent or handicap the coordinated utilization of those high frequency (R) band allotments as prescribed in the Plan;

e) that the families of high frequencies allotted to the Major World Air Route Areas (MWARAs), Regional and Domestic Air Route Areas (RDARAs) and Sub-Areas and VOLMET areas have been chosen considering propagation conditions which allow for the selection of the most suitable frequencies for the distance involved;

f) that it is essential to distribute the communication traffic load as uniformly as possible over frequencies ~~of the same order~~ available;

g) that specific steps should be taken to ensure that the correct order of frequency is used;

h) that frequencies have been allotted for world-wide use

resolves

that administrations, individually or in collaboration, take the necessary steps:

1. to make as great a use as possible of very high frequencies in order to lessen the load on the high frequency (R) bands;

2. to make as great a use as possible of antennas of appropriate directivity and efficiency in order to minimize possibilities of mutual interference within an area or between areas;

D/16/1 (cont.)

3. to coordinate the use of families of frequencies necessary for a given route segment in accordance with the technical principles in Appendix 27 and, in the light of the propagation date available, in order that the most appropriate frequencies be used with an aircraft at a given distance from the aeronautical station providing service over the route segment concerned;

4. to improve operating techniques and procedures and to use equipment which will make it possible to attain the highest possible efficiency in handling air-ground high frequency communications;

5. to collect precise data on the operation of their high frequency communication systems, particularly that having a bearing on technical and operating standards, so as to facilitate future re-examination of this Plan.

USA/4/67 ADD

RESOLUTION No. Aer2 - (C)

Relating to the Use of Frequencies of the Aeronautical Mobile (R) Service

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the previous Allotment Plan developed for the use of high frequency channels for the Aeronautical Mobile (R) Service Appendix 27 to the Radio Regulations, Geneva, edition of 1968) has been substantially revised by this conference;

b) that air operations are subject to continuous changes;

c) that these changes require attention by the administrations concerned, but

d) that, in seeking to satisfy new communication requirements, no decision should be taken that will prevent or handicap the coordinated utilization of those high frequency (R) band allotments as precribed in the Plan;

e) that the families of high frequencies allotted to the Major World Air Route Areas (MWARA), Regional and Domestic Air Route Areas (RDARA) and Sub-Areas and VOLMET areas have been chosen considering propagation conditions which allow for the selection of the most suitable frequencies for the distance involved;

USA/4/67 (cont.)

f) that it is essential to distribute the communication traffic load as uniformly as possible over frequencies of the same order available;

g) that specific steps should be taken to ensure that the correct order of frequency is used;

h) that frequencies have been allotted for world-wide use

resolves

that administrations, individually or in collaboration, take the necessary steps:

1. to make as great a use as possible of very high frequencies in order to lessen the load on the high frequency (R) bands;

2. to make as great a use as possible of antennas of appropriate directivity and efficient in order to minimize possibilities of mutual interference within an area or between areas;

3. to coordinate the use of families of frequencies necessary for a given route segment in accordance with the technical principles in Appendix 27 and, in the light of the propagation data available, in order that the most appropriate frequencies be used with an aircraft at a given distance from the aeronautical station providing service over the route segment concerned;

4. to improve operating techniques and procedures and to use equipment which will make it possible to attain the highest possible efficiency in handling air-ground high frequency communications;

5. to collect precise data on the operation of their high frequency communication systems particularly that having a bearing on technical and operating standards, so as to facilitate future re-examination of this Plan.

CAN/20/49 ADD

Resolution No. A

Relating to the Use of Frequencies of the Aeronautical Mobile (R) Service

The World Administrative Radio Conference, Geneva, 1978,

considering

a) that the Plan developed for the use of high frequency channels for the Aeronautical Mobile (R) Service (Appendix 27 to the Radio Regulations, Geneva, 1971) has been substantially implemented;

b) that air operations are subject to continuous changes;

c) that these changes require attention by the administrations concerned, but

d) that, in seeking to satisfy new communication requirements, no decision should be taken that will prevent or handicap the co-ordinated utilization of those high frequency (R) band allotments as prescribed in the Plan;

e) that the families of high frequencies allotted to the Major World Air Route Areas (MWARA), Regional and Domestic Air Route Areas (RDARA) and Sub-Areas have been chosen considering propagation conditions which allow for the selection of the most suitable frequencies for the distance involved;

f) that it is essential to distribute the communication traffic load as uniformily as possible over frequencies of the same order;

g) that specific steps should be taken to ensure that the correct order of frequency is used;

h) that from an aeronautical viewpoint, VHF can provide a more reliable and more noise-free communication system than HF;

i) that from a technical and operational viewpoint, the use of VHF by aviation has progressed appreciably;

j) that the use of VHF in its several modes could appreciably reduce the use of HF in the aeronautical mobile (R) service;

k) that, owing to development in the telecommunication networks in many areas of the world, the possibilities of providing VHF coverage are rapidly increasing;

CAN/20/49 (cont.)

Resolves

that administrations, individually or in collaboration, take the necessary steps:

1. to employ, to the maximum extent practicable, VHF to meet their requirements in the aeronautical mobile (R) services to lessen the load on the high frequency (R) bands;

2. to make as great a use as possible of antennae of appropriate directivity and efficiency in order to minimize possibilities of mutual interference within an area or between areas;

3. to co-ordinate the use of families of frequencies necessary for a given route segment in accordance with the technical principles in Appendix 27 and, in light of the propagation data available, in order that the most appropriate frequencies be used with an aircraft at a given distance from the aeronautical station providing service over the route segment concerned;

4. to improve operating techniques and procedures and to use equipment which will make it possible to attain the highest possible efficiency in handling air-ground high frequency communications;

5. to collect precise data on the operation of their high frequency communication systems, particularly those having a bearing on technical and operating standards, so as to facilitate re-examination of this Plan;

6. to establish, through regional agreements, the best method to provide the required communications for any new long-distance international or regional air operation which is not or cannot be accommodated within the system of MWARA and RDARA, in such a manner as not to cause harmful interference to the utilization of frequencies as prescribed in the Aeronautical Mobile (R) Frequency Plan.

RESOLUTION No. Aer 1

relating to the use of frequencies 3023·5 and 5680 kHz common to the aeronautical mobile (R) and (OR) services

USA/4/68 SUP
D/12/1
F/22/1-102
MAU/33/1-102
G/43/56
J/44/32-2

USA/4/69 ADD
D/12/2
F/22/1-103
MAU/33/1-103
G/43/60
J/44/32-3

RESOLUTION No. Aer2 - (D)

Relating to the Use of frequencies 3023 and 5680 kHz common to the Aeronautical Mobile (R) and (OR) Services

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

having noted

that this conference in adopting a new Frequency Allotment Plan in, Appendix 27 (Rev), has decided to use 3023 kHz instead of 3023.5 kHz; and, additionally, has amended the provisions governing the use of 3023 and 5680 kHz,

considering

1. that, by this action some anomalies now exist in the conditions prescribed in Appendix 26 to the Radio Regulations, Geneva, 1959, for the use of the frequencies 3023.5 and 5680 kHz;

2. that the coordination of search and rescue operations at the scene of a disaster would be improved if the use of the frequencies 3023 and 5680 kHz in such operation, was extended to include communication between mobile stations and participating land stations;

3. that it would be in the general interests of the aeronautical mobile (R) service if the same provisions relating to the use of the frequencies 3023 and 5680 kHz were applied to operations both in the aeronautical mobile (R) service and the aeronautical mobile (OR) service;

resolves

to invite administrations to apply in the aeronautical mobile (OR) service, as from the date of coming into force of the Final Acts of the Conference, the provisions governing the use of the Frequencies 3023 and 5680 kHz specified in Appendix 27 (MOD 27/196 and MOD 27/201).

RESOLUTION No. Aer 2

relating to the use of frequencies in the HF bands allocated exclusively to the aeronautical mobile (R) service

USA/4/70 SUP
D/13/1
F/22/1-104
MAU/33/1-104
G/43/57
J/44/32-3

USA/4/71 ADD
D/13/2
F/22/1-105
MAU/33/1-105
G/43/61
J/44/32-4

RESOLUTION No. Aer2 - (E)

Relating to the Unauthorized Use of Frequencies in the Bands allocated to the Aeronautical Mobile (R) Service.

The World Aeronautical Administrative Radio Conference, Geneva, 1978

considering

a) that monitoring observations of the use of the frequencies in the bands between 2850 and 17970 kHz allocated exclusively to the aeronautical mobile (R) service show that a number of frequencies in these bands are still being used by stations of services other than the aeronautical mobile (R) service, notably by high powered broadcasting stations, some of which are operating in contravention of No. 422 of the Radio Regulations;

b) that these stations are causing harmful interference to the aeronautical mobile (R) service and that a considerable number of emissions, the sources of which could not be positively identified, were observed in these bands;

c) that radio is the sole means of communication of the aeronautical mobile (R) service and that this service is a safety service;

considering, in particular

d) that it is of paramount importance that channels directly concerned with the safe and regular conduct of aircraft operations be kept free from harmful interference, since they are essential for the protection of the safety of life and property;

resolves to urge administrations

1. to ensure that stations of services other than the aeronautical mobile (R) service abstain from using frequencies in the Aeronautical Mobile (R) Service bands other than under the conditions specified in Nos. 115 and 415;

2. to make every effort to identify and locate the source of any unauthorized emission capable of causing harmful interference to the aeronautical mobile (R) service and thereby endangering this safety service and to communicate their findings to the IFRB;

3. to participate in the monitoring programs that the IFRB may organize pursuant to this Resolution;

4. to request their governments to enact such legislation as is necessary to prevent stations located on-board aircraft operating in contravention of No. 422 of the Radio Regulations:

requests the International Frequency Registration Board

1. to continue to organize monitoring programmes in the bands exclusively allocated to the aeronautical mobile (R) service with a view to eliminating the emissions of out-of-band stations which cause, or are likely to cause, harmful interference to the aeronautical mobile (R) service;

2. to take the necessary steps with a view to the elimination of the emissions of out-of-band stations which cause, or are likely to cause harmful interference to the aeronautical mobile (R) service;

3. to seek, as appropriate, the co-operation of administrations in identifying the sources of out-of-band emissions by all available means, and in securing the cessation of these emissions.

RESOLUTION No. Aer 3

relating to the introduction of single sideband techniques in the HF bands allocated to the aeronautical mobile (R) service

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USA/4/72 SUP
D/18/1
CAN/20/50
F/22/1-106
MAU/33/1-106
G/43/63
J/44/32-5

CAN/20/54 **ADD**

Resolution No. C

Relating to the use of Single Sideband Technique in the bands allocated exclusively to the Aeronautical Mobile (R) Service between 2850 - 22000 kHz

The World Administrative Radio Conference, Geneva, 1978

considering

a) that the Extraordinary Administrative Radio Conference, Geneva, 1966 resolved that Administrations should effect, as soon as possible, a progressive conversion of their HF radiotelephone services in the Aeronautical Mobile (R) Service from double sideband to single sideband operations;

b) that the Final Acts of this Conference will enter into force on April 1, 1979;

c) that the revised Frequency Allotment Plan contained in Appendix 27 will enter into force on February 1, 1983;

CAN/20/54 (cont.)

resolves

that, unless otherwise specified in the Final Acts of this Conference, radiotelephone stations in the Aeronautical mobile service operating in the bands between 2850 and 22000 kHz shall comply with the following conditions:

1. as from April 1, 1979 any new installations of double sideband equipment in aeronautical and aircraft stations shall not be permitted; however, administrations shall endeavour to discontinue the use of double sideband equipment at the earliest possible date and in any case not later than February 1, 1983;

2. as from April 1, 1979, frequency assignments made in accordance with Appendix 27, Edition of 1968 may continue in force until February 1, 1983;

3. on the reference frequency 2182 kHz, the requirement for class A3H emissions will continue beyond February 3, 1983;

4. as from April 1, 1979 frequency assignments under the new frequency allotment plan may be implemented; however, the use of such frequencies must not interfere with frequency assignments made under the frequency allotment plan contained in Appendix 27, Edition of 1968;

5. As from April 1, 1979 any new installations of single sideband equipment at aeronautical and aircraft stations using frequencies from the new frequency allotment plan are not required to be compatible with double sideband systems;

6. as from April 1, 1979 any new installations of single sideband equipment in aircraft using frequencies from the present frequency allotment plan are not required to be compatible with double sideband systems if communication is required only with aeronautical and aircraft stations using single sideband systems;

7. as from April 1, 1979 any new installations of single sideband equipment at aeronautical stations using frequencies from the present allotment plan are required to be compatible with double sideband systems until February 1, 1983;

CAN/20/54 (cont.)

8. for aircraft station and aeronautical station transmitters not exceeding 400 W PEP first installed before April 1, 1979 and for aeronautical station transmitters exceeding 400 W PEP in use until January 1, 1989 the mean power of any A2H, A3H or A7J/A9J emission supplied to the antenna transmission line of an aeronautical or aircraft station on any discrete frequency, shall be less than the mean power (Pm) of the transmitter in accordance with the following table:

Frequency separation Δ from the assigned frequency kHz	Minimum attenuation below mean Power (Pm) db
$2 \leq \Delta < 6$	25
$6 \leq \Delta < 10$	35
$10 \leq \Delta$	Aircraft stations: 40 Aeronautical stations: $43 + 10 \log_{10} Pm$ (watts)

RESOLUTION No. Aer 4

relating to the use of VHF for communication in the aeronautical mobile (R) service

USA/4/73 SUP
D/14/1
CAN/20/51
F/22/1-107
MAU/33/1-107
G/43/64
J/44/32-8

USA/4/74 ADD
D/14/2
F/22/1-108
MAU/33/1-108
J/44/32-9

RESOLUTION No. Aer2 - (F)

Relating to the use of VHF for Communication in the Aeronautical Mobile (R) Service

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that from an aeronautical viewpoint, VHF can provide a more reliable and more static-free communication system that HF;

b) that from a technical and operational viewpoint, the use of VHF by aviation has progressed appreciably;

c) that the use of VHF in its several modes could appreciably reduce the use of HF in the aeronautical mobile (R) service;

d) that, owing to development of aeronautical telecommunications in many areas of the world, the possibilities of providing VHF coverage are rapidly increasing;

resolves

that administrations, to the maximum extent practicable, should employ VHF to meet their requirements in the aeronautical mobile (R) service.

RESOLUTION No. Aer 5

relating to the use of VHF for meteorological broadcasts in the aeronautical mobile (R) service

USA/4/75 SUP
D/15/1
F/22/1-109
MAU/33/1-109
G/43/65
J/44/32-8

USA/4/76 ADD
D/15/2
F/22/1-110
MAU/33/1-110
J/44/32-9

RESOLUTION No. Aer2 - (G)

Relating to the use of VHF for meteorological Broadcasts in the Aeronautical Mobile (R) Service

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the number of channels available for the aeronautical mobile (R) service in the frequency bands between 2850 and 17970 kHz is limited;

b) that the need for frequencies for aeronautical mobile (R) service communications and for meteorological broadcasts to aircraft is increasing;

c) that the propagation characteristics of high frequencies make them essential for aviation communication requirements over long distances;

d) that in Recommendation No. 13 of the International Administrative Aeronautical Radio Conference, Geneva, 1949, and Resolution No. 14 MOD [See Report on Agenda Item 3, first page of Appendix D]* of the Ordinary Administrative Radio Conference, Geneva, 1959, administrations were urged "to make as great a use as possible of very high frequencies in order to lessen the load on the high frequency (R) bands";

e) that this conference has adopted a Resolution whereby administrations should, to the maximum extent practicable, employ VHF to meet their requirements in the aeronautical mobile (R) service;

f) that substantial technical progress has been made by aviation in extending the operational range of VHF used for communications within the aeronautical mobile (R) service;

g) that this extension of the operational range of VHF could partially meet the increasing need for meteorological broadcasts to aircraft;

resolves

that administrations, to the maximum extent practicable, should employ VHF for meteorological broadcasts to aircraft.

* See Annex to Document No. 21, page 3-23

RESOLUTION No. Aer 6

relating to the treatment of notices concerning frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the bands allocated exclusively to that service between 2850 and 17 970 kHz

USA/4/77 SUP
D/10/1
F/22/1-111
MAU/33/1-111
G/43/66
J/44/32-10

USA/4/64 ADD
D/10/2
F/22/1-112
MAU/33/1-112
G/43/58

RESOLUTION No. Aer2 - (B)

Relating to the Treatment of Notices Concerning Frequency Assignments to Aeronautical Stations in the Aeronautical Mobile (R) Service in the Bands Allocated Exclusively to that Service Between 2850 and 17 970 kHz

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the Final Acts of this Conference will enter into force on 1 April 1979;

b) that the new Frequency Allotment Plan contained in Appendix 27 (Rev) will enter into force at 0001 hours G.M.T. on 1 February 1983;

c) that some administrations may wish to implement certain provisions of the revised Frequency Allotment Plan in advance of the latter date when this may be done without causing harmful interference to stations working in accordance with the present Frequency Allotment Plan;

d) that it will therefore be necessary to provide an interim procedure to facilitate transition from the present Frequency Allotment Plan to the new Frequency Allotment Plan;

USA/4/64, D/10/2, F/22/1,
MAU/33/1, G/43/58 (cont.)

resolves

1. that during the period between the date of entry into force of the Final Acts and the date of entry into force of the new Frequency Allotment Plan:

1.1 that provisions of Nos. 553 to 558 of the Radio Regulations, shall continue to be applied in the examination of notices concerning frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the bands allocated exclusively to that service between 2850 and 17 970 kHz;

1.2. all such assignments shall be recorded in the Master International Frequency Register according to the findings reached by the I.F.R.B;

1.3 the date to be entered in Column 2a or 2b of the Master International Frequency Register shall be as follows:

a) if the finding is favourable with respect to Nos. 554 to 557, the date of 29th April 1966 shall be entered in Column 2a;

b) if the finding is favourable with respect to Nos. 558, the date of 29th April 1966 shall be entered in Column 2b;

c) for all other assignments (including those which may be in conformity with the revised Frequency Allotment Plan but not in conformity with the present Frequency Allotment Plan) the date of receipt of the notice by the I.F.R.B. shall be entered in Column 2b;

1.4 any assignment which is in accordance with the revised Frequency Allotment Plan shall be so indicated by the insertion by the I.F.R.B. of an appropriate symbol in the Remarks Column of the Master International Frequency Register:

2. that on the date of coming into force of the new Frequency Allotment Plan, the I.F.R.B. shall examine those frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the bands allocated exclusively to that service between 2850 and 17 970 kHz, which are contained in the Master International Frequency Register from the point of view of their conformity with the new Frequency Allotment Plan following the relevant parts of the procedure described in Nos. 553 to 559 of the Radio Regulations, and shall record against them in the Master International Frequency Register a date in Column 2a or 2b as follows:

USA/4/64, D/10/2, F/22/1,
MAU/33/1, G/43/58 (cont.)

* 2.1 assignments with double sideband emission (A3), mentioned in paragraph 4.4 of Resolution Aer 2-(A), and already appearing in the Master Register on the date of coming into force of the new Frequency Allotment Plan, shall retain the date recorded in column 2a or 2b as appropriate until 1 February 1983. A date in column 2a for a frequency assignment using double sideband (A3) as mentioned in paragraph 4.4 of proposed Resolution Aer 2-(A), shall be transferred to column 2b on 2 February 1983. On 1 January 1987 the IFRB shall review the entries and, in consultation with Administrations concerned, cancel those entries which are no longer in use, retaining the others for information only, without a date in column 2b.

2.2 assignments found favourable with respect to Nos. 554 to 557 shall have (the date of signing of the AWARC Agreement, Geneva, 1978) entered in column 2a.

2.3 assignments found favourable with respect to No. 558 shall have (the date of signing of the AWARC Agreement, Geneva, 1978) entered in column 2b;

2.4 all other assignments shall have (the day AFTER the date of signing the AWARC Agreement, Geneva, 1978) entered in column 2b;

3. that, on the date of entry into force of the new Frequency Allotment Plan, the allotments therein shall replace in the Master International Frequency Register those allotments in the present Frequency Allotment Plan;

invites

administrations to notify to the I.F.R.B. as soon as possible the cancellation of frequency assignments released as a consequence of bringing into use the allotments in the new Frequency Allotment Plan.

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* Proposal G/43/58 is the following :

2.1 assignments with double sideband emission (A3), already appearing in the Master Register on the date of coming into force of the new Frequency Allotment Plan, shall retain the date recorded in Column 2a or 2b as appropriate until 1 February 1983. A date in Column 2a for a frequency assignment using double sideband (A3) shall be transferred to Column 2b on 2 February 1983. On 1 January 1987 the IFRB shall review the entries and, in consultation with the administrations concerned, cancel those entries which are no longer in use, retaining the others for information only, without a date in Column 2b;

USA/4/63 ADD
D/9/1
F/22/1-116
MAU/33/1-116
J/44/32-14

RESOLUTION No. Aer2 - (A)

Relating to the Implementation of the New Arrangement of High Frequency Bands Allocated Exclusively to the Aeronautical Mobile (R) Service Between 2850 and 17 970 kHz

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that each of the high frequency bands allocated exclusively to the aeronautical mobile (R) service by the Administrative Radio Conference, Geneva, 1959, and modified by the Extraordinary Administrative Radio Conference, Geneva, 1966, has been further modified by this conference to provide for SSB techniques;

b) that a considerable number of both aircraft and aeronautical stations will be transferred from existing frequencies to the new frequencies and channels designated by the present Conference;

c) that changes in frequency assignments should be made as soon as possible so that the advantages of the new channels designated by the present Conference may be realized at the earliest opportunity;

d) that the transfer of assignments should be made with the least possible disruption of the service rendered by each station;

e) that the transfer of assignments should be made in such a manner that harmful interference between stations involved is avoided during the implementation period;

f) that the Final Acts of this Conference will enter into force on 1 April 1979:

g) that the revised Frequency Allotment Plan contained in Appendix 27 (Rev) will enter into force on 1 February 1983;

recognizing

a) that the aeronautical mobile (R) service is a safety service

b) that some frequencies have been allotted for world-wide use

resolves

1. that the implementation of the decisions made by the present Conference relating to the new arrangements of the high frequency bands allocated to the aeronautical mobile (R) service should follow an orderly procedure for the transfer of existing services from the old to the new assignments and for the introduction of new services;

USA/4/63, D/9/1, F/22/1,
MAU/33/1, J/44/32-14 (cont.)

2. that between the entering into force of the Final Acts of this Conference on 1 April 1979 and the entering into force of the new Frequency Allotment Plan contained in Appendix 27 (Rev) on 1 February 1983, the transition to single sideband operation shall be made in accordance with the following provisions:

2.1 that carrier (reference) frequency of the single sideband channel in the upper half of the previous double sideband channel shall be the same as the carrier (reference) frequency of that channel;

2.2 that carrier (reference) frequency of the single sideband channel in the lower half of the previous double sideband channel shall be 3 kHz lower than the carrier (reference) frequency of the previous double sideband channel;

2.3 that prior to 1 February 1983, Aeronautical and Aircraft stations fitted with single sideband equipment may employ either half of the previous double sideband channel (the single sideband carrier (reference) frequency being that in 2.1 and 2.2 above), or a channel in the new frequency plan on a non-interference basis to the existing users of channels in the present plan. Operational use of the channels concerned shall be co-ordinated with the International Civil Aviation Organization in accordance with No. (MOD) 27/20 of Appendix 27 to the Radio Regulations;

3. that on 1 February 1983, the frequencies appearing in Appendix 27 to the Radio Regulations shall be replaced by the frequencies appearing in Section II, Article I, Appendix 27 (Rev);

4. that unless otherwise specified in the Final Acts of this Conference radiotelephone stations in the Aeronautical Mobile (R) Service operating in the bands between 2850 and 17970 kHz shall comply with the following conditions:

4.1 installations of new double sideband equipment in aircraft stations shall not be permitted after 1 April 1979; however, administrations shall endeavour to discontinue the installations of double sideband equipment at the earliest possible date prior to 1 April 1979;

4.2 installations of new double sideband equipment in aeronautical stations shall not be permitted after 1 April 1979; aeronautical stations shall be capable of single sideband operation at the earliest possible date; furthermore; they shall discontinue double sideband emissions as early as possible, and, in any event, not later than 1 February 1983;

USA/4/63, D/9/1, F/22/1,
MAU/33/1, J/44/32-14 (cont.)

4.3. until 1 February 1983, aeronautical and aircraft stations equipped for single sideband operation shall also be equipped to transmit class A3H emissions where required to be compatible with reception by double sideband equipment;

4.4 as of 1 February 1983, the use of classes of emission A2H, A3J, A7J and A9J only shall be authorized. Double sideband operations may, however, be continued in exceptional cases for domestic use until 1 February 1987, provided that harmful interference which may be caused to the International Aeronautical Mobile (R) Service operating in the single sideband mode be resolved by application of Article 15 of the ITU Radio Regulations, noting in particular RR 667 and RR 674. The Administrations requiring such an extension of the full implementation of single sideband are, nevertheless, urged to ceased double sideband operations as soon as possible.

→

USA/4/78 ADD
D/11/1
F/22/1-113
MAU/33/1-113
G/43/62
J/44/32-12

RESOLUTION No. Aer2 - (H)

Relating to the Implementation of the Frequency Allotment Plan in the High Frequency Bands allocated exclusively to the Aeronautical Mobile (R) Service between 2850 and 17970 kHz

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the bands allocated exclusively (between 2850 and 17970 kHz) to the aeronautical mobile (R) Service by the Administrative Radio Conference, Geneva, 1959, were modified by the Extraordinary Administrative Radio Conference, Geneva, 1966;

b) that the 1966 Conference set up procedures to be followed by administrations relating to the implementation of the modifications;

c) that the necessary provisions were made for the IFRB to carry out these procedures;

recognizing

d) that the aeronautical mobile (R) service is a safety service;

e) that the present conference has further modified the said bands to provide for SSB techniques;

f) that there is a need for all administrations to implement the modifications made by the present conference, with a view to avoiding any harmful interference to the services rendered by stations operating in accordance with the Radio Regulations;

resolves

1. that the assignments existing in the Master Register on 1 February 1983 which are not in conformity with the decisions of the present Conference on that date shall be treated as follows;

1.1 the IFRB will send relevant extracts from the Master Register to the administrations concerned, within 30 days from 1 February 1983, advising that, in accordance with the terms of the present resolution, the assignments concerned are to be transferred to the appropriate bands within a period of 180 days after the dispatch of the extracts;

1.2 if an administration does not notify the IFRB of the transfer within the prescribed period, the original entry shall be retained in the Master Register without a date in Column 2 and with a suitable remark in the Remarks column. The administrations shall be advised of this action;

2. that, if an administration so desires, the IFRB shall give it all necessary assistance. In so doing, the IFRB shall apply the provisions of Nos. 629 to 633 of the Radio Regulations.

Note : See also CAN/20/53, page 153.

URS/29/5 5. Procedure for reviewing the Frequency Allotment Plan

The switchover to a new frequency grid with reduced channel spacing, as distinct from the 7 kHz and 8 kHz separation specified in the present Appendix 27, will mean changing the nominal frequencies in the Table under No. 27/16 and at the same time transferring all stations in the Aeronautical Mobile (R) Service to new channels. To retain the use of the channels in the present Appendix 27 which has evolved in the course of joint operation and to simplify the task of preparing a new Frequency Allotment Plan for the Aeronautical Mobile (R) Service, the USSR Administration considers that the following revision procedure should be applied :

URS/29/6 5.1 to establish a frequency grid divided up according to frequency range with a channel separation of 6 kHz, keeping in each band the nominal carrier of the first (lowest frequency) channel;

URS/29/7 5.2 to transfer the allotments of the present Plan (Nos. 27/195 - 27/207) to new nominal frequencies by shifting them all towards the lower frequencies in each band. However, to ensure reliable communications during the transition period, the switchover to new nominal frequencies should not be made simultaneously on all frequency ranges;

URS/29/8 5.3 to stipulate that by the end of the transition period all the allotments referred to in point 5.2 should be transferred to the single sideband system, using the upper sideband;

URS/29/9 5.4 to provide for the establishment of additional single sideband channels :

5.4.1 with a carrier frequency situated 3 kHz below the carrier of the channels referred to in point 5.1;

5.4.2 formed, with a 3 kHz spacing, in the bands released from double sideband operation by the reduction of the channel separation specified in the present Appendix 27 to 6 kHz;

5.4.3 created in the 21 960 - 22 000 kHz band.

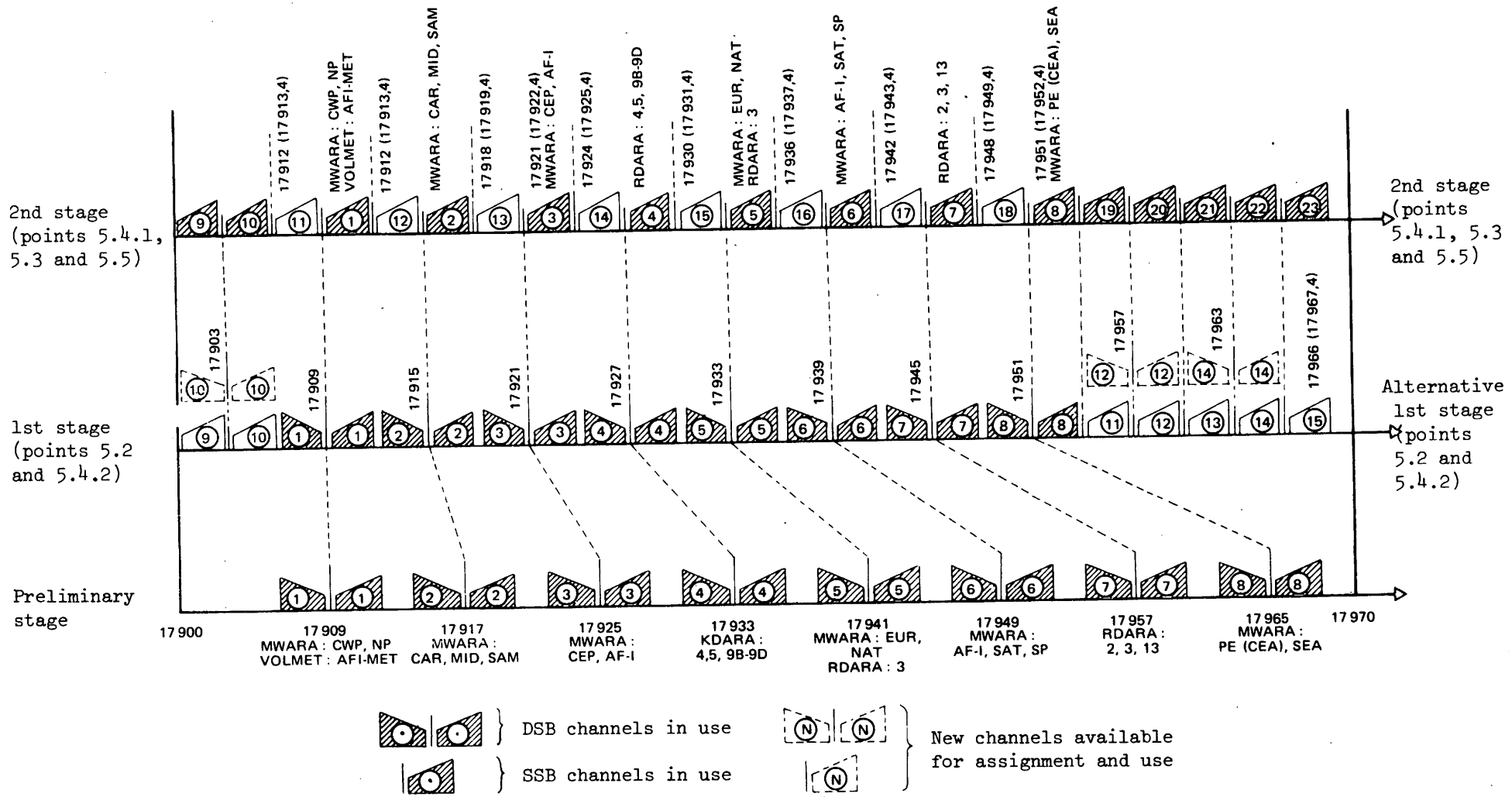
The channels referred to in points 5.4.2 and 5.4.3 will continue to be available for use during the transition period after the completion of the stage referred to in point 5.2, i.e., until the date of the entry into force of the new Appendix 27 (as an illustration, see Annex 3, Chart modifying the Table of Frequencies in the 17 900 - 17 970 kHz band).

URS/29/10 5.5 to allot the frequencies of the additional single sideband channels to newly-formed areas, to establish nominal frequencies for the flight control service and to allot additional frequencies to the existing areas;

URS/29/11 5.6 if necessary, to allot additional frequencies to areas in the channels referred to in point 5.2, taking into account the provisions of Section II.B of Appendix 27;

URS/29/12 5.6.1 since the theoretical and experimental data have shown that it is possible to use a signal-to-noise protection ratio of 15 dB for class of emission A3J adopted by WARC-66, it would also be advisable to retain the contours adopted by that Conference as a technical basis for planning frequency allotments.

CHART MODIFYING THE TABLE OF FREQUENCIES IN THE 17 900 - 17 970 kHz BAND



DRAFT RESOLUTION

relating to the future introduction of an aeronautical mobile service for public correspondence with aircraft

SUI/34/5 The World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978

considering

a) that the use of VHF in their various applications could bring about a marked reduction in the use of HF by the Aeronautical Mobile (R) Service;

b) that a wish has been expressed to set up long-range public correspondence links with aircraft in the HF band;

c) that those parts of the spectrum currently allocated to the Aeronautical Mobile (R) Service which are no longer needed by the Service following the revision of Appendix 27 of the Radio Regulations could be used to accommodate public correspondence with aircraft without recourse to the frequencies of other services;

resolves

to request the World Administrative Radio Conference, 1979, to reserve for other applications in the Aeronautical Mobile Service, such as a future service of public correspondence with aircraft, those parts of the spectrum which are no longer used by the Aeronautical Mobile (R) Service.

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RECOMMENDATIONS

RECOMMENDATION No. Aer 1

relating to the development of techniques which would help to reduce congestion in the high frequency bands allocated to the aeronautical mobile (R) service

USA/4/80 SUP
F/22/1-117
MAU/33/1-117
G/43/67
J/44/32-15

USA/4/81 ADD
F/22/1-118
MAU/33/1-118
G/43/68
J/44/32-16

RECOMMENDATION No. Aer2 - (B)

Relating to the development of Techniques which would help to reduce congestion in the High Frequency bands allocated to the Aeronautical Mobile (R) Service

The Aeronautical World Administrative Radio Conference, Geneva, 1978, considering

considering

a) that several administrations are actively engaged in the development of communication techniques the wider use of which in the aeronautical mobile (R) service, would help to reduce congestion in the high frequency bands allocated to that service; such developments include remotely controlled VHF stations, high-powered VHF transmitters employing directional antennae, space radiocommunication techniques and automatic data transmission;

b) that knowledge of these developments would be useful to other administrations in considering the application of these techniques to their aeronautical mobile (R) communication services;

(c) that the International Civil Aviation Organization (I.C.A.O.) is actively engaged in coordinating the operational development of such techniques;

invites

administrations engaged in such developments to inform the I.F.R.B. periodically of the progress achieved;

requests

the I.F.R.B. periodically to circulate the information so obtained to administrations and to I.C.A.O.

USA/4/79 ADD
D/17/1
F/22/1-119
MAU/33/1-119
J/44/32

RECOMMENDATION No. Aer2 - (A)

Relating to a Study of the Feasibility of Creating new High Frequency Bands to be Allocated exclusively to the Aeronautical Mobile (R) Service

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the HF bands exclusively allocated to the aeronautical mobile (R) service are at present generally of an adequate MHZ order to satisfy all of the requirements of Major World Air Route and Regional and Domestic Air Route areas as defined in Appendix 27 to the Radio Regulations;

b) that aircraft operating agencies have a requirement to communicate with their aircraft over long distances beyond the boundaries of Major World Air Route and Regional and Domestic Air Route areas as defined in Appendix 27 to the Radio Regulations;

c) that frequencies of the higher MHz order (20-24 MHz) required for such long distance communications are not now exclusively allocated to the aeronautical mobile (R) service;

recommends

that administrations study the problem and take into account the needs of the aeronautical mobile (R) service for increased exclusive allocations in the 20-24 MHz region of the spectrum when preparing their proposals for the next competent World Administrative Radio Conference.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/2-E
6 February 1978

HEADS OF DELEGATIONS
PLENARY MEETING

Note by the Secretary-General

PROPOSED STRUCTURE OF THE AERONAUTICAL (R) CONFERENCE 1978

Committee 1 - Steering Committee

Terms of reference : To coordinate the work of the Committees, fix the timetable of meetings, etc.

Committee 2 - Credentials Committee

Terms of reference : To verify the credentials of delegations and to report on its conclusions to the Plenary Meeting within the time specified by the latter.

Committee 3 - Budget Control Committee

Terms of reference : To determine the organization and the facilities available to the delegates and to examine and approve the accounts for expenditure incurred throughout the duration of the Conference.

Committee 4 - Technical Committee

Terms of reference : To establish the basic technical criteria for revision of the Frequency Allotment Plan in Appendix 27, taking into account the Report of the CCIR dated March 1976, including its Addendum. January 1978, and to consider and revise, where necessary, the technical principles of that Appendix, as well as to make any consequential changes to other technical provisions of the Radio Regulations, including Appendix 3.

Committee 5 - Planning Committee

Terms of reference : To establish the frequency requirements and the boundaries of the various Aeronautical Areas, and to revise the Frequency Allotment Plan on the basis of single sideband operation which satisfies the frequency requirements within the minimum amount of spectrum necessary; to consider and revise related provisions of Appendix 27, and to make any consequential changes to the Radio Regulations on Planning matters.

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Committee 6 - Regulatory Procedures Committee

Terms of reference : To revise the other provisions of Appendix 27 and to consider and make any consequential changes to the Radio Regulations on procedural matters; and to establish the basic timetable and the principles to be observed in the procedure for transition from the present Frequency Allotment Plan to the revised Frequency Allotment Plan.

Committee 7 - Editorial Committee

Terms of reference : To perfect the form of the texts of the Final Acts without altering the sense.

Each Committee would consider such Resolutions and Recommendations as necessary to fulfil its terms of reference.

M. MILI
Secretary-General

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/3
6 février 1978
Original : français
anglais
espagnol

SEANCE PLENIERE
PLENARY MEETING
REUNIÓN PLENARIA

PROJET / DRAFT / PROYECTO

Note du Secrétaire général / Note by the Secretary-General / Nota del Secretario General

ATTRIBUTION DES DOCUMENTS / ALLOCATION OF DOCUMENTS / ATRIBUCIÓN DE LOS DOCUMENTOS

(Nos. 1 - 65)

Plénière / Plenary / Plenaria : 1, 38, 40+, 41, 47, 58

C2 - Pouvoirs / Credentials / Credenciales : 3

C3 - Budget / Presupuesto : 35, 36

C4 - Technique / Technical / Técnica : 2+, 4*, 5, 20, 21, 22, 24, 28, 29, 31, 33, 34, 42, 43, 44, 49, 51, 56, 60, 62, 65

C5 - Planification / Planning / Planificación : 4, 5, 6, 7, 8, 18, 19, 20, 21, 23, 26, 29, 30, 32, 33, 34, 37, 39, 42, 43, 44, 45*, 48, 49+, 50, 51, 52*, 53, 55, 56, 59, 60, 62, 65

C6 - Procédures réglementaires / Regulatory procedures / Procedimientos reglamentarios : 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 25, 27, 29, 33, 34, 43, 44, 46, 54, 56, 57, 60, 61, 62, 63, 65

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* : + Corr.
\+ : + Add.

M. MILI
Secrétaire général

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/4
1 February 1978
Original : English

HEADS OF DELEGATIONS

DRAFT

AGENDA

OF THE

FIRST PLENARY MEETING

Monday, 6 February 1978, at 1500 hrs

		Document No.
1.	Opening of the Conference	-
2.	Election of the Chairman of the Conference	-
3.	Election of the Vice-Chairmen of the Conference	-
4.	Address by the Secretary-General	-
5.	Committee structure and organization of the work of the Conference	DT/2
6.	Election of Chairmen and Vice-Chairmen of Committees	-
7.	Composition of the Conference Secretariat	-
8.	Allocation of documents to the Committees	DT/3
9.	Invitations to the Conference and participation	38, 41
10.	Participation of international organizations in the work of the Conference	40 (+ Add.)
11.	Date by which the Credentials Committee shall formulate its conclusions	-
12.	Timetable of meetings	-
13.	Other business	-

M. MILI

Secretary-General

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/5-E
7 February 1978
Original : French

COMMITTEE 4

TERMS OF REFERENCE OF THE WORKING GROUPS OF COMMITTEE 4

In accordance with the decision reached at the first meeting of Committee 4, two Working Groups have been set up with the following terms of reference :

Terms of reference of Working Group 4A

- to examine and, if necessary, to revise or establish the technical criteria for sharing in all frequency bands, taking account so far as possible of such factors as the interference originating in adjacent channels or caused by third order intermodulation products, auroral absorption, etc.;

- to prepare the technical provisions for inclusion in Appendix 27(Rev.) which fall within the Working Group's competence.

Terms of reference of Working Group 4B

- to determine the characteristics of new SSB channels;

- to examine and revise the classes of emission, power and technical provisions relating to SSB operation;

- to examine the Table of Frequency Tolerances in Appendix 3 to the Radio Regulations and to introduce the necessary amendments with regard to the Aeronautical Mobile (R) Service in frequency bands 1 605 to 4 000 kHz and 4 to 29.7 MHz;

- to prepare the technical provisions for inclusion in Appendix 27(Rev.) which fall within the Working Group's competence.

G. KOVACS
Chairman of Committee 4

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UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/6-F/E/S
7 février 1978

COMMISSION 5

Conformément aux souhaits exprimés lors de la première séance de la Commission 5, les limites des ZLAMP et des zones d'allotissement et de réception VOLMET, telles qu'elles sont recommandées dans le Rapport de la réunion de la Division des télécommunications de l'OACI (annexé au document N° 21), sont représentées sur les cartes ci-jointes.

Annexes : 4 cartes

COMMITTEE 5

In accordance with the wishes expressed in the first meeting of Committee 5, the boundaries of MWARAs and VOLMET-allotment and reception areas, as recommended in the Report of ICAO Communications Divisional Meeting (enclosure to Conference Document No. 21), are shown in the enclosed maps.

Enclosures : 4 maps

COMISIÓN 5

De conformidad con los deseos expresados en la primera sesión de la Comisión 5, en los mapas adjuntos se muestran los límites de las Zonas de paso de Rutas Aéreas Mundiales Principales (ZRMP) y de las Zonas de adjudicación y de recepción VOLMET recomendados en el Informe de la Reunión de Divisiones de Comunicaciones de la OACI (adjunto al Documento N.° 21 de la Conferencia).

Anexos: 4 mapas

Le Président de la Commission 5

M. CHEF

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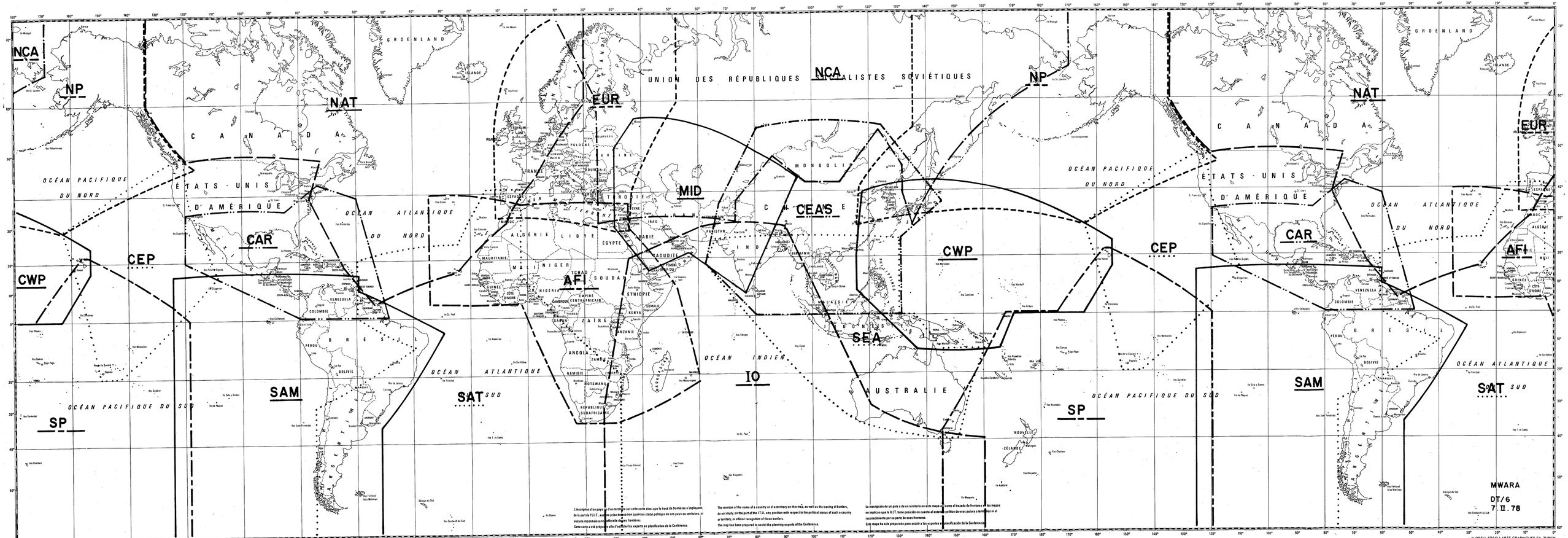
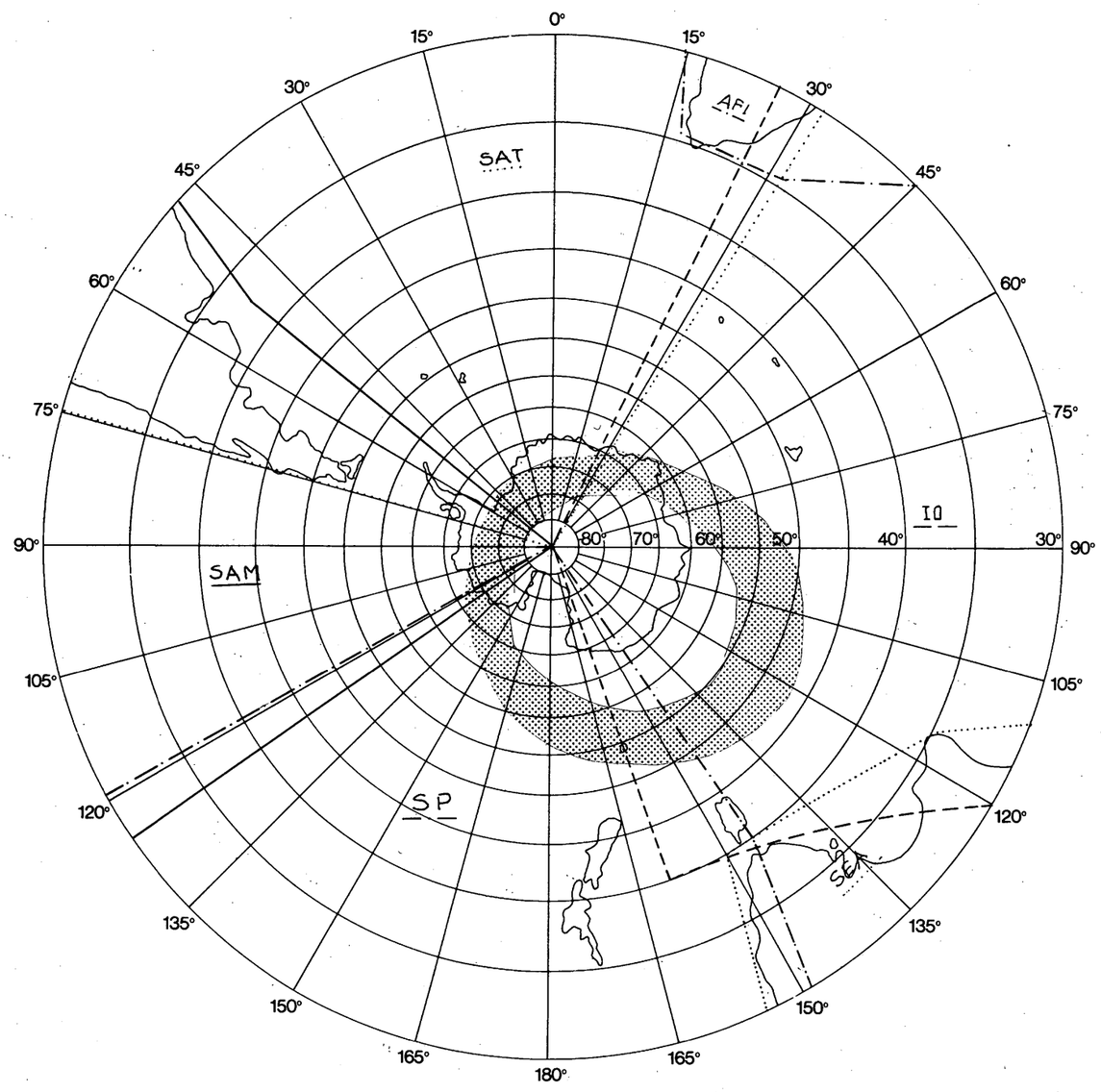


L'inscription d'un pays ou d'un territoire sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'U.I.T., aucune prise de position quant au statut politique de ces pays ou territoires, ni aucune reconnaissance officielle des frontières.
Cette carte a été préparée afin d'aider les experts en planification de la Conférence.

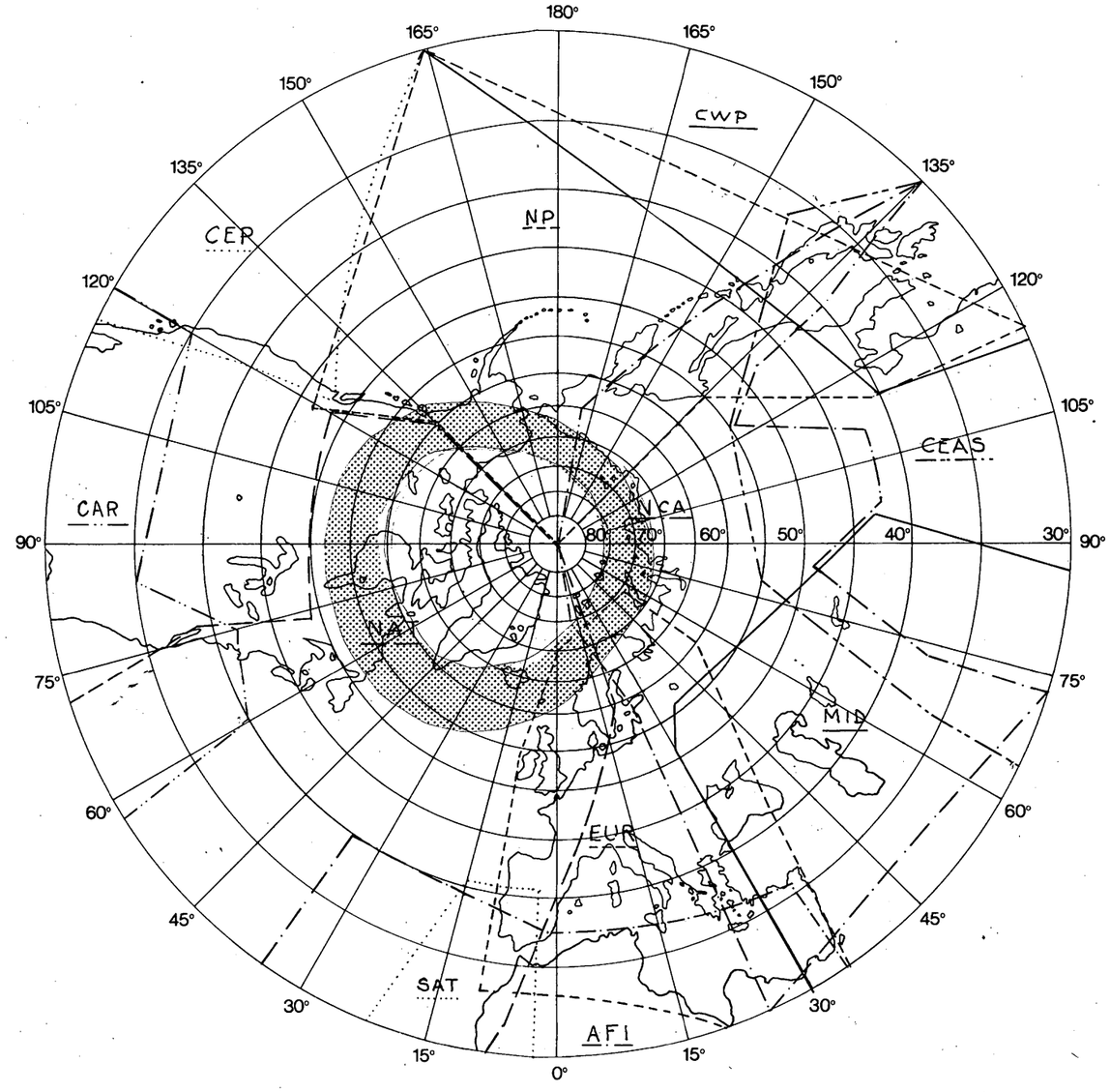
The mention of the name of a country or of a territory on this map, as well as the tracing of borders, do not imply, on the part of the I.T.U., any position with respect to the political status of such a country or territory, or official recognition of these borders.
The map has been prepared to assist the planning experts of the Conference.

La inscripción de un país o de un territorio en este mapa así como el trazado de fronteras en los mapas no implican que la U.I.T. tome posición en cuanto al estatuto político de esos países o territorios ni el reconocimiento por su parte de esas fronteras.
Este mapa ha sido preparado para asistir a los expertos en planificación de la Conferencia.

POLE SUD

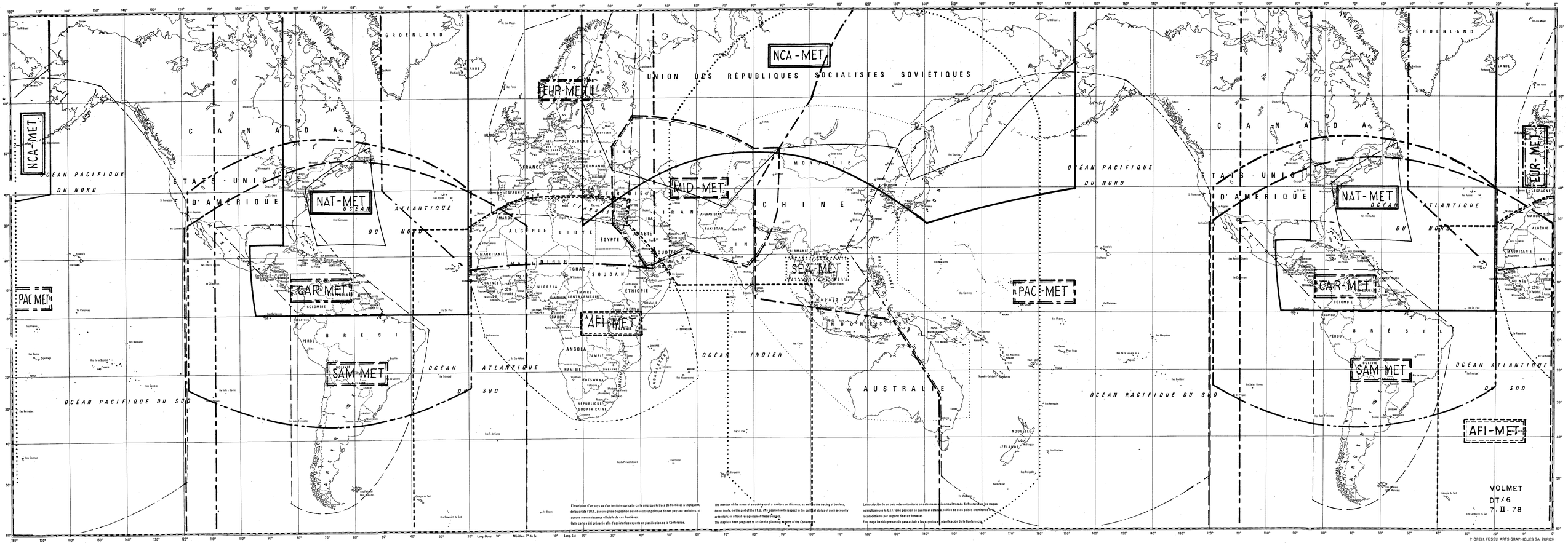


POLE NORD



MWARA

DT/6
7.II.78



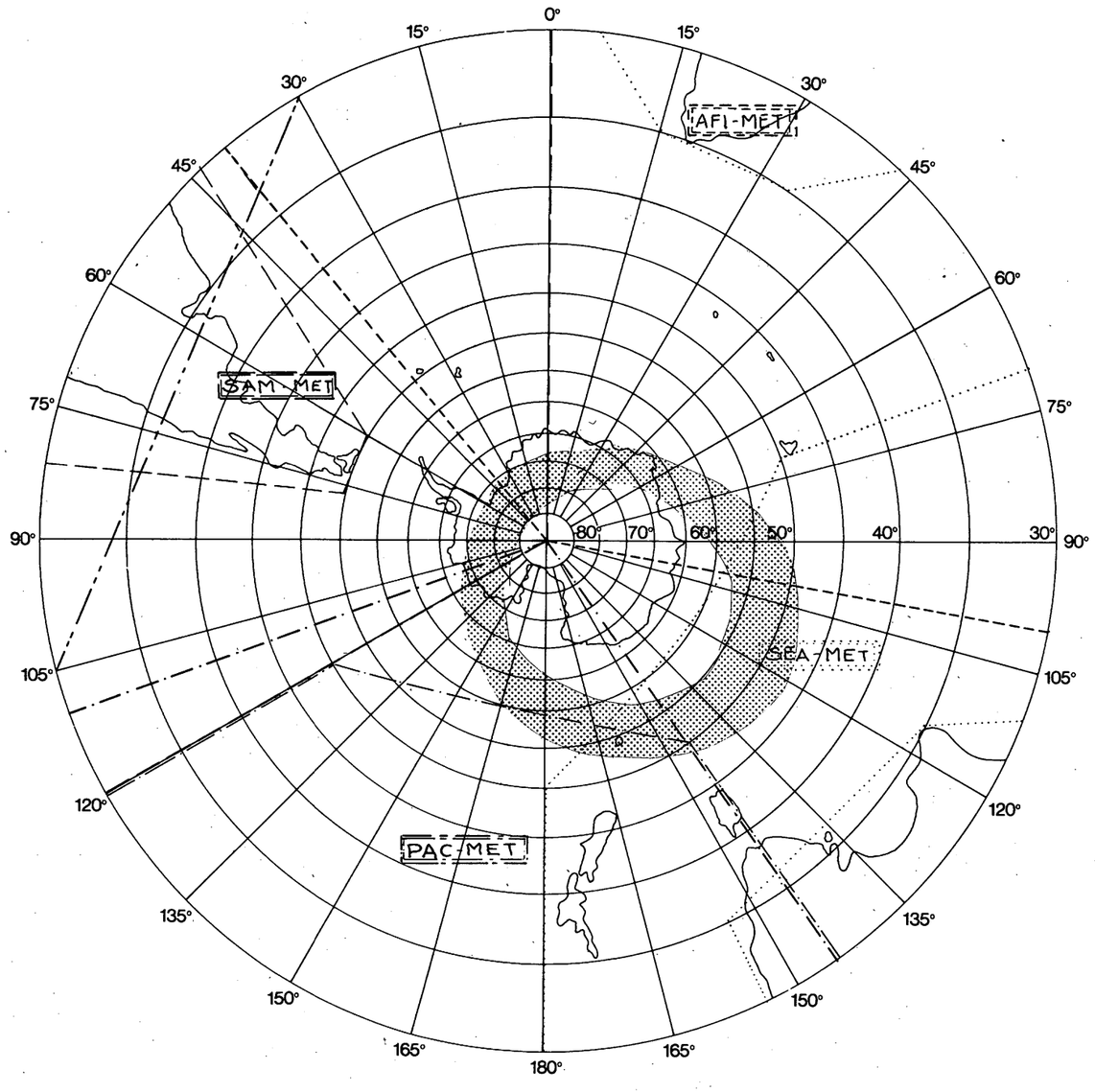
L'inscription d'un pays ou d'un territoire sur cette carte ainsi que le tracé de frontières n'impliquent de la part de l'OIT, aucune prise de position quant au statut juridique de tel pays ou territoire, ni aucune reconnaissance officielle de ces frontières.
Cette carte a été préparée afin d'assister les experts en planification de la Conférence.

The mention of the name of a country or of a territory on this map, as well as the tracing of borders, do not imply, on the part of the I.T.O., any position with respect to the political status of such a country or territory, or official recognition of these borders.
The map has been prepared to assist the planning experts of the Conference.

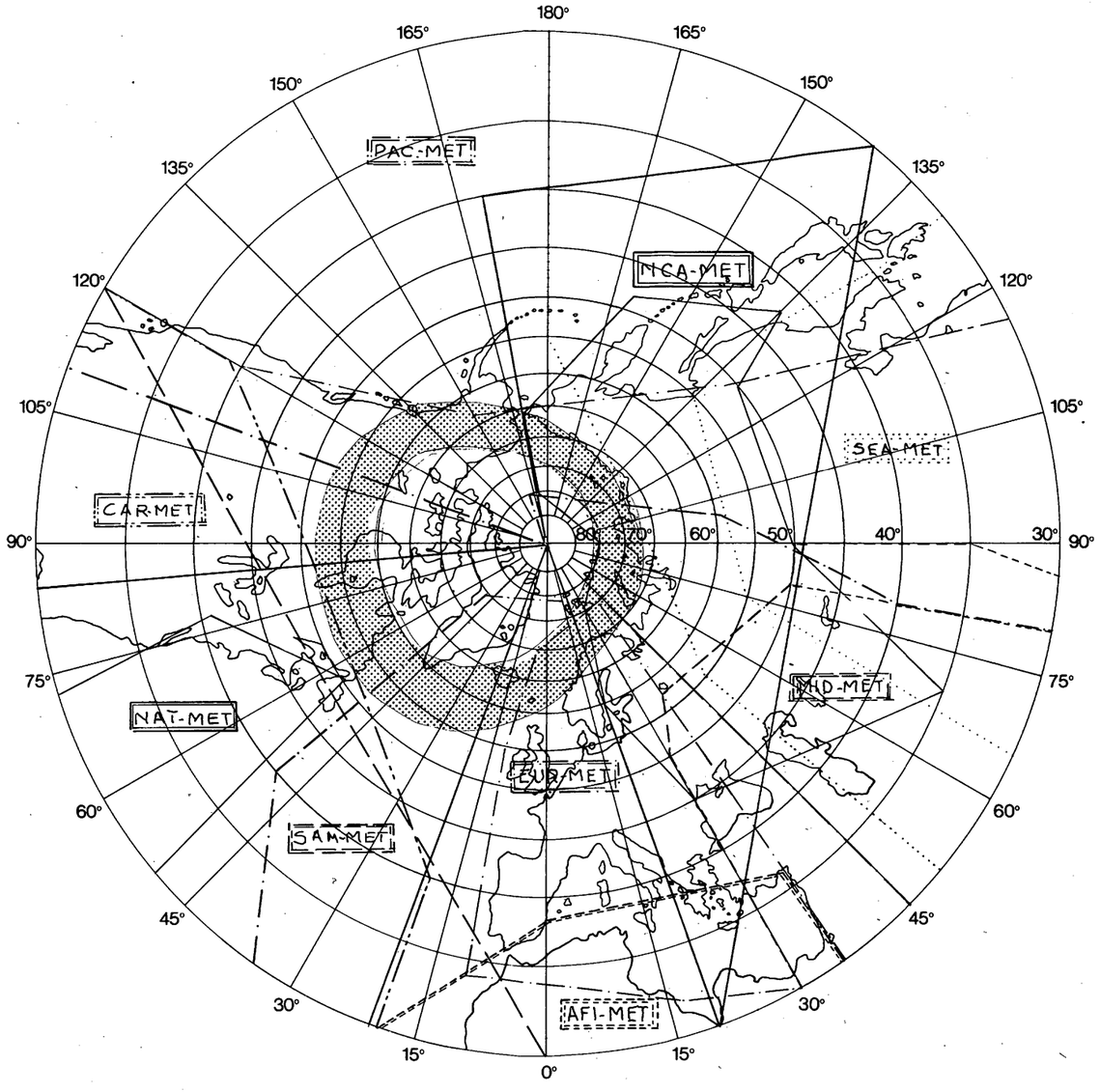
La inscripción de un país o de un territorio en este mapa así como el trazado de fronteras en los mapas no implican que la O.I.T. tome posición en cuanto al estado político de esos países o territorios, ni reconocimiento por su parte de esas fronteras.
Este mapa ha sido preparado para asistir a los expertos en planificación de la Conferencia.

© ORELL FÜSSLI ARTS GRAPHIQUES SA ZURICH

POLE SUD



POLE NORD



VOLMET

DT/6
7.II.78

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/7-E
8 February 1978
Original: English

COMMITTEE 6

PROPOSED TERMS OF REFERENCE
FOR WORKING GROUPS OF COMMITTEE 6

1. Working Group 6A

To consider and make recommendations to the committee on proposals:

1) to revise the provisions of Appendix 27, other than those relating to technical matters and the allotment plan;

2) for consequential changes to the Radio Regulations on procedural matters;

3) for resolutions and recommendations other than those dealing with the transition to the revised Frequency Allotment Plan.

2. Working Group 6B

To consider proposals for establishing the basic timetable and the principles to be observed in the procedure for transition from the present Frequency Allotment Plan to the revised Frequency Allotment Plan, and to provide the necessary draft resolutions to cover the transition to the revised plan.

R.J. BUNDLE
Chairman of Committee 6

ARCHIVES U.I.T. GENÈVE

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/8-F/E/S
8 février 1978

Original : français
anglais
espagnol

COMMISSION 5
COMMITTEE 5
COMISIÓN 5

Note du Président de la Commission 5

DONNEES SUR LA FREQUENCE MAXIMUM UTILISABLE
POUR PLUSIEURS ZONES AERONAUTIQUES

On trouvera ci-joint les données préparées par l'IFRB, concernant la fréquence maximum utilisable pour plusieurs zones aéronautiques.

La méthode employée pour présenter les données est expliquée sur la page de couverture. Ces données se rapportent au paragraphe 1 de l'Appendice à la lettre-circulaire de l'IFRB No 401 (Document No 48 de la Conférence).

Note by the Chairman of Committee 5

DATA CONCERNING THE MAXIMUM USABLE
FREQUENCY FOR VARIOUS AERONAUTICAL AREAS

I enclose herewith the data prepared by the IFRB concerning the maximum usable frequency for various aeronautical areas.

The cover page explains the method of presentation of the data. This has reference to paragraph 1 of Appendix to the IFRB Circular-letter No. 401 (Conference Document No. 48).

Nota del Presidente de la Comisión 5

DATOS SOBRE LA FRECUENCIA MÁXIMA UTILIZABLE
EN DIVERSAS ZONAS AERONÁUTICAS

Uno a la presente los datos preparados por la IFRB sobre la frecuencia máxima utilizable en diversas zonas aeronáuticas.

En la primera página se explica el método de presentación de los datos. Esto se relaciona con el punto 1 del Apéndice a la Carta circular de la IFRB N.° 401 (Documento N.° 48 de la Conferencia).

M. CHEF
Président de la Commission 5

ARCHIVES U.I.T. GENÈVE

With reference to para 1 of Appendix to I.F.R.B. Circular-letter No. 401 of 1 December 1977, the data concerning the Maximum Usable Frequency (MUF), for various aeronautical areas is enclosed.

These tables take into account the recommendations contained in the ICAO Report, (Doc. 21 of the Conference) concerning revision of the boundaries of MWARAs, some sub-RDARAs and VOLMET areas.

The attached tables are presented in the following manner :

			SSN 5			SSN 125		
R	S	T	O	M	L	O	M	L
		T_1						
	J	D						
		T_2						
	D	N						

R : Aeronautical Area

S : Season (J, June; D, December)

T : Time (T_1, 04 - 08 hrs LMT*; D, 08 - 16 hrs LMT*; T_2, 16 - 20 hrs LMT*; N, 20 - 04 hrs LMT*.)

SSN 5 : Low sunspot activity Sunspot Number 5

SSN 125 : High sunspot activity Sunspot Number 125

O : Short path lengths in the aeronautical area concerned

M : Medium path lengths in the aeronautical area concerned

L : Long path lengths in the aeronautical area concerned

* LMT : Local Mean Time.

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
CAR	J	T_1	2.6	9.3	8.4	5.1	17.0	13.3
		D	4.3	14.9	13.0	7.0	22.3	17.8
		T_2	4.9	15.2	11.8	7.7	24.1	18.2
		N	2.6	9.3	8.3	5.3	17.2	13.6
	D	T_1	2.4	5.6	7.5	3.0	9.4	8.5
		D	4.6	18.3	14.6	9.5	30.5	21.7
		T_2	2.7	9.4	8.5	6.0	21.6	13.1
		N	2.6	5.6	7.7	3.1	10.2	8.6
CEP	J	T_1	2.7	9.3	8.2	5.3	15.3	13.7
		D	4.7	14.2	12.7	8.1	20.1	18.7
		T_2	5.2	18.4	14.3	8.7	23.5	18.0
		N	2.7	9.3	8.2	5.4	15.5	13.7
	D	T_1	1.7	6.6	4.4	2.7	8.0	7.2
		D	5.3	17.6	13.6	10.2	32.1	25.7
		T_2	2.4	7.8	7.9	7.3	19.7	14.8
		N	2.0	7.1	6.5	2.8	8.1	7.6
CWP	J	T_1	2.4	8.8	10.1	5.1	16.7	15.5
		D	4.5	13.8	12.0	7.6	20.7	20.4
		T_2	5.0	11.3	14.7	8.9	23.6	24.4
		N	2.4	8.3	9.5	5.7	16.7	15.0
	D	T_1	1.4	5.8	7.0	3.3	8.2	11.0
		D	5.4	12.2	9.4	10.5	20.8	15.6
		T_2	3.6	7.3	8.6	11.6	18.1	22.3
		N	1.7	5.9	6.3	3.9	9.6	8.7

ZLAMP /MWARA/ ZRMP

R	S	T	SSN 5			SSN 125			
			O	M	L	O	M	L	
EUR	J	T_1	3.5	9.6	10.1	5.0	14.4	15.0	
		D	4.4	14.2	14.6	6.0	17.5	18.4	
		T_2	4.4	14.5	14.6	6.3	18.8	18.9	
		N	3.1	9.6	9.8	5.0	14.3	14.5	
	D	T_1	2.3	7.7	7.7	2.8	9.0	8.6	
		D	3.5	13.9	10.4	6.5	22.7	18.7	
		T_2	2.1	7.7	7.3	3.8	14.8	11.5	
		N	2.3	7.7	7.6	2.9	9.4	8.7	
MID	J	T_1	3.5	9.9	9.8	5.6	17.7	13.8	
		D	4.8	16.6	13.9	7.1	25.7	17.8	
		T_2	4.8	15.0	14.3	7.0	22.2	17.6	
		N	3.5	9.9	9.6	5.6	17.7	13.3	
	D	T_1	2.6	5.9	6.5	3.3	8.4	8.4	
		D	4.0	20.1	10.6	7.2	39.1	16.9	
		T_2	2.4	10.0	7.5	4.7	32.9	10.9	
		N	2.4	5.9	6.9	3.2	8.4	7.9	
NAT	J	T_1	2.9	10.4	10.7	4.1	12.2	11.1	
		D	4.1	13.0	12.7	5.0	14.0	13.1	
		T_2	4.1	13.9	14.2	5.9	16.6	16.1	
		N	2.6	9.3	9.1	4.1	12.3	11.5	
	D	T_1	2.0	5.0	8.4	3.0	7.0	10.2	
		D	2.8	7.7	9.5	5.2	12.2	11.5	
		T_2	2.1	5.1	8.3	5.1	8.5	11.6	
		N	2.0	5.1	7.5	3.2	7.6	8.8	

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
NP	J	T_1	3.5	11.6	11.5	4.8	12.3	12.9
		D	4.1	13.2	12.7	5.5	14.8	14.5
		T_2	4.2	13.2	13.6	5.7	16.0	16.0
		N	3.3	9.1	9.6	4.8	11.8	12.2
	D	T_1	2.4	6.5	6.4	2.6	6.6	7.3
		D	3.3	9.9	9.1	6.2	12.3	9.8
		T_2	2.2	6.5	6.7	3.5	9.7	8.6
		N	2.2	6.5	6.4	2.4	6.6	7.3
AFI	J	T_1	1.5	4.8	7.7	4.3	7.0	12.1
		D	5.6	14.4	15.1	9.2	23.4	22.3
		T_2	4.5	9.7	9.1	7.8	15.0	19.4
		N	1.5	4.8	5.3	4.5	6.4	8.5
	D	T_1	1.6	7.8	8.1	4.9	16.0	9.7
		D	5.6	16.3	10.9	10.1	22.5	16.5
		T_2	5.3	14.4	11.4	7.8	22.2	24.2
		N	1.6	8.1	8.0	5.6	16.7	12.7
SAT	J	T_1	1.7	5.0	6.2	3.2	11.2	9.7
		D	5.4	14.1	10.7	9.3	20.5	17.3
		T_2	4.3	14.1	8.5	10.6	18.9	15.2
		N	2.0	3.4	6.5	4.0	11.5	9.2
	D	T_1	2.4	5.9	5.5	5.8	7.7	9.6
		D	5.1	14.6	16.9	8.5	25.2	28.7
		T_2	4.9	10.0	12.6	9.9	17.8	25.6
		N	2.6	6.1	5.5	6.8	7.7	9.6

ZLAMP /MWARA/ ZRMP

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
SAM	J	T_1	1.1	5.0	4.2	2.8	10.6	8.3
		D	5.1	14.2	12.9	10.8	22.6	22.0
		T_2	4.6	11.3	8.0	9.2	19.8	15.0
		N	1.5	5.0	5.6	3.6	11.3	9.3
	D	T_1	2.1	7.2	6.2	5.5	15.2	14.5
		D	5.3	15.4	15.9	8.8	22.9	23.5
		T_2	4.9	12.6	16.4	9.4	19.9	21.0
		N	2.1	6.0	6.2	6.0	15.2	15.3
SEA	J	T_1	1.6	5.5	4.8	3.3	12.0	9.4
		D	6.2	15.7	11.1	11.3	23.2	22.4
		T_2	3.1	12.0	9.2	9.7	26.4	12.9
		N	1.2	5.5	6.3	3.0	12.0	9.2
	D	T_1	2.2	5.9	6.2	5.9	11.5	16.6
		D	5.5	16.2	13.0	9.4	25.1	22.0
		T_2	5.2	16.0	12.2	10.3	24.9	19.8
		N	2.2	5.9	9.6	6.2	15.6	15.5
SP	J	T_1	1.7	7.2	8.0	2.7	9.6	9.8
		D	4.8	12.8	12.8	9.4	18.0	16.0
		T_2	2.9	7.7	10.7	7.0	15.1	19.4
		N	2.0	7.2	8.0	3.1	9.9	11.5
	D	T_1	3.5	9.4	5.1	7.0	17.1	12.4
		D	5.5	13.9	14.3	9.5	22.8	23.6
		T_2	5.0	14.1	12.7	8.4	24.5	25.0
		N	3.5	9.4	5.1	7.1	17.1	12.4

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
IO	J	T_1	1.6	6.3	5.1	1.8	9.3	9.4
		D	4.0	16.8	11.6	7.2	26.0	21.3
		T_2	2.9	10.0	9.3	4.8	21.9	12.3
		N	1.8	6.5	6.1	2.0	9.7	9.4
	D	T_1	3.0	6.0	6.0	5.9	12.5	14.9
		D	4.9	18.8	11.1	8.9	27.4	19.7
		T_2	5.1	14.0	13.0	8.0	27.4	19.4
		N	3.3	6.0	9.7	6.2	12.5	16.0
NCA	J	T_1	3.9	11.6	11.4	4.9	13.6	15.1
		D	4.3	13.1	14.7	5.1	14.9	15.9
		T_2	4.6	12.9	15.7	6.0	16.4	18.8
		N	3.5	10.6	11.1	4.9	13.8	15.0
	D	T_1	2.1	5.3	7.7	2.7	7.6	7.7
		D	2.9	5.2	9.8	5.2	9.3	13.8
		T_2	1.6	4.8	8.1	3.2	9.6	9.7
		N	1.7	4.8	7.7	2.9	7.6	7.7
CEAS	J	T_1	3.3	11.8	11.7	5.9	17.7	16.2
		D	5.0	16.7	15.8	7.8	19.4	18.0
		T_2	5.3	18.5	17.0	8.5	23.5	21.3
		N	3.3	11.8	11.4	5.9	17.7	16.2
	D	T_1	1.5	6.6	6.5	2.6	8.0	7.3
		D	4.9	15.7	12.6	9.6	30.5	22.2
		T_2	2.4	8.6	8.0	8.1	18.5	13.1
		N	1.7	7.1	6.5	2.7	8.3	7.3

ZLARN /RDARA/ ZRRN

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
1	J	T_1		7.3	11.5		10.2	16.8
		D		13.6	15.8		16.8	20.2
		T_2		11.9	16.3		14.8	21.5
		N		7.0	10.5		10.0	16.1
	D	T_1		5.9	9.0		6.1	10.1
		D		11.0	15.4		17.0	29.6
		T_2		5.8	8.5		10.0	15.3
		N		6.0	9.0		6.5	11.0
1A	J	T_1	3.5	7.3		5.7	10.2	
		D	4.7	13.6		6.7	16.8	
		T_2	5.1	11.9		7.3	14.8	
		N	3.3	7.0		5.6	10.0	
to	D	T_1	2.6	5.9		3.4	6.1	
		D	4.1	11.0		8.3	17.0	
		T_2	2.5	5.8		5.1	10.0	
1E		N	2.7	6.0		3.4	6.5	
2	J	T_1		8.0	12.0		4.0	7.0
		D		12.8	13.3		4.9	8.8
		T_2		10.2	13.9		4.0	6.2
		N		7.4	9.7		4.0	7.0
	D	T_1		9.1	13.9		5.5	8.1
		D		15.7	15.8		7.2	18.6
		T_2		12.2	16.5		8.5	8.5
		N		9.1	12.7		5.8	7.5

R	S	T	SSN 5			SSN 125			
			O	M	L	O	M	L	
2A	J	T_1	3.7	8.0		1.6	4.0		
		D	4.1	12.8		2.2	4.9		
		T_2	4.0	10.2		1.5	4.0		
		N	3.2	7.4		1.6	4.0		
to	D	T_1	4.7	9.1		2.9	5.5		
		D	5.1	15.7		4.2	7.2		
		T_2	5.5	12.2		3.4	8.5		
2C		N	4.6	9.1		3.0	5.8		
3	J	T_1		10.9	12.0		12.6	13.7	
		D		12.5	13.1		15.5	14.8	
		T_2		12.5	14.2		14.9	16.9	
		N		9.4	10.4		12.0	13.7	
	D	T_1		6.5	5.9		8.4	7.7	
		D		9.0	7.6		16.7	12.7	
		T_2		6.8	4.8		7.2	10.7	
		N		6.5	4.8		6.4	7.7	
3A	J	T_1	3.9	10.9		5.2	12.6		
		D	4.5	12.5		5.4	15.5		
		T_2	4.5	12.5		6.0	14.9		
		N	3.7	9.4		5.1	12.0		
to	D	T_1	2.4	6.5		2.7	8.4		
		D	3.4	9.0		5.5	16.7		
		T_2	2.2	6.8		3.4	7.2		
3C		N	2.2	6.5		2.7	6.4		

ZLARN / RDARA / ZRRN

R	S	T	SSN 5			SSN 125			
			O	M	L	O	M	L	
4	J	T_1		7.3	6.0		15.2	14.2	
		D		15.6	15.8		24.3	24.4	
		T_2		18.7	12.8		26.0	20.6	
		N		7.3	6.2		16.2	14.2	
	D	T_1		5.7	5.0		11.3	14.2	
		D		15.4	17.6		29.4	26.8	
		T_2		19.9	16.2		33.2	23.0	
		N		8.9	4.6		17.3	14.2	
4A	J	T_1	1.1	7.3		4.2	15.2		
		D	5.4	15.6		9.5	24.3		
		T_2	4.4	18.7		7.7	26.0		
		N	1.1	7.3		4.2	16.2		
and	D	T_1	1.9	5.7		4.5	11.3		
		D	5.9	15.4		10.2	29.4		
		T_2	5.6	19.9		7.9	33.2		
4B		N	2.0	8.9		5.5	17.3		
5	J	T_1		9.1	6.6		13.4	15.3	
		D		14.1	14.7		17.3	22.1	
		T_2		13.9	15.5		18.1	20.3	
		N		9.2	7.5		14.0	16.1	
	D	T_1		6.0	3.8		7.7	11.2	
		D		10.7	16.9		18.0	25.5	
		T_2		6.7	15.7		15.2	21.9	
		N		6.2	4.6		8.9	14.0	

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
5A	J	T_1	3.3	9.1		6.0	13.4	
		D	4.9	14.1		8.0	17.3	
		T_2	5.0	13.9		7.3	18.1	
		N	3.3	9.2		6.0	14.0	
to	D	T_1	1.7	6.0		2.7	7.7	
		D	4.3	10.7		9.2	18.0	
		T_2	2.1	6.7		7.2	15.2	
5D		N	2.0	6.2		2.9	8.9	
6	J	T_1		11.3	11.1		17.3	16.1
		D		15.9	15.2		20.6	21.9
		T_2		18.1	15.1		24.1	23.8
		N		11.1	9.9		17.3	16.0
	D	T_1		6.6	4.9		8.7	8.8
		D		15.2	13.6		29.2	22.7
		T_2		9.0	7.8		23.3	26.0
		N		7.7	4.9		10.1	9.6
6A	J	T_1	2.5	11.3		5.2	17.3	
		D	4.8	15.9		8.0	20.6	
		T_2	4.7	18.1		9.0	24.1	
		N	2.5	11.1		5.2	17.3	
to	D	T_1	1.4	6.6		3.3	8.7	
		D	5.7	15.2		11.7	29.2	
		T_2	3.6	9.0		12.0	23.3	
6G		N	1.5	7.7		3.6	10.1	

ZLARN / RDARA /ZRRN

R	S	T	SSN 5			SSN 125			
			O	M	L	O	M	L	
7	J	T_1		5.3	4.4		4.7	6.2	
		D		13.6	9.2		21.3	18.0	
		T_2		8.7	14.3		13.8	13.5	
		N		4.3	4.4		5.3	6.2	
	D	T_1		6.2	6.7		10.9	14.6	
		D		14.8	14.9		18.4	22.9	
		T_2		13.2	12.8		19.4	23.8	
		N		6.2	7.2		11.3	16.1	
7A	J	T_1	1.8	5.3		2.1	4.7		
		D	4.0	13.6		6.7	21.3		
		T_2	2.5	8.7		4.0	13.8		
		N	2.0	4.3		2.4	5.3		
to	D	T_1	2.4	6.2		4.0	10.9		
		D	4.3	14.8		7.4	18.4		
		T_2	5.0	13.2		8.1	19.4		
7E		N	2.4	6.2		4.1	11.3		
8A	J	T_1	1.9	-	5.6	2.2	-	6.0	
		D	3.6	-	13.7	7.6	-	26.6	
		T_2	2.3	-	8.1	3.1	-	12.8	
		N	1.9	-	7.3	2.2	-	6.0	
	D	T_1	3.2	-	9.4	5.0	-	16.9	
		D	4.9	-	15.5	6.9	-	25.3	
		T_2	4.6	-	15.5	6.5	-	21.2	
		N	3.1	-	10.5	5.0	-	16.9	

R	S	T	SSN 5			SSN 125			
			O	M	L	O	M	L	
9	J	T_1		5.0	8.0		9.7	8.8	
		D		15.9	12.7		29.5	18.0	
		T_2		8.9	10.4		24.5	14.4	
		N		4.1	9.1		9.7	8.8	
	D	T_1		6.9	10.3		15.7	17.6	
		D		17.9	12.9		27.1	21.3	
		T_2		10.6	15.2		20.4	23.2	
		N		4.8	10.3		14.8	17.6	
9A	J	T_1	2.1	5.0		2.8	9.7		
		D	4.4	15.9		8.9	29.5		
		T_2	2.8	8.9		5.3	24.5		
		N	2.1	4.1		2.8	9.7		
to	D	T_1	3.5	6.9		6.3	15.7		
		D	5.7	17.9		9.2	27.1		
		T_2	5.3	10.6		8.3	20.4		
9E		N	3.5	4.8		6.3	14.8		
9	J	T_1		6.6	8.0		6.4	8.8	
		D		11.8	12.7		18.7	18.0	
		T_2		6.7	10.4		9.6	14.4	
		N		6.6	9.1		6.4	8.8	
	D	T_1		7.7	10.3		11.1	17.6	
		D		13.7	12.9		17.0	21.3	
		T_2		11.0	15.2		15.8	23.2	
		N		7.7	10.3		11.0	17.6	

ZLARN / RDARA / ZRRN

R	S	T	SSN 5 O	SSN 5 M	SSN 5 L	SSN 125 O	SSN 125 M	SSN 125 L	
9F	J	T_1	2.6	6.6		2.9	6.4		
		D	3.8	11.8		6.0	18.7		
		T_2	2.5	6.7		4.6	9.6		
		N	2.5	6.6		3.3	6.4		
to	D	T_1	3.2	7.7		4.9	11.1		
		D	4.8	13.7		6.3	17.0		
		T_2	5.3	11.0		7.2	15.8		
9J		N	3.2	7.7		4.9	11.0		
10	J	T_1		9.2	11.6		11.9	11.5	
		D		12.7	14.1		15.8	16.1	
		T_2		9.8	13.6		10.2	16.4	
		N		7.2	8.2		8.6	11.1	
	D	T_1		5.4	7.9		6.6	9.8	
		D		8.8	10.5		13.5	19.4	
		T_2		5.6	6.8		9.4	13.3	
		N		5.4	6.8		6.6	9.8	
10A	J	T_1	3.3	9.2		3.7	11.9		
		D	4.0	12.7		4.4	15.8		
		T_2	4.2	9.8		5.5	10.2		
		N	2.6	7.2		3.6	8.6		
to	D	T_1	2.3	5.4		2.9	6.6		
		D	3.7	8.8		6.0	13.5		
		T_2	2.2	5.6		4.8	9.4		
10F		N	2.1	5.4		2.9	6.6		

R	S	T	SSN 5			SSN 125			
			O	M	L	O	M	L	
11	J	T_1		8.8	9.1		10.3	11.0	
		D		12.6	13.5		17.4	15.5	
		T_2		13.9	14.3		16.0	17.4	
		N		8.0	8.6		10.3	11.0	
	D	T_1		7.3	9.5		7.8	10.5	
		D		9.8	11.9		12.0	19.5	
		T_2		7.2	7.4		18.8	13.7	
		N		6.8	7.4		9.1	10.2	
11A	J	T_1	2.7	8.8		3.8	10.3		
		D	4.2	12.6		5.1	17.4		
		T_2	4.7	13.9		6.1	16.0		
		N	2.4	8.0		3.8	10.3		
and	D	T_1	2.6	7.3		3.1	7.8		
		D	4.3	9.8		7.5	12.0		
		T_2	2.3	7.2		5.8	18.8		
11B		N	2.3	6.8		3.5	9.1		
12	J	T_1		8.0	9.1		11.7	19.1	
		D		15.8	13.9		17.7	21.2	
		T_2		11.0	10.3		16.4	22.7	
		N		6.7	8.3		11.7	16.8	
	D	T_1		6.0	8.2		6.5	10.7	
		D		12.3	17.3		22.8	27.9	
		T_2		8.0	10.9		13.2	26.0	
		N		6.0	4.4		6.5	10.7	

ZLARN /RDARA / ZRRN

R	S	T	SSN 5 O	SSN 5 M	SSN 5 L	SSN 125 O	SSN 125 M	SSN 125 L
12A	J	T_1	2.8	8.0		5.1	11.7	
		D	4.5	15.8		7.9	17.7	
		T_2	4.7	11.0		7.6	16.4	
		N	2.8	6.7		5.3	11.7	
to	D	T_1	2.0	6.0		2.7	6.5	
		D	4.4	12.3		10.0	22.8	
		T_2	2.8	8.0		5.9	13.2	
12I		N	2.1	6.0		2.7	6.5	
13	J	T_1		3.4	5.1		5.2	9.9
		D		8.8	18.1		15.2	27.6
		T_2		5.7	11.4		13.2	23.9
		N		3.4	4.6		5.2	9.9
	D	T_1		5.7	8.8		9.8	16.9
		D		11.8	15.2		14.6	21.2
		T_2		9.5	12.0		14.5	21.3
		N		5.7	6.3		9.8	15.3
13A	J	T_1	1.7	3.4		2.9	5.2	
		D	4.2	8.8		7.9	15.2	
		T_2	3.4	5.7		8.7	13.2	
		N	1.5	3.4		2.9	5.2	
to	D	T_1	2.8	5.7		6.0	9.8	
		D	5.1	11.8		8.3	14.6	
		T_2	5.2	9.5		10.1	14.5	
13L		N	2.8	5.7		6.0	9.8	

VOLMET

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
AFI	J	T_1	1.9	7.3	8.7	4.2	15.0	17.3
		D	5.7	11.8	9.4	10.7	20.4	17.3
		T_2	3.7	11.0	13.2	10.3	24.1	25.2
		N	1.9	5.4	5.5	4.2	14.3	13.5
	D	T_1	1.9	7.8	7.4	5.2	17.3	10.0
		D	6.5	14.2	7.4	9.5	20.0	10.0
		T_2	6.2	16.0	17.0	11.5	22.9	25.7
		N	1.9	5.7	6.6	6.8	15.0	14.9
NAT	J	T_1	2.7	8.6	8.4	4.4	13.6	15.1
		D	4.2	8.6	13.6	6.2	16.1	19.4
		T_2	4.6	13.8	12.3	6.8	17.5	20.9
		N	2.4	8.2	8.4	4.4	18.1	15.1
	D	T_1	2.5	5.7	4.2	3.3	7.9	9.0
		D	4.1	10.8	13.2	9.6	16.9	21.9
		T_2	2.3	5.8	9.2	5.6	12.0	20.8
		N	2.3	5.7	4.2	3.3	7.9	10.1
EUR	J	T_1	3.7	8.9	11.5	4.9	15.8	12.0
		D	4.3	14.0	12.6	5.7	20.8	14.7
		T_2	4.4	13.1	12.3	6.1	20.8	13.7
		N	3.0	8.4	8.8	4.8	15.7	11.2
	D	T_1	2.0	5.6	5.0	2.5	6.5	7.8
		D	3.0	13.1	8.1	7.1	22.0	14.1
		T_2	2.0	8.3	6.0	3.3	12.6	8.9
		N	2.2	7.8	5.2	2.6	7.5	8.0

VOLMET

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
MID	J	T_1	3.5	12.3	10.9	5.6	19.3	14.2
		D	4.7	16.7	13.2	7.1	24.4	16.9
		T_2	4.7	14.6	13.2	7.0	20.4	16.9
		N	3.5	11.2	10.2	5.6	18.0	13.5
	D	T_1	2.5	6.5	7.2	3.3	9.2	8.5
		D	4.2	13.9	11.3	7.9	33.9	21.3
		T_2	2.4	7.4	6.4	4.3	21.2	9.9
		N	2.5	6.5	6.4	3.3	8.6	7.8
PAC	J	T_1	2.3	10.6	10.4	4.9	23.2	13.6
		D	5.3	7.2	9.6	8.2	17.2	12.8
		T_2	4.2	5.7	10.8	8.2	14.9	15.8
		N	2.3	6.8	10.1	4.9	14.9	15.4
	D	T_1	1.5	12.4	7.2	4.1	26.9	7.4
		D	5.8	5.8	6.4	12.2	14.0	6.6
		T_2	5.1	7.5	7.6	12.0	16.9	12.7
		N	1.5	8.4	6.8	4.1	16.9	8.8
SEA	J	T_1	1.5	9.2	10.7	5.1	15.9	14.9
		D	5.6	13.5	11.9	9.3	15.8	22.0
		T_2	4.6	14.4	9.1	8.6	16.7	13.5
		N	1.5	10.6	10.0	5.3	15.3	11.7
	D	T_1	1.4	5.7	9.2	4.4	9.0	10.8
		D	5.9	9.9	11.0	10.2	16.9	12.0
		T_2	5.2	8.4	10.5	8.6	8.0	21.9
		N	1.4	8.0	7.6	4.9	7.7	8.5

R	S	T	SSN 5			SSN 125		
			O	M	L	O	M	L
CAR	J	T_1	2.7	8.5	8.3	5.3	14.9	14.2
		D	4.4	13.9	15.8	7.8	19.1	23.0
		T_2	4.3	15.0	9.7	8.1	20.6	24.5
		N	2.7	8.5	5.6	5.3	15.0	12.0
	D	T_1	2.2	7.7	8.4	2.8	9.6	9.8
		D	4.3	11.6	16.5	9.5	23.6	27.3
		T_2	2.7	8.3	9.0	6.0	13.3	19.7
		N	2.2	7.5	7.3	2.8	8.6	10.4
SAM	J	T_1	1.5	6.8	5.9	3.0	10.3	11.2
		D	4.4	11.8	9.0	8.2	19.4	13.6
		T_2	3.9	7.9	12.2	9.3	10.7	22.8
		N	2.3	6.6	7.7	3.9	8.1	16.2
	D	T_1	2.6	4.9	5.8	5.8	13.4	10.0
		D	5.1	16.5	14.4	8.2	23.8	22.5
		T_2	5.3	18.2	12.3	10.4	23.8	29.2
		N	2.6	6.8	5.8	6.1	16.3	10.0
NCA	J	T_1	4.0	11.0	9.9	5.0	13.1	13.8
		D	4.4	12.9	9.5	5.2	15.8	13.5
		T_2	4.5	13.5	12.5	6.1	16.3	14.3
		N	3.4	10.8	12.6	4.9	13.0	14.5
	D	T_1	2.1	5.3	5.1	2.7	8.4	6.6
		D	2.5	6.5	3.8	5.8	14.4	7.4
		T_2	1.6	4.7	5.5	3.1	10.0	9.7
		N	1.8	5.5	4.8	2.7	8.0	7.6

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document No. DT/9-F/E/S
8 février 1978
Original: français
anglais
espagnol

COMMISSION 5

Conformément aux souhaits exprimés lors de la première séance de la Commission 5, les limites des ZLARN décrites dans les propositions des Administrations, sont représentées sur les cartes ci-jointes. Les propositions contenues dans les documents jusqu'au Document N° 53 sont montrées dans les cartes 1 et 2 et les propositions dans les documents suivants sont montrées dans les cartes 3 et 4.

Annexes: 4 cartes

COMMITTEE 5

In accordance with the wishes expressed in the first meeting of Committee 5, the boundaries of RDARAs, as described in the proposals from Administrations, are shown in the enclosed maps. The proposals contained in documents up to Document No. 53 are shown in Maps 1 and 2 and the proposals in the later documents are shown in Maps 3 and 4.

Enclosures: 4 Maps

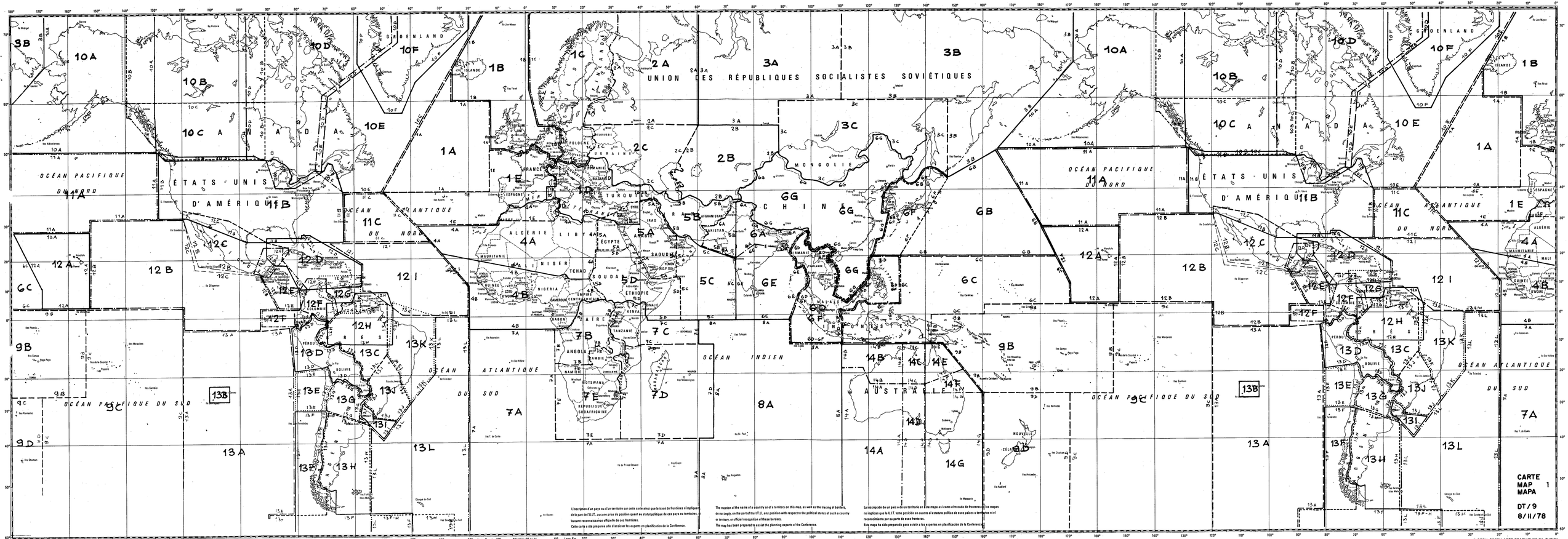
COMISION 5

De conformidad con los deseos expresados en la primera sesión de la Comisión 5, en los mapas adjuntos se muestran los límites de las Zonas de paso de Rutas Aéreas Regionales y Nacionales (ZRRN), descritas en las proposiciones de las Administraciones. Las proposiciones contenidas en los documentos de la Conferencia hasta el Documento N.° 53 aparecen en los mapas 1 y 2 y las proposiciones de documentos posteriores en los mapas 3 y 4.

Anexos: 4 mapas

M. CHEF
Président de la Commission 5

ARCHIVES U.I.T. GENÈVE



L'inscription d'un pays ou d'un territoire sur cette carte ainsi que le tracé de frontières n'impliquent de la part de l'U.I.T. aucune prise de position quant au statut politique de ces pays ou territoires, ni aucune reconnaissance officielle de ces frontières.
Cette carte a été préparée afin d'assister les experts en planification de la Conférence.

The mention of the name of a country or of a territory on this map, as well as the tracing of borders, do not imply, on the part of the I.T.U., any position with respect to the political status of such a country or territory, or official recognition of these borders.
The map has been prepared to assist the planning experts of the Conference.

La inscripción de un país o de un territorio en este mapa así como el trazado de fronteras en los mapas no implican que la U.I.T. tome posición en cuanto al estatuto político de esos países o territorios ni el reconocimiento por su parte de esas fronteras.
Este mapa ha sido preparado para asistir a los expertos en planificación de la Conferencia.

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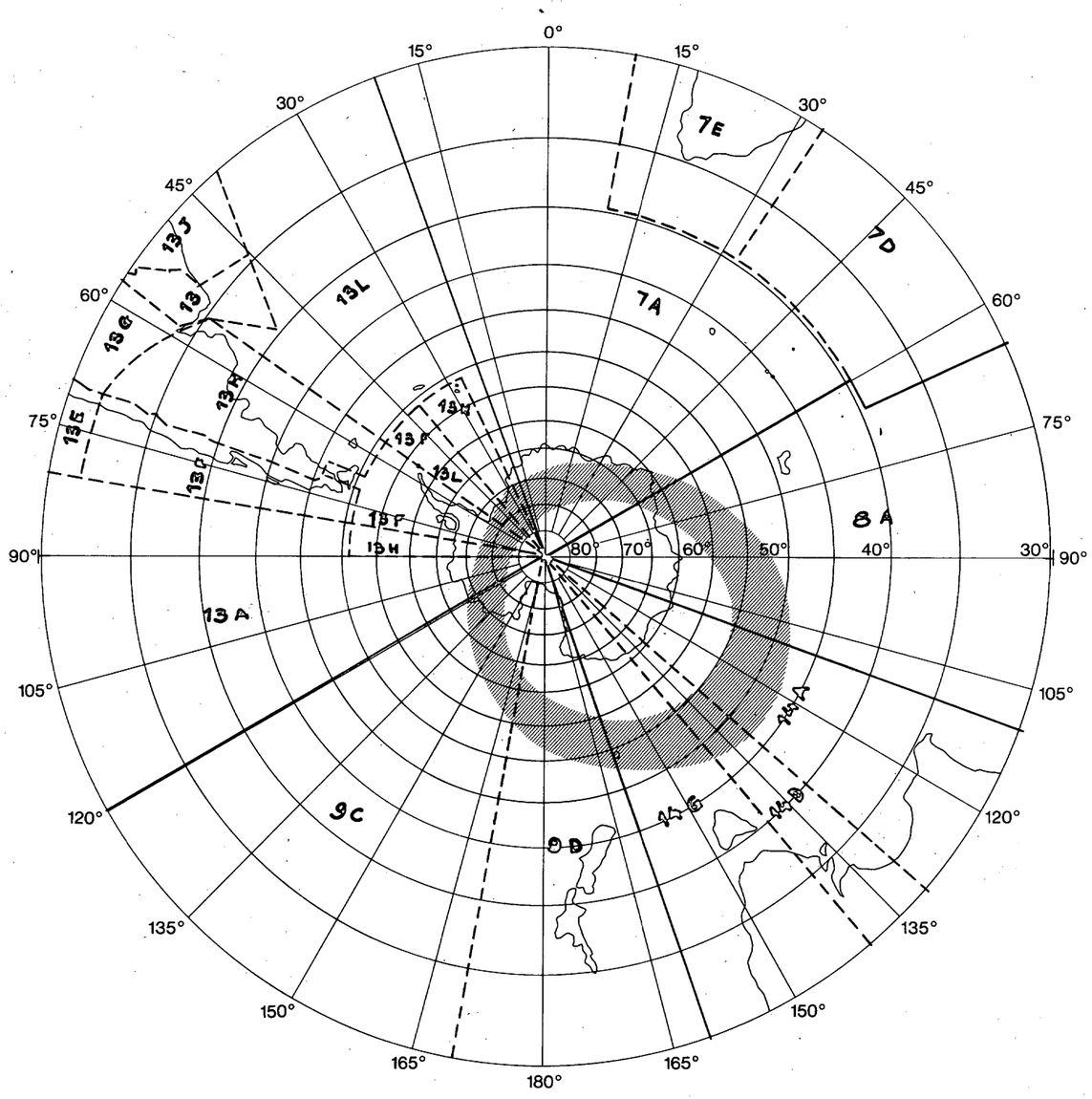
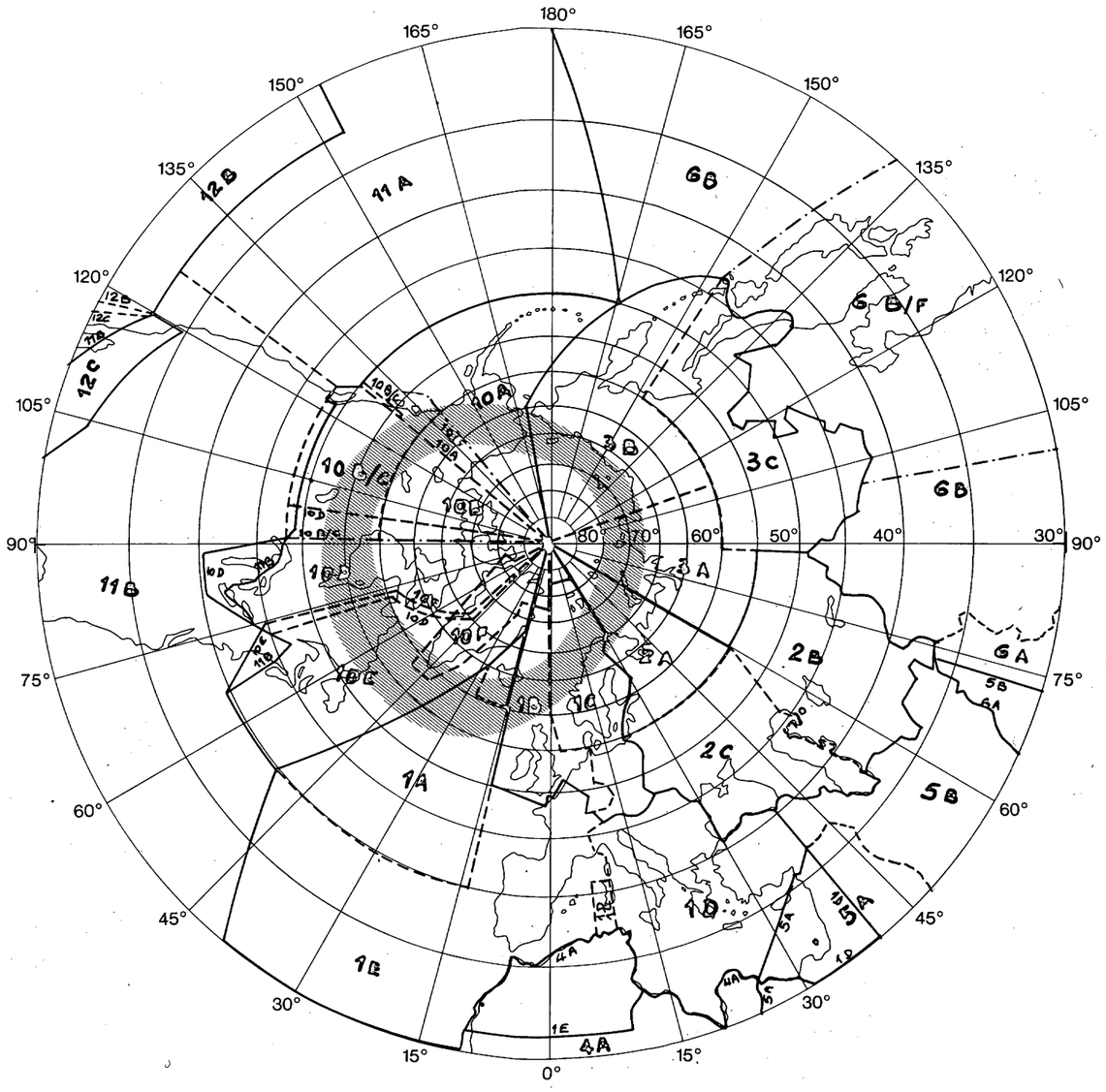
POLE SUD – SOUTH POLE – POLO SUR



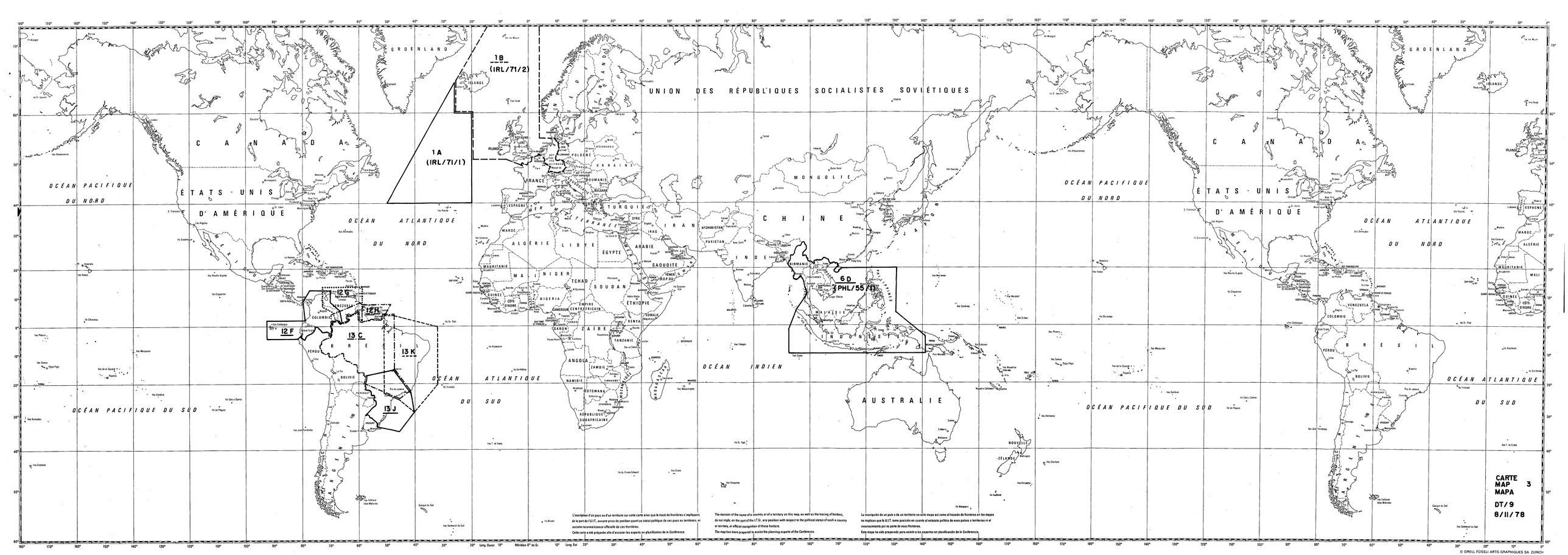
POLE NORD – NORTH POLE – POLO NORTE



PROJECTION GNOMONIQUE
GNOMONIC PROJECTION
PROYECCIÓN GNOMÓNICA

CARTE
MAP 2
MAPA

DT/9
8/11/78



L'inscription d'un pays ou d'un territoire sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'U.I.T., aucune prise de position quant au statut politique de ces pays ou territoires, ni aucune reconnaissance officielle de ces frontières.
Cette carte a été préparée afin d'assister les experts en planification de la Conférence.

The mention of the name of a country or of a territory on this map, as well as the tracing of borders, do not imply, on the part of the I.T.U., any position with respect to the political status of such a country or territory, or official recognition of these borders.
The map has been prepared to assist the planning experts of the Conference.

La inscripción de un país o de un territorio en este mapa así como el trazado de fronteras en los mapas no implican que la U.I.T. tome posición en cuanto al estatuto político de esos países o territorios ni el reconocimiento por su parte de esas fronteras.
Este mapa ha sido preparado para asistir a los expertos en planificación de la Conferencia.

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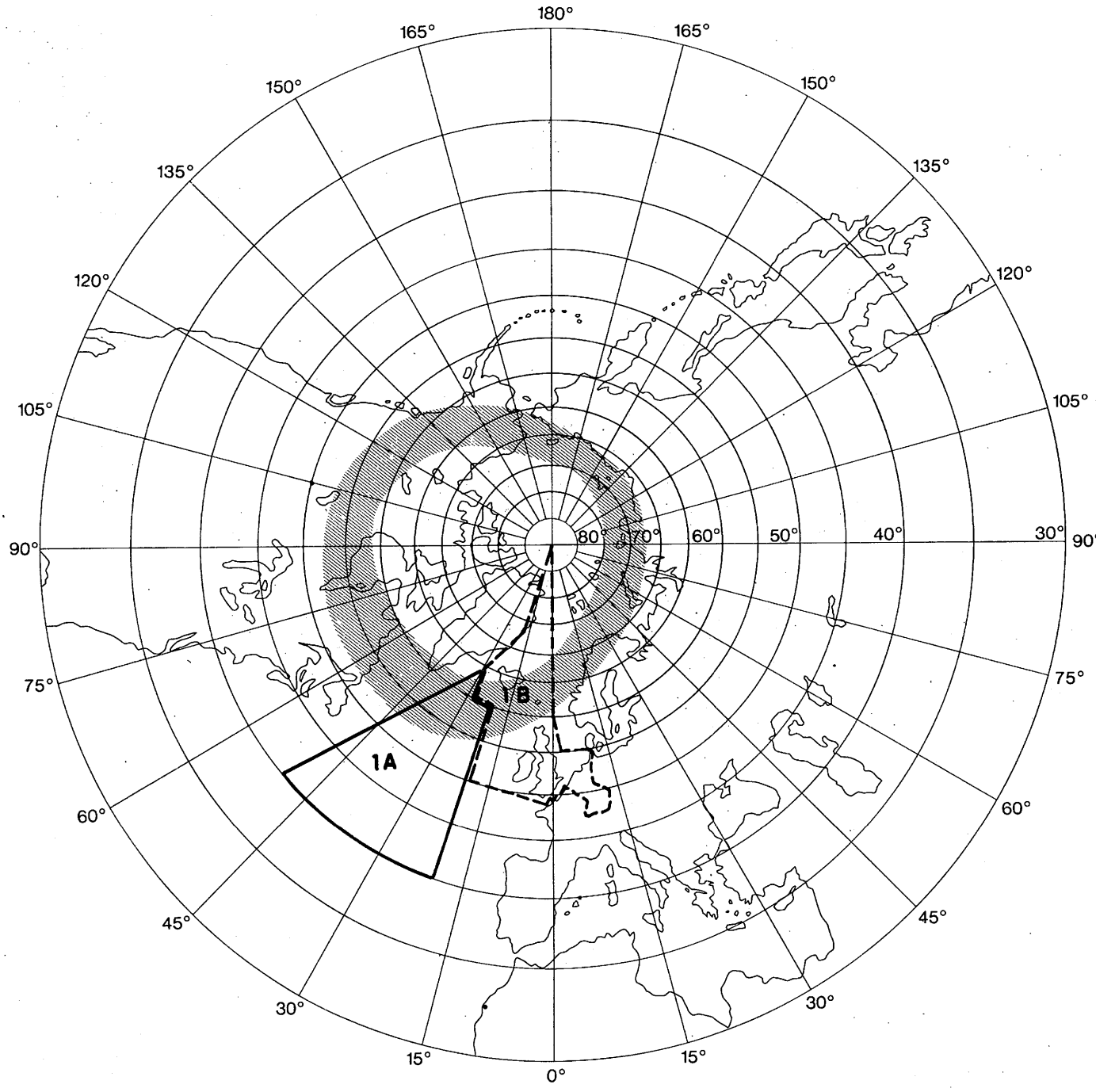
POLE NORD – NORTH POLE – POLO NORTE



PROJECTION GNOMONIQUE
GNOMONIC PROJECTION
PROYECCIÓN GNOMÓNICA

CARTE
MAP 4
MAPA

DT/9
8/11/78

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/10-F/E/S
9 février 1978
Original: français
anglais
espagnol

COMMISSION 5

On trouvera dans l'annexe ci-jointe les décisions prises à la deuxième séance de la Commission 5, concernant les limites des ZLAMP.

L'annexe ne contient pas la description des limites des ZLAMP CAR, AFI et NCA; celles-ci feront l'objet d'un autre document.

La carte des ZLAMP sera aussi définitivement établie une fois que des décisions auront été prises au sujet de toutes les ZLAMP.

COMMITTEE 5

The decisions taken at the second meeting of Committee 5 concerning the boundaries of MWARAs are reproduced in the enclosure.

The enclosure does not include the description of the boundaries of MWARAs CAR, AFI and NCA; these will be the subject of a separate document.

The map of MWARAs will also be finalized when decision on all MWARAs are available.

COMISIÓN 5

En el anexo se recogen las decisiones tomadas en la segunda sesión de la Comisión 5 con respecto a los límites de las ZRMP.

En el anexo no figura la descripción de los límites de las ZRMP CAR, AFI y NCA; las indicaciones al respecto se incluirán en un documento separado.

También se completará el mapa de las ZRMP una vez que se hayan tomado decisiones sobre todas las ZRMP.

M. CHEF
Président de la Commission 5

ARTICLE 1

DESCRIPTION OF THE BOUNDARIES OF THE MAJOR WORLD AIR ROUTE AREAS (MWARAs)

MOD 27/82 Major World Air Route Area - CENTRAL EAST PACIFIC (MWARA-CEP)

From the point 50°N 122°W through the points 38°N 120°W, 15°N 110°W, 20°S 145°W, 20°S 152°W, 30°N 165°W, to the point 50°N 122°W.

MOD 27/83 Major World Air Route Area - CENTRAL WEST PACIFIC (MWARA-CWP)

From the point 40°N 117°E through the points 25°N 155°W, 17°N 155°W, 00° 165°W, 00° 170°E, 12°S 165°E, 12°S 136°E, 09°N 115°E, 23°N 114°E, to the point 40°N 117°E.

MOD 27/84 Major World Air Route Area - EUROPE (MWARA-EUR)

From the point 33°N 12°W through the points 54°N 12°W, 70°N 00°, 74°N 40°E, 74°N 52°E, 60°N 52°E, 40°N 36°E, 29°N 35° 30'E, 32°N 13°E, to the point 33°N 12°W.

SUP 27/85

ADD 27/85A Major World Air Route Area - INDIAN OCEAN (MWARA-INO)

From the South Pole through the points 30°S 26°E, 20°N 35°E, 30°N 60°E, 30°N 90°E, 30°S 120°E, 40°S 160°E to the South Pole.

MOD 27/87 Major World Air Route Area - NORTH ATLANTIC (MWARA-NAT)

From the North Pole through the points 60°N 135°W, 49°N 120°W, 49°N 74°W, 39°N 78°W, 18°N 66°W, 05°N 55°W, 16°N 26°W, 32°N 08°W, 44°N 02°E, 60°N 20°E, to the North Pole.

SUP 27/88
SUP 27/89
SUP 27/90
SUP 27/91
SUP 27/92
SUP 27/93

MOD 27/94 Major World Air Route Area - NORTH PACIFIC (MWARA-NP)

From the North Pole through the points 60°N 135°W, 47°N 118°W, 30°N 165°W, 30°N 115°E, 41°N 116°E, 55°N 135°E to the North Pole.

SUP 27/96
SUP 27/97

MOD 27/98 Major World Air Route Area - SOUTH ATLANTIC (MWARA-SAT)

From the South Pole through the points 30°S 75°W, 10°S 40°W, 00° 60°W, 20°N 60°W, 25°N 25°W, 41°N 15°W, 41°N 03°W, 15°N 03°W, 20°S 32°E to the South Pole.

SUP 27/99

MOD 27/100 Major World Air Route Area - SOUTH AMERICA (MWARA-SAM)

From the South Pole through the points 15°N 125°W, 15°N 60°W, 10°N 60°W, 05°S 30°W, 36°S 52°W, to the South Pole.

SUP 27/101

MOD 27/102 Major World Air Route Area - SOUTH EAST ASIA (MWARA-SEA)

From the point 26°N 130°E, through the points 00° 130°E, 00° 135°E, 12°S 145°E, 12°S 160°E, 25°S 155°E, 40°S 150°E, 35°S 115°E, 18°N 62°E, 26°N 65°E, to the point 26°N 130°E.

MOD 27/103 Major World Air Route Area - SOUTH PACIFIC (MWARA-SP)

From the South Pole through the points 38°S 145°E, 00° 167°E, 00° 175°W, 22°N 158°W, 22°N 156°W, 00° 120°W to the South Pole.

ADD 27/103A Major World Air Route Area - EAST ASIA (MWARA- EA)

From the point 55°N 124°E through the points 37°N 145°E, 26°N 130°E, 00° 130°E, 00° 80°E, 18°N 62°E, 37°N 67°E, 55°N 80°E to the point 55°N 124°E.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/11-E
9 February 1978
Original : English

WORKING GROUP 4A

DRAFT

REPORT OF THE CHAIRMAN WORKING GROUP 4A

TO THE CHAIRMAN OF COMMITTEE 4

The Working Group has held two meetings to study the matters attributed to it under the Terms of Reference as given in Document No. DT/5. The work was mainly concentrated to the examination of the Relevant provisions of Appendix 27 namely Nos. 27/14 and 27/24 to 27/48.

In addition the problems related to the adjacent channel interference and 3rd order intermodulation products were discussed.

After having examined the proposals submitted to the Conference by the Administrations, the Working Group 4A unanimously proposes the texts annexed hereto.

H.J. MULLER

Chairman of Working Group 4A

ARCHIVES U.I.T. GENÈVE

ANNEX

MOD 27/14 For the avoidance of potential interference, adjacent channels in the List of Frequencies at No. 27/16 should not as a rule be allotted to the same Major World Air Route, Volmet or RDARA Areas.

However, to satisfy particular needs in the assignment of adjacent channels derived from the table (No. 27/16), special arrangements may be made by the Administrations concerned.

B. Interference Range Contours

MOD 27/24

1.1 General Provisions

(a) Service Range - Due to factors such as the power of the transmitter, propagation loss, noise level, etc., there is a limit to the distance at which reliable communications can be effected between an aeronautical station and an aircraft station. This limiting distance, based on the weakest path, is the service range. Often, the boundary of the air route area is assumed to be the limiting distance.

(b) Interference Range - This is the minimum distance from the limit of the service range of a wanted station to a potentially interfering station, needed to produce a protection ratio of 15 dB. This protection ratio is between the wanted signal at an aircraft station at the limit of the service range and the signal from a potentially interfering aeronautical station operating on the same frequency. The interference range has been calculated for different frequencies indicated on the data tables contained in Nos. 27/39 - 27/48 for day and night conditions, for various latitudes, for conditions of median sunspot activity and for a mean effective radiated power of 1.0 kW at the aeronautical station.

(c) Repetition Distance - This is the distance at which a frequency may be successfully shared and is equal to the sum of the service range and the interference range.

(d) Figure 1 illustrates the use of the concept of interference range in frequency planning through the determination of repetition distance.

1.1A Transparencies

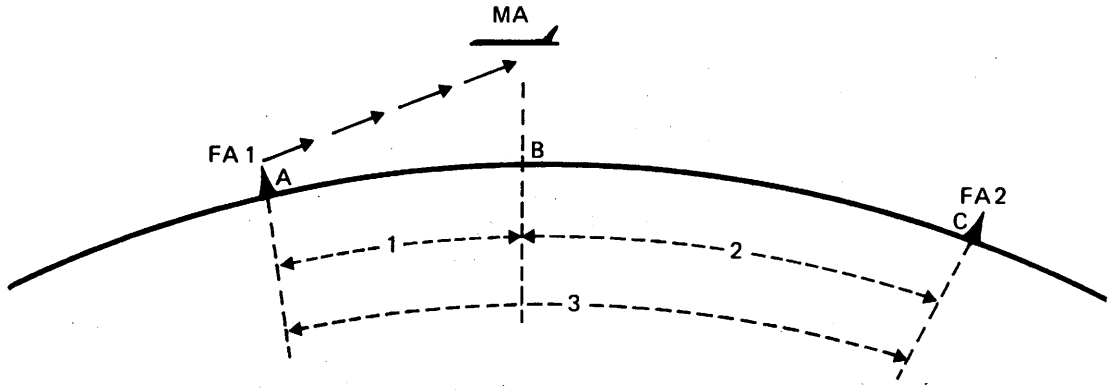
The transparencies associated with this Appendix show, for the frequencies stated, the interference range described in 1.1(b) which would be required between an interfering aeronautical station and an aircraft station operating at the limit of its service range. Because of the variability of propagation conditions not only from hour to hour within the day-time and night-time periods but also from day-to-day, with season, with solar activity level and geographic location the 15 dB protection ratio may be expected to have marked variations and accordingly a greater protection may be available much of the time especially when the aircraft is not operating at the limit of its service range.

1.2 This table is contained here for information purposes only. The table was prepared at the 1948 and 1949 I.T.U. Conferences and was based on the operation of a representative aeronautical communication system.

Frequency Band MHz	Service Range km		Interference Range km		Repetition Distance km	
	Day	Night	Day	Night	Day	Night
3	100	500	700	3500	800	4000
3·5	100	800	700	3500	800	4300
4·7	350	1400	1200	5500	1550	6900
5·6	450	1800	1500	6500	1950	8300
6·6	650	2200	1900	8000	2550	10200
9	1000	3400	3800	11000	4800	14400
10	1250	–	5500	–	6750	–
11·3	1500	–	6000	–	7500	–
13·3	1900	–	7700	–	9600	–
18·0	2600	–	10000	–	12600	–

As noted in 27/24A, the service range is normally assumed to be the boundary of the air route area. The service ranges contained in this table are not normally used in the application of the interference range contours.

The interference ranges shown in this table, in some cases, differ from those interference ranges shown in Nos. 27/39 – 27/48; this difference is due to the decision of the 1948 and 1949 I.T.U. Conferences to minimize the number of interference range contours.



FA1 = aeronautical station in communication with aircraft station MA
FA2 = aeronautical station in communication with aircraft stations other than MA
MA = aircraft station in communication with aeronautical station FA1
1 = service range AB
2 = interference range CB
3 = repetition distance AC

Fig. 1 Service Range, Interference Range, Repetition Distance

NOC **27/25** 1.2 Two types of transparencies are provided for use respectively with the Mercator projection world maps and the Gnomonic projection maps for the polar areas. The Mercator projection transparencies encompass the area between latitude 60° North and 60° South. The Gnomonic projection transparencies encompass the areas north of latitude 30° North and south of latitude 30° South. The Mercator projection overlaps the Gnomonic projection between latitudes 30°-60° North and 30°-60° South. This overlap is intended to provide continuity between transparencies of the two projections.

[Note : With respect to the maps referred to in No. 27/25 the Working Group recommends that the appropriate country names are to be used throughout.]

2. *Type of maps used*

NOC **27/26** The transparencies mentioned in Nos. **27/24** and **27/25**, can be used only on a world or polar map of the projection and scales given on each transparency and will not be suitable for use on any other projection or scale. The world and polar maps associated with this Appendix, depicting MWARA, RDARA and VOLMET areas, are to the correct scale so that the transparencies carrying the interference range contours can be directly used on these maps. The auroral zones are marked on the polar maps.

3. *Change of Scale of Projection*

NOC **27/27** 3.1 Should any other scale or projection be desired, then new interference range contours can be drawn to fit the new scales or projections, by using the co-ordinates given in the tables shown below.

NOC **27/28** 3.2 When new transparencies are constructed, the intersection of the vertical line of symmetry, i.e., the meridian of longitude and the horizontal line of latitude should be at 00° latitude for the 00° contour, 20°N for the 20° contour, 40°N for 40° contour, etc.

NOC **27/29** 3.3 The co-ordinates shown in the tables under Nos. **27/39-27/48** are given with reference to the 180° meridian taken as the axis of symmetry for the construction of the contours.

MOD 27/30 **4.1 The transparencies are constructed on the basis of the following sharing conditions:**

Areas	Bands between: Mc/s	Sharing conditions
MWARA or VOLMET area to MWARA or VOLMET area	3- 6.6 9-11.3 13-[18][22]	night propagation day propagation [time separation] (no transparencies) *Note*: 6.6 Mc s and 5.6 Mc s sharing conditions are considered to be the same
MWARA or VOLMET area to RDARA	3 - 5.6 6.6-11.3 13-[18][22]	night propagation day propagation [time separation] (no transparencies)
RDARA to RDARA	3 - 4.7 5.6-11.3 13-[18][22]	night propagation day propagation [time separation] (no transparencies)

NOC **27/31** 4.2 The additional " Day " contours included for 3 Mc/s, 3.5 Mc/s and 4.7 Mc/s are for determining daylight sharing possibilities.

MOD 27/32 **5. Method of Use**

5.1 Take the MWARA, RDARA or VOLMET area maps associated with this Appendix and select the transparency for the frequency order and sharing conditions under consideration. (Note: MWARA and RDARA transparencies are equally applicable for world-wide use.)

NOC **27/33** 5.2 The Gnomonic projections are applicable in the polar areas north of 60° North and south of 60° South; and the Mercator projections are applicable between 60° North and 60° South.

MOD 27/34

5.3 Place the centre of the transparency (i.e. the intersection of the axis of symmetry and the latitude line) over the boundary of the area (use the reception area boundary in the case of VOLMET) at the point on the boundary nearest to the potentially interfering transmitter or at the location of the interfering transmitter. Note the latitude of the selected point and use the interference range contour corresponding to this latitude.

27/35 5.4 A transmitter located at any point outside the contour will result, as defined in No. **27/24**, in a protection ratio of better than 15 db.

27/36 5.5 A transmitter located at any point inside the contour will result in a protection ratio of less than 15 db. However, if the transmitter is located inside the contour but the propagation path traverses an auroral zone, it is assumed that the signal attenuation within this zone will result in a protection ratio of better than 15 db.

27/37 5.6 For the Northern Hemisphere the Mercator projection transparencies should be used in their natural position as published, but for the Southern Hemisphere the transparencies should be inverted. This point should be carefully observed when following the boundaries of areas which involve the transition of the equator.

27/38 5.7 For either the north or south polar areas, the Gnomonic projection transparency should be positioned so that the north-south line (terminated with an arrow) is parallel to the meridian of longitude, with the arrow pointing towards the pole.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/12-E
9 February 1978
Original : English

WORKING GROUP 4B

DRAFT

FIRST REPORT OF THE CHAIRMAN WORKING GROUP 4B
TO THE CHAIRMAN OF COMMITTEE 4

Under its Terms of reference as shown in Document No. DT/5, Working Group 4B held two meetings to study the matters attributed to it.

The relevant provisions of Appendix 27 especially provisions of Nos. 27/10 to 27/13, 27/15 to 27/19, and 27/24 to 27/53 were discussed.

After having studied the proposals submitted to the Conference by the Administrations, Working Group 4B proposes in its first report the texts annexed hereto to Committee 4 for consideration.

H.T. BLAKER
Chairman of Working Group 4B

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A N N E X

MOD

A. CHANNEL CHARACTERISTICS AND UTILIZATION

MOD 27/10 A frequency separation between carrier (reference) frequencies of 3 kHz is adequate to permit communciations using the classes of emission referred to in Nos. 27/49-27/52 in the frequency bands between 2 850 kHz and 17 970 kHz [22 000 kHz] allocated exclusively to the Aeronautical Mobile (R) Service. The carrier (reference) frequency of the channels in the Plan shall be on integral multiples of 1 kHz.

MOD 27/11 For radiotelephone emissions the audio frequencies will be limited to between 300 and 2 700 Hz and the occupied bandwidth of other authorized emissions will not exceed the upper limit of A3J emissions. In specifying these limits, however, no restriction in their extension is implied in so far as emissions other than A3J are concerned, provided that the limits of unwanted emissions are met [(see ADD 27/66A and ADD 27/66B).

Note : For aircraft and aeronautical station transmitter types first installed before 1 February 1983 the audio frequencies will be limited to 3 000 Hz.]

ADD 27/11A For reasons of possible interference potential a given channel should not be used in the same allotment area for radiotelephony and data transmissions.

MOD 27/12 b) The use of channels, indicated in 27/16 for the various classes of emissions other than A3J and A2H will be subject to special arrangements by the Administrations concerned and affected in order to avoid harmful interference which may result from the simultaneous use of the same channel for several classes of emission.

SUP 27/13

MOD 27/15 The arrangements contemplated in No. 27/12 [and 27/14] should be made under the Articles of the International Telecommunication Convention and the Radio Regulations entitled "Special Arrangements".

MOD 27/16 The list of carrier (reference) frequencies to be allotted in the bands allocated exclusively to the Aeronautical Mobile (R) Service, on the basis of the frequency separation provided for under No. 27/10, will be found in the following table.

[Note : The Working Group agreed that the frequencies in the table should be in 3 kHz steps at integrals of 1 kHz, leaving a guard band of 1 kHz at each bandedge in so far as possible. However, accommodation of the common frequencies 3 023 kHz and 5 680 kHz for continued use of A3 emission will result in a different number of channels being available in the band 2 850-3 025 kHz and 5 480-5 680 kHz. This should be resolved by Committee 5. If special protection for A3 use is necessary the table contained in CAN/20/18 should be used; otherwise the table contained in USA/4/11 should be used.

The majority view of the Working Group was that it was desirable to have a greater number of channels with some lesser degree of protection to the common R and OR frequencies 3 023 and 5 680 kHz.

Additionally, it was agreed that Committee 5 should decide whether the table should include the "assigned" frequency in addition to the carrier (reference) frequency. /

MOD 3. Frequencies common to (R) and (OR) Services

MOD 27/17 The frequencies common to the (R) and (OR) Services, with carrier (reference) frequencies of 3 023 and 5 680 kHz, are authorized for world-wide use as shown in Nos. 27/196 and 27/201.

Notwithstanding these provisions, the carrier (reference) frequency 5 680 kHz may also be used at aeronautical stations for communication with aircraft stations when other frequencies of the aeronautical stations are either unavailable or unknown. However, this use shall be restricted to such areas and conditions that harmful interference cannot be caused to other authorized operations of stations in the Aeronautical Mobile Service.

MOD 27/18 All stations directly involved in coordination search and rescue operations using 3 023 and 5 680 kHz shall transmit only in the upper sideband mode except as provided in Nos. 27/50 and 27/73.

A3 and A3H may be used in accordance with /ITU Resolution Aer 2 (A) paragraph 4.4/.

SUP 27/19

MOD 27/49 1. Classes of emission

In the Aeronautical Mobile (R) Service the use of emissions such as those listed below is permissible if the special provisions applicable to each case are complied with and provided that such use does not cause harmful interference to other users of the channel concerned.

MOD 27/50 1.1 Telephony - Amplitude modulation :

- double sideband (A3)*
- single sideband, full carrier (A3H)*
- single sideband, suppressed carrier (A3J)

* A3 and A3H to be used only on 3 023 kHz and 5 680 kHz and in accordance with proposed ITU Resolution Aer 2 (A), paragraph 4.4.

MOD 27/51 1.2.1 Amplitude modulation

- 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 and including selective calling - single sideband - full carrier — A2H

- multichannel voice frequency telegraphy - single sideband - suppressed carrier — A7J

- other transmission such as automatic data transmission - single sideband - suppressed carrier — A9J

MOD 27/52 1.2.2 Frequency modulation

- telegraphy by frequency shift keying without the use of a modulating audio frequency, one of two frequencies being emitted at any instant — (F1)**

** A1 and F1 are permitted provided they do not cause harmful interference to the classes of emission A2H, A3J, A7J and A9J. In addition, A1 and F1 emissions shall be in accordance with the provisions in MOD 27/65 and MOD 27/66 and care should be taken that emissions should be limited to the centre of the authorized channel.

SUP 27/53

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/13-E
9 February 1978
Original : English

COMMITTEE 5

TERMS OF REFERENCE OF THE WORKING GROUPS OF COMMITTEE 5

In accordance with the decisions reached at the third meeting of Committee 5 on Thursday, 9 February 1978, two Working Groups have been set up with the following terms of reference:

Working Group 5A - Chairman: Mr. E.D. Ducharme (CAN)

Terms of reference:

To examine and, if necessary, to revise the boundaries of RDARAs and Sub-RDARAs on the bases of the proposals received.

Working Group 5B - Chairman: Mr. K. King (AUS)

Terms of reference:

To collate the frequency requirements submitted by the Administrations and to examine the capability of the frequency bands to accommodate the needs of:

- MWARAs
- VOLMET areas
- RDARAs
- Long-distance operational control.

M. CHEF
Chairman of Committee 5

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UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/14-F/E/S
9 février 1978
Original: français
anglais
espagnol

COMMISSION 5

Les décisions prises à la troisième séance de la Commission 5 au sujet des limites des zones d'allotissement et des zones de réception VOLMET sont reproduites en annexe au présent document.

L'Annexe ne définit pas les limites des zones d'allotissement et de réception PAC-MET qui feront l'objet d'un document distinct.

La carte des zones d'allotissement et de réception VOLMET sera définitivement tracée lorsque seront disponibles les décisions relatives à la totalité des zones VOLMET.

COMMITTEE 5

The decisions taken at the third meeting of Committee 5 concerning the boundaries of VOLMET Allotment and Reception Areas are reproduced in the enclosure.

The enclosure does not include the description of the boundaries of PAC-MET Allotment and Reception Areas; these will be the subject of a separate document.

The map of VOLMET Allotment and Reception Areas will also be finalised when decisions on all VOLMET Areas are available.

COMISIÓN 5

En las páginas siguientes se reproducen las decisiones adoptadas en la tercera sesión de la Comisión 5 con respecto a los límites de las zonas de adjudicación y de las zonas de recepción VOLMET.

La descripción de los límites de las zonas de adjudicación y de las zonas de recepción PAC-MET será objeto de un documento distinto.

Asimismo, el mapa de las zonas de adjudicación y de las zonas de recepción VOLMET quedará listo una vez que se disponga de las decisiones sobre todas las zonas VOLMET.

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M. CHEF
Président de la Commission 5

ARTICLE 3

DESCRIPTION OF THE BOUNDARIES OF THE VOLMET ALLOTMENT AREAS AND VOLMET RECEPTION AREAS

VOLMET Area - AFRICA-INDIAN OCEAN (AFI-MET)

MOD 27/174 The AFI-MET allotment area is defined by a line drawn from the point 29°N 20°W, through the points 37°N 03°W, 37°N 36°E, 30°N 35°E, 10°N 52°E, 22°S 60°E, 35°S 35°E, 35°S 15°E, 08°S 15°W, 12°N 20°W, to the point 29°N 20°W.

MOD 27/175 The AFI-MET reception area is defined by a line drawn from the point 37°N 03°W, through the points 37°N 36°E, 30°N 35°E, 10°N 52°E, 10°N 100°E, the South Pole, 29°N 40°W, 29°N 20°W, to the point 37°N 03°W.

VOLMET Area - NORTH ATLANTIC (NAT-MET)

MOD 27/176 The NAT-MET allotment area is defined by a line drawn from the point 41°N 78°W, through the points 51°N 55°W, 24°N 50°W, 24°N 74°W, to the point 41°N 78°W.

MOD 27/177 The NAT-MET reception area is defined by a line drawn from the point 24°N 97°W, through the points 24°N 85°W, 75°N 85°W, 75°N 20°W, 00° 20°W, 00° 95°W, to the point 24°N 97°W.

VOLMET Area - EUROPE (EUR-MET)

MOD 27/178 The EUR-MET allotment area is defined by a line drawn from the point 33°N 12°W, through the points 54°N 12°W, 70°N 00°, 74°N 40°E, 40°N 36°E, 29°N 35°30'E, 32°N 13°E, to the point 33°N 12°W.

MOD 27/179 The EUR-MET reception area is defined by a line drawn from the point 15°N 20°W, through the points 40°N 50°W, 75°N 50°W, 75°N 45°E, 15°N 45°E, to the point 15°N 20°W.

VOLMET Area - MIDDLE EAST (MID-MET)

MOD 27/180 The MID-MET allotment area is defined by a line drawn from the point 50°N 80°E, through the points 29°N 80°E, 27°N 85°E, 16°N 78°E, 22°N 56°E, 16°N 42°E, 30°N 30°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

MOD 27/181 The MID-MET reception area is defined by a line drawn from the point 50°N 80°E, through the points 50°N 90°E, 35°N 90°E, 27°N 85°E, 16°N 78°E, 22°N 56°E, 16°N 42°E, 30°N 30°E, 51°N 30°E, 57°N 37°E, to the point 50°N 80°E.

VOLMET Area - NORTH CENTRAL ASIA (NCA-MET)

ADD 27/181A The NCA-MET allotment area is defined by a line drawn from the point 76°N 32°E, through the points 80°N 90°E, 75°N 168°W, 66°N 168°W, 48°N 160°E, 42°N 135°E, 50°N 130°E, 50°N 90°E, 35°N 70°E, 45°N 30°E, 60°N 20°E, to the point 76°N 32°E.

ADD 27/181B The NCA-MET reception area is defined by a line drawn from the North Pole, through the points 40°N 168°W, 30°N 140°E, 35°N 70°E, 30°N 20°E, to the North Pole.

VOLMET Area - SOUTH EAST ASIA (SEA-MET)

MOD 27/184 The SEA-MET allotment area is defined by a line drawn from the point 55°N 75°E, through the points 55°N 135°E, 45°N 135°E, 35°N 130°E, 10°N 130°E, 10°S 155°E, 35°S 155°E, 35°S 116°E, 08°N 75°E, 26°N 65°E, to the point 55°N 75°E.

MOD 27/185 The SEA-MET reception area is defined by a line drawn from the point 55°N 50°E, through the points 55°N 180°, 50°S 180°, 50°S 70°E, 08°N 70°E, 08°N 50°E, to the point 55°N 50°E.

VOLMET Area - CARIBBEAN (CAR-MET)

ADD 27/185A The CAR-MET allotment area is defined by a line drawn from the point 30°N 110°W, through the points 30°N 75°W, 00° 50°W, following equator to 00° 80°W to the point 30°N 110°W.

ADD 27/185B The CAR-MET reception area is defined by a line drawn from the point 40°N 120°W, through the points 40°N 20°W, 25°S 20°W, 25°S 120°W, to the point 40°N 120°W.

VOLMET Area - SOUTH AMERICA (SAM-MET)

ADD 27/185C The SAM-MET allotment area is defined by a line drawn from the point 15°N 83°W, through the points 15°N 60°W, 05°S 35°W, 55°S 60°W, 55°S 83°W, to the point 15°N 83°W.

ADD 27/185D The SAM-MET reception area is defined by a line drawn from the point 30°N 120°W through the points 30°N 00°, the South Pole, to the point 30°N 120°W.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/15-E
9 February 1978
Original : English

COMMITTEE 4

TIME SEPARATION

The annexed information has been received from the Chairman of the IFRB and is submitted to Committee 4 for its consideration.

G. KOVACS
Chairman of Committee 4

Annex : 1

ARCHIVES U.I.T. GENÈVE

A N N E X

Subject : Technical preparation for the World Administrative Radio Conference for the Aeronautical Mobile (R) Service, Geneva, 1978
Report by the IFRB on studies relating to "time separation" mentioned in No. 27/30 of Appendix 27

References : IFRB Circular-letter No. 401 of 1 December 1977 (Conference Document No. 49)
No. 482 of the Radio Regulations

Appendix 27 to the Radio Regulations does not contain interference range contours for 13.3 and 18 MHz bands. The sharing condition for these bands appearing in No. 27/30 is time separation. The Board indicated in paragraph 3.3 of the Appendix to its Circular-letter No. 401 of 1 December 1977 that it was studying this question and it hoped to provide the Conference with some guidelines in order to decide upon the sharing criteria.

2. The Board examined if it was possible to determine the longitude separation that could ensure that stations (and consequently the aeronautical areas) separated in longitude could use the same frequency without risk of mutual harmful interference. Two solutions are possible :

2.1 either to choose for each area a certain number of reference points and calculate at these points the protection ratios using the Technical Standards of the IFRB (or other standards that the Conference may define); such a solution is well adapted to a limited number of cases but would not be suited for use in a planning exercise;

2.2 or to examine the problem in a more pragmatic manner suited to a planning exercise; a possible method of this type would be to choose a certain number of points (P) of ionospheric reflection and to determine the values of maximum usable frequencies (MUF) for different distances of propagation paths; in a planning exercise the service and interference paths are known, and points of ionospheric reflection can be determined and the MUF values for a point P_i nearest to such points can be applied.

3. The Board applied the latter approach and selected for the purpose of this study about 70 geographical locations chosen from different parts of the world, at 20° intervals in latitude, from 80°N to 80°S and 30° intervals in longitude. For each of these locations, using its Technical Standards Series M, the Board examined the probability that the maximum usable frequency is equal to or higher than 13.3, 18 MHz and 22 MHz for 0, 500, 1,000, 1,500, 2,000 and 4,000 km, for four seasons (December, March, June and September) and two sunspot values (low sunspot, sunspot number 5 and high sunspot, sunspot number 125). The results of this study are tabulated below. The 22 MHz band was included in the study in view of the fact that there are some proposals to consider this band also.

TABLE

Frequency band (in MHz)	Distance (in km)	Probability (in terms of percentage of the total number of cases that the maximum usable frequency (MUF) is likely to be equal to or greater than the indicated frequency for at least the duration in hours/day given below						
		0-3	4-7	8-11	12-15	16-19	20-23	24
13.3	0	90.5	9.5	5.9	3.5	1	0	0
	500	80	20	14.8	7	2.5	0	0
	1000	47	53	38.4	25	17.7	4.1	0
	1500	16.5	83.5	73	50.8	28.4	21	7.2
	2000	7	93	86	71.3	48	31	17.9
	4000	2.5	97.5	95	87	72	59.5	44.3
18	0	100	0	0	0	0	0	0
	500	100	0	0	0	0	0	0
	1000	83	17	10.3	4.7	1.4	0	0
	1500	51.5	48.5	34.2	22	12.8	1.4	0
	2000	33	67	53.3	36	23.4	12.1	1.6
	4000	15	85	80.5	65.5	43.5	29.6	17.3
22	0	100	0	0	0	0	0	0
	500	100	0	0	0	0	0	0
	1000	99	1	0	0	0	0	0
	1500	77	23	16	6.6	3.6	0	0
	2000	55	45	33	19.7	11.8	1.6	0
	4000	29.4	70.6	62	41	27	17.6	4.8

4. The above Table will be helpful to determine the aeronautical areas in which the frequency band concerned can be used, taking into account the average distance of typical paths in the areas concerned and at the same time to determine the longitudinal separation between aeronautical areas which can use the same channel. It is interesting to note that over typical paths not exceeding 1,000 NM (1,850 km), which are considered to be those likely to be encountered in most aeronautical areas (especially MWARAs and VOLMET areas), 13.3 MHz is more useful for a longer duration than 18 and 22 MHz and correspondingly its repeatability with time separation criterion is lowest among the three bands included in the Table. On the other hand, the usable time reduces with increasing frequency and correspondingly the repeatability also increases with increasing frequency.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/16-F/E/S
9 février 1978
Original : français
anglais
espagnol

GROUPE DE TRAVAIL 5B

RASSEMBLEMENT DES BESOINS DE FREQUENCES

Le tableau annexé ci-après donne la liste des besoins de fréquences pour les ZLAMP et les zones VOLMET, en fonction des besoins de fréquences qui avaient été présentés par les administrations avant le 9 février 1978 à 18 heures.

Une liste semblable pour les ZLARN et les subdivisions de ZLARN est en cours de préparation et sera distribuée plus tard.

WORKING GROUP 5B

COLLATION OF FREQUENCY REQUIREMENTS

Taking into account the frequency requirements submitted by Administrations up to 1800 hours on 9 February 1978, the enclosure shows the collated frequency requirements for MWARAs and VOLMET Areas.

Similar collation for RDARAs and Sub-RDARAs is under preparation and will be distributed later.

GRUPO DE TRABAJO 5B

COTEJO DE NECESIDADES DE FRECUENCIAS

Teniendo en cuenta las necesidades de frecuencias presentadas por las Administraciones hasta las 18.00 horas del 9 de febrero de 1978, en el Anexo se muestran las necesidades de frecuencias cotejadas para las ZRMP y las zonas VOLMET.

Se está preparando un cotejo similar, que se distribuirá posteriormente, para las ZRRN y subzonas ZRRN.

K. KING
Président du Groupe de travail 5B

Annexe : 1

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ANNEXE - ANNEX - ANEXO

Zone *Area* Zona	Nombre de frequences par bande (MHz) *Number of frequencies by band (MHz)* Numero de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Simbolo designativo del pais
	3	3.5	4.7	5.4 (Reg 2)	5.6	6.6	9	10	11.3	13.3	18	22		
AFI	3	4	3		3	3	3	3	3	5	3	3		AFI AFS AGL ALG ASC(G) BDI CME CNR(E) COM CPV E ETH GAB GIB(G) GHA GUI HVO ISR KEN LBR LBY MAU MOZ MRC MTN MYT(F) NGR NIG NMB REU(F) SEN STP TCD TGK TUN YEM ZAI ZMB
CAR	2	1	1		2	2	2	1	2	1	1			ATN(HOL) BAH BER(G) CLM CUB GDL(F) GUF(F) HNB(G) IOB(G) JMC MEX MRT(F) NCG PNZ PTR(USA) SHN(USA) TRD USA VIR(USA)
CEP	1	2	1		4	1	4	1		2	2			HWA(USA) OCE(F) USA
CWP	2	1	2		2	2	2	1	2	2	2			GUM(USA) HKG(G) HWA(USA) HWL(USA) J JON(USA) KOR KRE MDW(USA) MRA(USA) MRL(USA) PHL PNG RYU(J) SLM(G) WAK(USA)
EA	2	2	1		2	2	3	2	2	2	1	1		CHN KRE PAK URS
EUR	3	3	3		3	3	3	3	3	3	3	1		ALG BLR BUL D DDR F G GIB(G) GRC HNG I LBY MRC POL ROU TCH TUN UKR URS YUG

Zone *Area* Zona	Nombre de frequences par bande (MHz) *Number of frequencies by band (MHz)* Numero de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Simbolo designativo del país
	3	3.5	4.7	5.4 (Reg 2)	5.6	6.6	9	10	11.3	13.3	18	22		
INO	1	1	1		2	2	2	3	2	1	1	1		AUS KEN IND LBY MAU PAK TGK
MID	5	3	4		4	4	6	4	4	4	2	2		AFG ARS BGD BHR BLR IND ISR LBY PAK QAT UKR URS YEM

Zone *Area* Zona	Nombre de fréquences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Rec 2)	5.6	6.6	9	10	11.3	13.3	18	22		
NAT	8	4			7	3	8	3	5	5	5			BER(G) CAN D, E, F, G, GDL(F) GIB(G) GRL(DNK) GUF(F) IOB(G) IRL ISL MRT(F) NOR PTR(USA) SPM(F) USA VIR(USA)
NCA	1	2	1		2	3	2	2	2	2	2	2		BLR J KRE NOR PAK UKR URS
NP	1		1		1	2	1		1	1	1			ALS(USA) J URS USA
SAM	2	2	1		1	1	2	3	1	2				ARG B BOL CHL CLM EQA GUF(F) IOB(G) MRT(F) PNZ PRG URG
SAT	2	2	2		2	2	2	2	2	2	2	1		AFS ALG ARG ASC(G) CMR(E) CPV CTI E GIB(G) GUI HVO MTN SEN URG
SEA	2	1	1		2	1	3	2	2	2	2	3		AUS BGD BRM BRU(G) HKG(G) IND INS PAK PHL MLA SNG
SP	1				2		2			2	1			AUS FJI GIL(G) HWA(USA) JAR(USA) NCL(F) NHB(G) NRU NZL OCE(F) PHX(USA) PLM(USA) PTC(G) SLM(G) SMA(USA) TON TUV(G) WAL(F).

Zone *Area* Zona	Nombre de fréquences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
AFI-MET	1	2	1		2	2	2	1	2	1	2	1		AGL ALG CME CTI ETH GIB(G) GAB GUI HVO ISR KEN LBY MTN MYT(F) NGR NIG REU(F) SEN TGK TUN
CAR-MET	1			1	1	1	1	1	1					CUB PNZ PTR(USA) USA VIR(USA)
EUR-MET	3	1	2		3	2	3	1	2	3	2	1		ALG BLR BUL D F G GIB(G) GRC HNG IRL ISR LBY POL TCH TUN UKR URS
MID-MET	2	1	1		2	3	3	2	2	2	2	1		AFG ARS CHN ISR LBY PAK UKR URS
NAT-MET	3	1	1		4	1	4	1	1	4	1			B BER(G) CAN CLM GDL(F) GUF(F) IOB(G) MRT(F) PRG SPM(F) TRD URG USA
NCA-MET		1	1		2	1	1		1	1				BLR UKR URS
PAC-MET	2	1	1		2	2	2	1	2	2				ALS(USA) GIL(G) GUM(USA) HKG(G) HWA(USA) HWL(USA) JAR(USA) JON(USA) MDW(USA) MRA(USA) MRL(USA) NCL(F) NHB(G) NZL PHX(USA) PLM(USA) PNG SLM(G) SMA(USA) TUV(G) URS USA WAK(USA) WAL(F)
SAM-MET	1	2	1		3		2	2	1	1	1	1		ARG B CHL PNZ URG
SEA-MET	1	2			3	3	3	2	1	3				BGD BRU(G) CHN INS KRE PAK SNG URS

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/17-E
10 February 1978
Original : French
English
Spanish

COMMITTEE 5

The Annex below sets out the decisions reached at the first meeting of Working Group 5A on the RDARA boundaries.

The Annex does not describe the boundaries of Sub-Areas 1A, 1B, 1C, 1D, 1E (Nos. 27/105 to 27/109), 6B, 6C, 6D, 6F (Nos. 27/128 to 27/130, 27/132), 7B (27/135), 12D (27/156), 12F, 12G and 12H (Nos. 25/158 to 27/160), which will be dealt with in another document.

The map of the RDARA will be definitively established once decisions have been adopted on all RDARA.

R.F. DUCHARME
Chairman of Working Group 5A

Annex : 1

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ARTICLE 2

DESCRIPTION OF THE BOUNDARIES OF THE REGIONAL AND DOMESTIC AIR ROUTE AREAS (RDARAs)

NOC 27/104
NOC 27/110
NOC 27/111
NOC 27/112
NOC 27/113
NOC 27/114
NOC 27/115
NOC 27/116
NOC 27/117
NOC 27/118
NOC 27/119

MOD 27/120 Sub-Area 4B

From the point 21°N 31°W, through the points 10°N 20°W, 05°S 20°W, to 05°S 12°E. Thence along the southern border of the People's Republic of the Congo and the Central African Republic to the Junction between the Republic of Zaire, the Sudan and the Central African Republic.. Along the western border of the Sudan to the point 12°N 22°E. Thence along the Ndjamena parallel to the Nigerian border. Then West along this border to Zinder. From Zinder through Gao to close the sub-area at 21°N 31°W.

NOC 27/121
NOC 27/122
NOC 27/123
NOC 27/124
NOC 27/125
NOC 27/126
NOC 27/127
NOC 27/131

MOD 27/133 Regional and Domestic Air Route Area-7 (RDARA-7)

From the South Pole along the 20°W meridian to 05°S. Then along the 05°S parallel to 12°E. Thence along the border between People's Republic of Congo and People's Republic of Angola, then along the northern border of the Republic of Zaire, along the border between Uganda and Sudan, and between Kenya and the following countries: Sudan, Ethiopia and Somalia to the point 02°S 42°E. Then to 02°S 60°E and along the 60°E meridian to the South Pole.

NOC 27/134

MOD 27/136 Sub-Area 7C

From the junction of the borders of Uganda, Republic of Zaire and Sudan along the western border of Uganda and Tanzania, and then along the southern border of Tanzania to the coast. Thence through the points 11°S 41°E, 11°S 60°E, 02°S 60°E, to 02°S 41°E. Thence to the East coast of Africa. Then North along the eastern border of Kenya, then West along the northern borders Kenya and Uganda to close the sub-area at the junction of the borders of the Republic of Zaire, Sudan and Uganda.

MOD 27/137 Sub-Area 7D

From the border of Tanzania and Mozambique on Lake Nyasa, south along the west border of Mozambique to the African east coast, then through the points 27°S 33°E, 40°S 33°E, 40°S 65°E, 11°S 65°E, to 11°S 41°E. Thence along the northern border of Mozambique to Lake Nyasa.

MOD 27/138 Sub-Area 7E

From the point 17°S 10°E, and through the points 40°S 10°E, 40°S 33°E, to 27°S 33°E. Thence along the West border of Mozambique and the lower part of the western border of Tanzania as far as the northern point of Lake Nyasa. Thence along the border between Malawi and Tanzania and between Zambia and Tanzania and along the borders between the Republic of Zaire and Zambia, the People's Republic of Angola and Zambia, and the People's Republic of Angola and the Territory of South-West Africa to the coast at the point 17°S 10°E.

MOD 27/139 Regional and Domestic Air Route Area-8 (RDARA-8)

From the South Pole along the 60°E meridian to 40°S then through the points 40°S 65°E, 11°S 65°E, 11°S 60°E, 02°S 60°E, 02°S 92°E, 10°S 92°E, to 10°S 110°E. Then along the 1100°E meridian to the South Pole.

SUP 27/140

MOD 27/141 Regional and Domestic Air Route Area-9 (RDARA-9)

From the South Pole along the 160°Emeridian to 27°S. Then through the points 19°S 153°E, 10°S 145°E, 10°S 141°E, 00° 141°E, 00° 160°E, 03°30'N 160°E, 03°30'N 120°W. Then along the 120°W meridian to the South Pole.

SUP 27/142

MOD 27/143 Sub-Area 9B

From the point 00° 141°E through points 10°S 141°E, 10°S 145°E, 27°S 160°E, 27°S 157°W, 03°30'N 157°W, 03°30'N 160°E, 00° 160°E to the point 00° 141°E.

NOC 27/144

MOD 27/145 Sub-Area 9D

From the South Pole along the 160°E meridian to 27°S. Then through the point 27°S 170°W and along the 170°W meridian to the South Pole.

MOD 27/146 Sub-Area 10A

From the point 50°N 164°E to 66°N 169°W, then along the 169°W meridian to the North Pole, then along the 130°W meridian to 50°N, then westward to close the sub-area at 50°N 164°E.

NOC 27/147
NOC 27/148
NOC 27/149
NOC 27/150

ADD 27/150A Sub-Area 10F

From the North Pole through the points 82°N 30°E, 82°N 00°, 73°N 00° 73°N 20°W, 70°N 20°W, 63°30'N 39°W, 58°30'N 43°W, 58°30'N 50°W, 63°30'N 55°44'W, 65°30'N 58°39'W, 74°N 68°18'W, 76°N 76°W, 78°N 75°W, 82°N 60°W to the North Pole.

MOD 27/151 Sub-Area 11A

From the point 29°N 180°, through the points 50°N 164°E, 50°N 130°W, 33°N 130°W, 33°N 153°W, 29°N 153°W, to close the sub-area at 29°N 180°.

MOD 27/152 Sub-Area 11B

From the point 50°N 130°W and through the points 33°N 130°W, 33°N 119°W, 25°N 98°W, 25°N 65°W, 40°N 65°W, 46°N 67°W then along the border between the United States and Canada through 50°N 127°W, to close the sub-area at 50°N 130°W.

ADD 27/152A Sub-Area 11C

From the point 25°N 65°W and through the points 40°N 65°W, 40°N 50°W, 25°N 35°W, to close the sub-area at 25°N 65°W.

NOC 27/153
NOC 27/154
NOC 27/155
NOC 27/157
NOC 27/161

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/18-E
10 February 1978
Original: English

WORKING GROUP 6A

ADD 27/194A The world-wide frequency allotments appearing in the table at No. 27/195 to No. 27/207 except for frequencies /3023 kHz and 5680 kHz/ are for assignment by administrations to stations for the purpose of serving one or more aircraft operating agencies, operating under authority granted by the administration concerned. Such assignments are to provide communications between an appropriate aeronautical station and an aircraft station anywhere in the world for exercising authority over regularity of flight and for safety of aircraft. World-wide frequencies are not to be assigned by administrations for MWARA, RDARA and VOLMET purposes. Where an operational area lies wholly within a RDARA or Sub-RDARA boundary, frequencies allotted to RDARAs and Sub-RDARAs shall be used.

K. OLMS
Chairman of Working Group 6A

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UNIÓN INTERNACIONAL DE TELECOMUNICACIONES

CONFERENCIA AERONÁUTICA (R)

(Ginebra, 1978)

Document No. DT/19-E
10 February 1978
Original : Spanish

WORKING GROUP 5A

REPORT

Ad Hoc Working Group to define Sub-Area 12F

(Colombia - Ecuador - Panama)

Reference documents : CLM No. 117, PNR No. 123

1. Background

1.1 During the meeting of Working Group 5A on 10 February 1978 (0900 - 1200 hours), the delegations of Colombia and Panama presented reference documents which substantially modify the boundaries of Sub-Area 12F to exclude Ecuador.

The Chairman of Working Group 5A suggested the establishment of an Ad Hoc Working Group consisting of the delegations of Colombia, Ecuador and Panama and also of the delegations of Brazil, Venezuela and Guatemala, which expressed the wish to take part in these deliberations. The Chairman also invited the other interested delegations to participate in the Ad Hoc Group.

2. Consultations

2.1 After discussions between the above delegations on the matter, the following initial conclusions emerged :

- The delegate of Guatemala said that he would not join the Ad Hoc Group because he had no authority from the other States of the Central American area to represent them and he considered that Sub-Area 12E as defined in Appendix 27 (Geneva, 1966) should remain unchanged.

- The delegation of Venezuela expressed its interest in collaborating with a view to the coordination of the matters under discussion.

- The delegation of Brazil confirmed the statement made during the meeting of Working Group 5A, i.e. that it was interested in the exclusion of the territory of Brazil from Sub-Area 12F and that the boundary of the sub-area should be the border between Colombia and Brazil.

3. Conclusions

3.1 After considering each of the proposals, the delegations of Colombia, Ecuador and Panama reached the following conclusions :

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1) The boundaries of Sub-Area 12F should be amended to include the Republics of Colombia and Panama and to exclude Ecuador; the sub-area would thus have the following boundaries :

MOD 27/158 Sub-Area 12F

From the point 02°N 79°W to the point 08°N 83°W, then along the border between Panama and Costa Rica, through the points 10°N 83°W, 13°N 83°W, 08°N 70°W, 06°N 67°W and 01°N 66°W. Then along the border between Brazil and Colombia to 04°S 70°W. Thence along the border between Colombia and Peru, continuing along the border between Colombia and Ecuador, to close the sub-area at 02°N 79°W.

2) Establishment of a sub-area (name to be determined later) for Ecuador, which would include the Galapagos Archipelago and have the following boundaries :

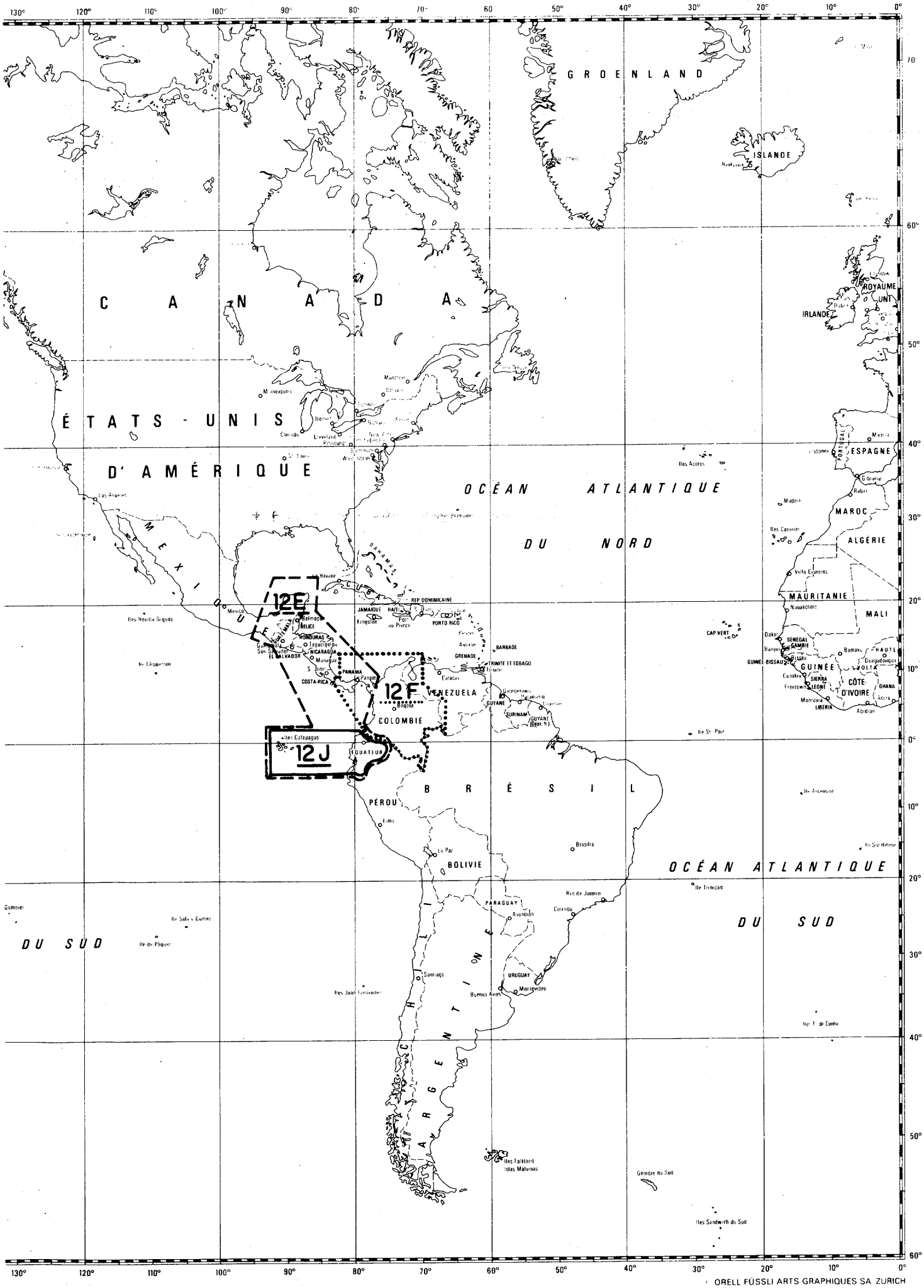
ADD 27/161A Sub-Area 12J

From the point 04°S 93°W, and through the points 02°N 93°W, 02°N 79°W. Then along the border between Ecuador and Colombia to the junction with the borders of Colombia, Peru and Ecuador. Thence along the border between Peru and Ecuador to close the sub-area at 04°S 93°W.

3) Ecuador agrees to the modification of Sub-Area 12F on condition that the new sub-area proposed above is created.

Annex : 1 Map

ANNEXE - ANNEX - ANEXO



ORELL FÜSSLI ARTS GRAPHIQUES SA ZURICH

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/20-E
10 February 1978
Original : English

WORKING GROUP 5B

SUGGESTIONS CONCERNING
THE PRINCIPLES TO DETERMINE FREQUENCY
REQUIREMENTS FOR MWARAs

1. The requirements expressed in Document No. 21 represent the additional families of frequencies required in each of the MWARAs.

2. The first or the basic family for a MWARA does not need to comprise more than five frequencies.

3. The total frequency requirements for each area can be expressed as the sum of the number of frequencies in one or more families each consisting of two or more frequencies and the number of additional frequencies in one or more bands necessary to meet the demands of aircraft and aeronautical stations during peak traffic hours.

K. KING
Chairman of Working Group 5B

ARCHIVES U.I.T. GENÈVE

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/21-F/E/S
10 février 1978
Original: français
anglais
espagnol

GROUPE DE TRAVAIL 5B

RASSEMBLEMENT DES BESOINS DE FREQUENCES

Le tableau annexé ci-après donne la liste des besoins de fréquences pour les ZLARN et les subdivisions de ZLARN, en fonction des besoins de fréquences qui avaient été présentés par les administrations avant le 10 février 1978 à 12 heures.

Une liste pour les besoins en matière de contrôle d'exploitation à grande distance (LDOCC) est en cours de préparation et sera distribuée plus tard.

Annexe:

WORKING GROUP 5B

COLLATION OF FREQUENCY REQUIREMENTS

Taking into account the frequency requirements submitted by Administrations up to 1200 hours on 10 February 1978, the enclosure shows the collated frequency requirements for RDARAs and Sub-RDARAs.

Similar collation for Long Distance Operational Control Communications (LDOCC) is under preparation and will be distributed later.

Annex

GRUPO DE TRABAJO 5B

COTEJO DE NECESIDADES DE FRECUENCIAS

Teniendo en cuenta las necesidades de frecuencias presentas por las Administraciones hasta las 12.00 horas del 10 de febrero de 1978, en el Anexo se muestran las necesidades de frecuencias cotejadas para las ZRRN y subzonas ZRRN.

Se está preparando un cotejo similar, que se distribuirá posteriormente, para las comunicaciones del control de operaciones a larga distancia (LDOCC).

Anexo

K. KING
Président du Groupe de travail 5B

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ANNEXE - ANNEX - ANEXO

Zone *Area* Zona	Nombre de fréquences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
1	2	2	2		1	1	1	1	2	2	2	1		ALG, BUL, D, DDR, F, G, GRC, I, LBY, POL, ROU, TCH, TUN, YUG
1A		NEANT				NIL				NADA				
1B	1	5	1		2	1		1						D, G, HOL, IRL
1C	1	2	1		2	1	1	1	1	1				DDR, DNK, HNG, NOR, POL, TCH
1D	3	3	3		3	3	3	3	1	1	1			BUL, GRC, I, LBY, MLT, ROU, YUG
1E	1	1 1*	1		1	1	1	1	1	1	1	1	4A	ALG, E, F, MCO, TUN
2								3 1*	6	2	1		3	URS
2A	13 2*	9 2*	7 2* 1*		10 2*	10 2* 1*	4 2* 1*	1 2*					2C 2B, 2C, 3A, 3B, 3C	URS
2B	9 2*	6 2*	4 2* 1*		11 2*	9 2* 1*	2* 1*						2C 2A, 2C, 3A, 3B, 3C	URS

Zone *Area* Zona	Nombre de frequences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole designant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
2C	13 2* 2*	5 2* 2*	3 2* 2* 1*		7 2* 2*	7 2* 2* 1*	2* 1* 1*	2*					2A 2B 2A, 2B, 3A, 3B, 3C	URS
3								2 1*	4	1	2	1	2	URS
3A	9 2*	6 2*	1 2* 1*		7 2*	9 2* 1*	4 2* 1*						3C 2A, 2B, 2C, 3B, 3C	URS
3B	14 2*	5 2*	3 2* 1*		12 2*	7 2* 1*	10 2* 1*	2*					3C 2A, 2B, 2C, 3A, 3C	URS
3C	11 2* 2*	4 2* 2*	3 2* 2* 1*		8 2* 2*	6 2* 2* 1*	2* 2* 1*	1* 2*					3B 3A 2A, 2B, 2C, 3A, 3B	URS
4	1	1	2		2	2	2	1	1	1	1	1		ALG, LBY, MTN, STP, TUN
4A	3	3 1*	3 2*		3	3	3 2*	3	3	3	3	3	1E 4B	ALG, CNR(E), LBY, MTN, NGR, TUN,

Zone *Area* Zona	Nombre de fréquences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
4B	1	2	2 2*		2	4	2 2*	1	1	1	1		4A	CME, CTI, GAB, GHA, GUI, HVO, LBR, MTN, NIG, SEN, STP, TCD, TGO
5	1	1	1		1	1	2	2	2	2	2	2		AFI, ARS, BHR, ETH, IND, PAK
5A	1	1 1*	1		2 1*	1 1*	1 1*	1	1	1	1	1	5C	ARS, BHR, EGY, QAT, YEM
5B	2	2	2		2	2	2	1	1	1				AFG, IND, PAK
5C	1	1 1*			1 1*	1 1*	1 1*						5A	ARS, IND, QAT
5D	2	2	3		6	3	3							AFI, ETH
6					2		2	2	2	2	1	1		IND, INS, KRE, MLA, PAK, PHL
6A	3	2	4		4	4	4	3	2	1				BGD, BRM, IND, NPL, PAK

Zone *Area* Zona	Nombre de fréquences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
6B	1 4*	1 2*	1 3*		3 4*	3*	2 2*	2*	1 2*	2*	1 1*		6F	J KOR KRE RYU(J)
6C		2	2		3	3	3		1	2	1			CAR(USA) GUM(USA) INS MRA(USA) MRL(USA) WAK(USA)
6D		3	2		3	4	3		1	1				BRM INS MLA PHL SNG THA
6E	3	4	2		3	5	4	4	2	1				IND
6F	2 4*	2 2*	3*		1 4*	2 3*	2*	2 2*	2*	1 2*	1 1*		6B	BRM INS J KOR KRE PHL RYU(J) THA
6G	22	15	5		32	24	16	10	9	10	4	3		CHN
7			1		1		1	1	1	1	1			AGL BDI KEN KEN MAU MOZ REU(F) TGK ZAI
7A			NEANT				NIL			NADA				

Zone *Area* Zona	Nombre de frequences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
7B	1	2			2	2	2	1						AGL BDI ZAI
7C					1		1		1					KEN TGK
7D	1		1				1			1				COM MAU MOZ REU(F)
7E	1	1			2	1	1	1		1				AFS MWI NMB ZMB
8		NEANT					NIL				NADA			
9									2					GIL(G) NCL(F) NHB(F/G) OCE(F) SLM(G) TUV(G) WAL(F)
9A		NEANT					NIL				NADA			
9B	5	3	5		5	5	5		1 1*		1		9D	FJI GIL(G) HWL(USA) NCL(F) NHB(F/G) NRU PHX(USA) PNG SLM(G) SMA(USA) SMO(NZL) TON TUV(G) WAL(F)

Zone *Area* Zona	Nombre de fréquences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
9C	2	3			3	1	6				1			CKH(NZL) NIU(NZL) OCE(F)
									1*				9D	
9D	1	1				1	1							NZL
									1*				9B	
									1*				9C	
10			2		1	1	1	2	4	1	1	1		CAN SPM(F)
10A	6	5	3		6	6	4	2	3					ALS(USA) CAN
10B	2	3	5		5	3	3							CAN
10C	2	1	3		5	3	2							CAN
10D	2	3	5		6	3	2							CAN
10E	3	2	4	1	3	2	3		1					CAN SPM(F)
10F	1	1	1	1	1	1	1							GRL(DNK)
11			NEANT				NIL				NADA			
11A			NEANT				NIL				NADA			
11B	6	8	6		9	7	3	1	2	1	2			USA

Zone *Area* Zona	Nombre de frequences par bande (MHz) *Number of frequencies by band (MHz)* Numero de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Simbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
12	3	3	2	2	2	3	3	2	1	1	1			B, EQA, GDL(F) GUF(F) MRT(F)
12A	1	1	1		1									HWA(USA) JON(USA) MDW(USA) PLM(USA)
12B		NEANT			NIL			NADA						
12C	2	3	4	1	4	5	1	4	1					MEX
12D	1	5	1	1	1	4	1	1						ATN(HDL) BRB, WB GDL(F) MRT(F), PNR PNZ PTR(USA) SWN(USA) TRD(USA) VIR(USA)
12E	2	2			6	5	2	1	1	1				NCG, PNR
12F	2	3			3	3	3	1						B, CLM, PNR
12G	3	2		1	4	1								B, VEN
12H	2	2	2	1	2	5								B GUF(F) SUR

Zone *Area* Zona	Nombre de frequences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
12I		NEANT			NIL			NADA						
13										1	1			B, CHL, URG
13A								1*			1*		13B 13B 13E 13F	PAQ(CHL)
13B								1*			1*		13A 13A 13E 13F	PAQ(CHL)
13C	3	3			4	4	3	2	3	1	1			B
13D	2	2			2	2	2	2	1	1	1			BOL, PRG
13E	1*	1	2*		3*	1 1*	1*		1	1*	1*		13F 13A 13B 13F	CHL
13F	2 1*	2	2*	1	3*	1 1*	2 1*	1	2	1*	1*		13E 13A 13B 13E	CHL
13G	4	1	1	2	1	2	3	3	1					ARG, URG
13H	2	2	1	2	2	1	2	2	2	1				ARG

Zone *Area* Zona	Nombre de frequences par bande (MHz) *Number of frequencies by band (MHz)* Número de frecuencias por banda (MHz)												Voie commune à *Common channel to* Canal común a	Symbole désignant le pays *Country symbol* Símbolo designativo del país
	3	3.5	4.7	5.4 (Reg.2)	5.6	6.6	9	10	11.3	13.3	18	22		
13I	3		3		2	1	2							URG
13J	4	2	4	2	3	4	4	4	2	1	1			B, URG
13K	3	3	3		3	3	3	4	3	1				B
13L		NEANT			NIL		NADA							
14	3	3			4	1	4	1	3		3			AUS
14A	1	1	1		2	2	3							AUS
14B	1	1	1		1	3	3							AUS
14C	1	1	1		1	3	3							AUS
14D	1	1	1		2	2	3							AUS
14E	1	1	1		1	3	3							AUS
14F		2	1		1	3	3							AUS
14G	2		1		3		3							AUS

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/22-E
10 February 1978

LIST OF DOCUMENTS
(Documents 1 to 100)

C = Committee
PL = Plenary
WG = Working Group

Number	Source	Title	Destination
1	SG	Agenda of the Conference	PL
2 + Add	SG	Report by CCIR Study Group 8	C.4
3	SG	Credentials of Delegations	C.2
4 + Corr.	USA	Proposals	C.4, 5, 6
5	F.R. of Germany	Proposals	C.4, 5, 6
6	F.R. of Germany	Proposals	C.5
7	F.R. of Germany	Proposals	C.5
8	F.R. of Germany	Proposals	C.5, 6
9	F.R. of Germany	Proposal	C.6
10	F.R. of Germany	Proposals	C.6
11	F.R. of Germany	Proposal	C.6
12	F.R. of Germany	Proposals	C.6
13	F.R. of Germany	Proposals	C.6
14	F.R. of Germany	Proposals	C.6
15	F.R. of Germany	Proposals	C.6
16	F.R. of Germany	Proposals	C.6
17	F.R. of Germany	Proposal	C.6

ARCHIVES U.I.T. GENÈVE

Number	Source	Title	Destination
18	F.R. of Germany	Proposal	C.4, 5
19	German Dem. Rep.	Changes of the present Appendix 27 to the Radio Regulations	C.5
20	Canada	Proposals	C.4, 5, 6
21	SG	ICAO Communications Divisional Meeting preparatory to the ITU WARC Aeronautical Mobile (R) Service	C.4, 5, 6
22	France	Proposal	C.4, 5, 6
23	France	Proposal	C.5
24	France	Proposal	C.4
25	USA	A suggested method for the transition to universal single sideband operation in the Aeronautical Mobile (R) Service	C.5, 6
26	USA	Requirements for "worldwide" frequency allotments to accommodate long-range aeronautical operational control communications	C.5
27	USA	Worldwide aeronautical operational control	C.5, 6
28	SG	Development of computer programme	C.4
29	USSR	Proposals	C.4, 5, 6
30	F.R. of Germany	Frequency requirements	C.5
31	Australia	Proposals	C.4
32	Australia	Description of the boundaries of the regional and domestic air route areas	C.5
33	Mauritius	Proposals	C.4, 5, 6
34(Rev.)	Switzerland	Proposal	C.4, 5, 6
35	SG	Budget of the conference	C.3

Number	Source	Title	Destination
36	SG	Contributions of Recognized Private Operating Agencies and Non-Exempt International Organizations	C.3
37	Denmark	Proposal	C.5
38	SG	Convening of the Conference	PL
39	USA	RDARA Requirements	C.5
40 + Add.	SG	Notifications to International Organizations	PL
41	SG	Invitations to the Conference	PL
42	Australia	Proposals	C.4
43	United Kingdom	Proposals	C.4, 5, 6
44 + Corr.	Japan	Proposals	C.4, 5, 6
45 + Corr.	New-Zealand	Amendments proposed for the description of the boundaries of the MWARA, RDARA, SUB-RDARA and VOLMET areas contained in Part II, Section I, Appendix 27 to the Radio Regulations	C.5
46	Canada	Allotment of frequencies from the band 21 870-22 000 kHz for inclusion in appendix 27	C.5, 6
47	SG	Report of the IFRB on the implementation of the decisions of the extraordinary Administrative Radio Conference for the Aeronautical Mobile (R) Service, Geneva, 1966	PL
48 + Add.	SG	Collation and analysis of information received concerning frequency requirements	C.5
49 + Add.	SG	Method developed by the IFRB for revision of the frequency allotment Plan contained in appendix 27 to the Radio Regulations	C.4, 5
50	Australia	Determination of future high frequency AM(R)S RDARA-14 requirements	C.5

Number	Source	Title	Destination
51	USA	Adjacent channel interference	C.4, 5
52 + Corr.	USA	RDARA boundary descriptions and allotment requirements	C.5
53 + Corr.	China	Proposals on the amendments to the descriptions of the boundaries of the MWARAs, RDARAs and VOLMET areas in appendix 27 to the Radio Regulations	C.5
54	Philippines	Proposal	C.6
55	Philippines	Description of the boundaries of the regional and domestic air route area (RDARA)	C.4, 5
56	Zaire	Proposals	C.4, 5, 6
57	SG	Special programme for monitoring the frequency bands between 2850 kHz and 17,970 kHz allocated exclusively to the aeronautical mobile (R) service	C.6
58 + Corr.	SG	Loss of the right to vote	PL
59	USA	Information received concerning frequency requirements	C.5
60	Argentine	Proposals	C.4, 5, 6
61(Rev.1)	Spain	Proposals	C.6
62	Spain	Proposal	C.4, 5, 6
63 + Corr.	Spain	Proposal	C.6
64 + Corr.	Spain	(Replaced by No. 67)	
65 + Corr.	Brazil	Proposals	C.4, 5, 6
66	SG	Documents of Study Group 8 of the CCIR	C.4
67	Spain	Proposals	C.4, 5, 6
68	Canada	Requirement forthe inclusion of the band 21 870-22 000 kHz in appendix 27	PL
69	German Democratic Rep.	Proposals	PL

Number	Source	Title	Destination
70	India	RDARA requirements for areas 5 and6 and for sub-areas 6A, 6E, 5B and 5C	C.5
71	Ireland	Proposals	C.5
72	Cuba	Information on frequency requirements	C.5
73	SG	Secretariat of the Conference	—
74	Papua New Guinea	Adjacent channel interference	C.4, 5
75	Papua New Guinea	Proposal for frequency stability requirement for national purpose	C.4, 6
76	SG	Structure of the aeronautical (R) Conference 1978	—
77	SG	Allocation of documents	—
78	Algeria	Proposals	C.5, 6
79	Mexico	Frequency requirements	C.5
80	Sweden	Proposals	C.5, 6
81	Ivory Coast	Frequency requirements	C.5
82 + Add.	Argentina & Uruguay	Description of the boundaries of the SAT-MET (Rio de la Plata) area	C.5
83	USA	Frequency tolerances	C.4
84	Bolivia	Proposals	C.5
85	Malaysia	Description of the boundaries of the regional and domestic air route areas (RDARA)	C.5
86(Rev.)	PL	Conference Chairman and Vice-Chairmen	—
87	Angola	RDARA boundary descriptions and allotment requirements	C.5
88	United Kingdom	Allotment of frequencies from the band 21 870 - 22 000 kHz for inclusion in appendix 27	C.5, 6
89	Papua New Guinea	Proposal for inclusion of families of frequencies for national flight regularity within the frequency allotment plan for the aeronautical mobile (R) services	C.5, 6

Number	Source	Title	Destination
90	Papua New Guinea	Proposals to facilitate a changer over to the provisions of the Final Acts	C.6
91(Rev.)	Saudi Arabia	Frequency requirements	C.5, 6
92	Sweden	Frequency requirements	C.5
93	Paraguay	Frequency requirements for long distance operational control and VOLMET	C.4, 5
94	Kenya	Frequency requirements	C.5
95	Tanzania	Proposals	C.5
96	Denmark	Requirements for long distance operational control	C.5
97	Spain	Proposal	C.5
98	Gabon	Frequency requirements	C.5
99	Yemen A.R.	Frequency allotment for the RDARA subarea 5A	C.5
100	Yemen A.R.	Frequency requirements	C.5

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/23-E
13 February 1978
Original : English

WORKING GROUP 5A

VOLMET AREA - PACIFIC

1. This paper is prepared to engender discussion directed to (a) possible redefinition of the Pacific VOLMET (PAC-MET) area, in the interest of improved frequency management, and (b) the determination of associated frequency requirements.

2. The ICAO Communications Divisional Meeting (refer Conference Document 21, paragraph 2.10.1 on page 2-12, and Appendix D, MOD 27/182 and MOD 27/183 on pages 2-26 and 2-27), and the proposals of Administrations (refer DT/1, pages 94 and 95) have proposed modifications to 27/182 and 27/183 to result in geographic expansion of the PAC-MET allotment and reception areas, and provision of one additional frequency family, for a total of two families. In retrospect, and recognizing these conclusions and proposals afford maximum flexibility in deployment of the two families recommended, they appear conducive to refinement. The wide geographic expanse of this single allotment area, and its associated reception area, inhibits repeatability of frequencies allotted thereto. Operational deployment of one family to each of two smaller areas would result in more efficient frequency management in that repeatability would be enhanced. At the same time, aeronautical and aircraft stations operating within these two respective allotment areas might be more likely to have an increased community of interest.

3. Based on propagation and frequency management considerations (repeatability), it would appear best to divide the area into PAC-east and PAC-west MET areas. The air traffic pattern within the proposed expanded PAC-MET allotment and reception areas, at present and forecast, is predominantly east-west, essentially across the North Pacific, with major hubs at Tokyo, Anchorage, Honolulu and USA west coast terminals. A lesser but significant pattern comprises that between south Pacific locations and the Orient on the one hand, and western north American terminals (predominantly via Honolulu) on the other (reference: ICAO Air Navigation Plan - North Atlantic, North American and Pacific Regions - Doc 8755/9, page O-14). This would appear to operationally promote division into PAC-north and PAC-south MET areas.

4. Aeronautical stations broadcasting on the existing single PAC-MET family comprise San Francisco, Anchorage, Honolulu, Tokyo, Hong Kong and Auckland, each transmitting 10 minutes hourly in two five-minute time periods. This is a marginal

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operation, especially during periods of adverse weather conditions, wherein insufficient time is available to complete designated broadcast material. This factor, in conjunction with potential implementation of additional stations and expansion of broadcast material, is the justification for the additional family. It is noted that the timing of the present broadcasts is such that the Tokyo, Hong Kong and Auckland stations occupy contiguous periods, and the Honolulu, San Francisco and Anchorage stations similarly occupy the following contiguous periods. This arrangement then provides for a community of interest predominantly based on direction of flight, catering to the major traffic flow. Accordingly, a division essentially along a north-south line (perhaps at the 180 degree meridian, or international date line) might be considered acceptable in the interest of operational considerations. This is undoubtedly the most efficient division from a frequency management viewpoint, and provides a more balanced division of present and potential aeronautical stations.

5. It is noted that the proposed modifications to the PAC-MET reception area result in extensions to the north and south poles. In the further interest of increased repeatability, consideration might be given to reducing these extensions.

6. The decisions then remain:

a) to adopt the proposed MOD 27/182 and MOD 27/183 (refer DT/1, pages 94 and 95);

or,

b) to adopt amendments to the proposals referred to in paragraph a) above, reflecting reductions in latitudes from the poles;

or,

c) to adopt amendments to the proposals referred to in paragraph a) above, resulting in:

(1) dividing the area, and if so, redifining respective allotment and reception areas;

and,

(2) possibly reducing the reception areas in latitude in the polar regions;

and,

d) to adopt consequential frequency requirements.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Corrigendum 1 to
Document No. DT/24(Rev.1)-E
21 February 1978
Original : English/
French/
Spanish

WORKING GROUP 5B

COLLATION OF FREQUENCY REQUIREMENTS

Page 2 The entry A301 opposite CLM should be placed opposite CHN

Page 2 Add BUL, in the 22 MHz column $\frac{1}{A301}$

Page 6 At the top of the page, read NZL

Page 6 Opposite POL, add $\frac{1}{A301}$ in the 22 MHz column

K. KING

Chairman of Working Group 5B

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UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/24(Rév.1)-F/E/S
20 février 1978
Original : français,
anglais,
espagnol

GROUPE DE TRAVAIL 5B

RASSEMBLEMENT DES BESOINS DE FREQUENCES

Le tableau annexé ci-après donne la liste des besoins de fréquences pour les besoins en matière de contrôle d'exploitation à grande distance (LDOCC), en fonction des besoins de fréquences qui avaient été présentés par les administrations avant le 20 février 1978 à 18 heures.

Annexe : 1

WORKING GROUP 5B

COLLATION OF FREQUENCY REQUIREMENTS

Taking into account the frequency requirements submitted by Administrations up to 1800 hours on 20 February 1978, the enclosure shows the collated frequency requirements for Long Distance Operational Control Communications (LDOCC).

Annex : 1

GRUPO DE TRABAJO 5B

COTEJO DE NECESIDADES DE FRECUENCIAS

Teniendo en cuenta las necesidades de frecuencias presentadas por las Administraciones hasta las 18.00 horas del 20 de febrero de 1978, en el Anexo se muestran las necesidades de frecuencias cotejadas para las comunicaciones del control de operaciones a larga distancia (LDOCC).

Anexo : 1

K. KING
Président du Groupe de travail 5B

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ANNEXE - ANNEX - ANEXO

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
MOD	AFG		1 A304			1 A304	1 A304	1 A304	1 A304	1 A304	1 A304	1 A304	1	
	AFS						1 A302	1 A302		1 A302		1 A302	1 A302	
			1 A303			1 A303	1 A303	1 A303						
	AGL		1 A305			1 A305		1 A305			1 A305	1 A305	1 A305	
	ALG	1	2	1		2	1	2	1	2	2	2	2	
	ALS (USA)													A362
MOD	ARG			1 A306			1 A306	1 A306			1 A306	1 A306	1	A375
				1 A307			1 A307	1 A307		1 A307	1 A307	1 A307		
MOD	ARS	1 A301	1 A301	2 A301		1 A301	1 A301	1 A301	1 A301	1 A301	2 A301	2 A301	1 A301	
	ATN (HOL)					1 A334	1 A335		1 A335		1 A335	1 A335	1 A335	
MOD	AUS	1 A309	1 A309	1 A309		1 A309	2 A309	1 A309	1 A309	2 A309	3 A309	3 A309	1 A301	A308
	B							1 A310	1 A310	1 A310	1 A310	1 A310	1 A301	
	BEL			1 A301			1 A301		1 A301		1 A301	1 A301	1 A301	
ADD	BGD												1	
	BHR		1 A311				1 A311	1 A311	1 A311		1 A311	1 A311	1 A301	
	BLR													A360
MOD	BOL		1 A387				1 A387		1 A387		1 A387	1 A387	1 A301	
	CAN		2 A301	2 A301		2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	
	CAR (USA)													A362
	CHL			1 A382			1 A382	1 A383		1 A382	1 A384	1 A384		
MOD	CHN		2			2		2		1	2	2	1	
ADD	CLM		1 A301			1 A301		1 A301		1 A301	1 A301	1 A301	A301	
MOD	CME			1			1	1		1		1	2	
	CPV	1 A312					1 A312		1 A312			1 A312		
	CTI		1			1	2	2		1	1	1		

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22		
MOD	CUB	1		1		1		1		1	1	1	1		
	D		1 A313	2 A313		1 A315	1 A315		1 A301		1 A301	1 A301	1 A301		
MOD	DDR		1 A317	1 A318		1 A318	1 A318	1 A319		1 A319	1 A320	1 A320	1 A301		
	DNK			1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	A321	
	E		1 A317	1 A323		2 A324	1 A324	2 A301		2 A301	2 A301	1 A301	1 A301		
ADD	EGY	1 A349	1 A395	1 A349			1 A349	1 A395	1 A349		1 A395	1 A395	1		
			1 A304			1 A304		1 A304		1 A304					
	EQA		3			3	3	3	1	1					
MOD	ETH						2 A326	2 A326	2 A326	2 A326	2 A326	2 A326	2		
	F	2 A301					2 A301		2 A301		2 A301	2 A301	2 A301	A365	
	FJI			1 A367		1 A367	1 A368	1 A368		1 A368	1 A368	1 A368			
	FNL	1 A301		1 A301		1 A301		1 A301		1 A301		1 A301		A385	A386
MOD	G	1 A369	1 A370			1 A371	1 A372	1 A372	2 A301		2 A301	1 A301	2 A301	A374	
			1 A371				1 A373	1 A373							
	GAB						2 A394	2 A394							
MOD	GRC	1 A301		1 A301			1 A301	1 A301		1 A301	1 A301	1 A301	1 A301		
SVP	GRL (DNK)														
	GUI							1 A330	1 A331	1 A304	2 A332	1 A333			
	GUM (USA)													A362	
	HNG					1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301		
	HOL			1 A317		1 A301		1 A301			1 A301	1 A301	1 A301		
	HVO		1			1	1	2	1		1				
	HWA (USA)													A362	
	HWL (USA)													A362	

1) Pour l'explication des Observations, voir page 8

1) *For explanation of Remarks see page* 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
	I			2 A301			1 A301	1 A301	2 A301	1 A301	2 A301	1 A301	1 A301	
MOD	IND	1 A336				1 A336		1 A336		1 A336	1 A336			A376
			1 A301				1 A301		1 A301		1 A301	1 A301	2	
MOD	INS							2 A354	2 A354	2 A354	2 A354	2 A354		
	IRL	2 A301		2 A301				1 A301						A337 A338
	IRN	1	1	1			2	2	3	3	3	3	3	
	ISR	2 A339	1 A339			2 A339	1 A339	2 A340		2 A340	2 A340	2 A340	1 A340	

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
MOD	J					1 A301	1 A301	2 A301	1 A301	1 A301	2 A301	2 A301	1 A301	A381
	JON (USA)													A362
	KEN	1				1	1	1			1		1	
	KOR						1	1	2	1	1	1		
MOD	KRE		1	1		1		1		1	1		1	
ADD	KWT												1	
	LBR		1 A341				1 A341	1 A341		1 A341	1 A341	1 A341	1 A341	
	LBY	1 A301	1 A301	1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301		
	MAU			1 A342			1 A342			1 A342			1 A342	
	MDW (USA)													A362
	MEX	1		1			1	1		1		1		
	MLA	1 A354				1 A354		1 A314			1 A380	1 A316	1 A317	
	MLT	2 A339	2 A339	2 A339		2 A339	2 A339	2 A339	2 A339	2 A339	2 A339	2 A339		
	MRA (USA)													A362
	MRL (USA)													A362
	MTN			1		1		1						
	NGR		1 A301					1 A301					1 A301	
MOD	NIG							2		2	2	2	2 A301	
	NOR			1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	A321
	NPL			1 A343			1 A343	1 A343						

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
			1 A344				1 A344		1 A344		1 A344	1 A344	1 A344	
				1 A345			1 A345							
MOD	PAK	1		1		1		2		1			1 A301	
MOD	PHL	1 A347					1 A347	1 A347		1 A347	1 A347	1 A347	1 A301	
	PHX (USA)													A362
	PLM (USA)													A362
MOD	PNG	1 A348				1 A348		1 A348			1 A348	1 A348		A337 A378 A379
	POL	1 A349	2 A350	1 A349		2 A350	2 A301	2 A301		1 A301	1 A301	1 A301		
MOD	POR		1 A351				1 A351	1 A351			1 A351	1 A351	1 A301	
MOD	PRG	1 A382	1 A382	1 A382		1 A382	1 A389		1 A390		1 A391	1 A392	1	
	PTR (USA)													A362
MOD	QAT		1 A311					1 A311		1 A311	1 A311	1 A311		
MOD	ROU	1 A301	2 A301	2 A301		2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	
	S			1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301		A321
MOD	SEN			1 A353		1 A353		1 A353		1		1	1	
	SMA (USA)													A362
	SMO (NZL)		1 A346				1 A346	1 A346		1 A346				
	SNG					1 A354		1 A354			1 A354			
	STP		1			1	1	1		1	1	1		
	SUI	1 A301	1 A301	1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	
	SUR					1		1		1	1	1	1	

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance *(LDOCC)*

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia *(LDOCC)*

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
	SWN (USA)													A362
ADD	SYR												1	
	TCH	2 A317 1 A355	1 A317	2 A317		1 A317 1 A355	1 A317	1 A317	1 A317		1 A317 1 A355	1 A355	1 A355	
	TGK	1				1	1	1			1		1	
	TON						6							
	TRD							1 A330						
	TUN	1	2	1		2	1	2	1	2	2	2	2	
ADD	TUR												1	
	UKR													A360
	URG	1 A356 1 A357 1 A358 1 A359				1 A356 1 A357 1 A358 1 A359		1 A356 1 A357 1 A358 1 A359	1 A358	1 A356 1 A357 1 A359	1 A356 1 A357 1 A358 1 A359	1 A356 1 A357 1 A358 1 A359	1 A356	A359
	URS		1 A301			2 A301	3 A301	2 A301	1 A301	3 A301	3 A301	3 A301	2 A301	A360
MOD	USA	3 A301	6 A301	3 A301		6 A301	8 A301	4 A301	8 A301	6 A301	6 A301	8 A301	3	A361 A362
MOD	VEN	1 A366					1 A366		1 A366		1 A366	1 A366	1 A301	
	VIR (USA)													A362
	WAK (USA)													A362
MOD	YEM					1 A393	1 A393	1 A304	1 A317	1 A311	1 A311	1 A388	1 A301	
ADD	YMS	1 A396	1 A396	1 A396		1 A396	1 A397	1 A397	1 A398	1 A398	1 A399	1 A399		
MOD	YUG								1 A301	2 A363	1 A364 1 A301	1 A317	1 A301	
	ZAI										2			
	ZMB						1	1	1	1	1			

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Explications des Observations - Explanation of Remarks - Explicación de las Observaciones

MOD A301 ARS, AUS, B, BEL, BOL, CAN, CHN, D, DDR, DNK, E, F, FNL, G, GRC, HNG, HOL, I, IND, IRL, J, LBY, NGR, NIG, NOR, PAK, PHL, POL, POR, ROU, S, SUI, URS, USA, VEN, YEM, YUG	Mondiale - Worldwide - Mundial
	NSA1 SA CAR SAM NA EU SEA FE NSA2
A302 AFS	
A303 AFS	7E
MOD A304 AFG, EGY, GUI, YEM	ME
A305 AGL	NSA1 NSA2 EU SA SAM2 NA3 CAR
MOD A306 ARG	SAM ATL
A307 ARG	SAM - PAC
A308 AUS	Voir page 11 - See page 11 - Ver página 11
A309 AUS	CWP SP NP SEA MID IO SAM AFI FE
A310 B	SA CWP NA3 EU CAR SAM1 CEP NSA1 NSA2
MOD A311 BHR, QAT, YEM	EU ME
A312 CPV	SA
A313 D	EU 1 2A 2C
A314 MLA	FE SEA ME SP
A315 D	EU ME NA NSA1 NSA2
A316 MLA	ME EU SP
A317 YUG, E, DDR, HOL, MLA, TCH, YEM	EU
A318 DDR	EU ME NA2 CAR
A319 DDR	EU ME FE NA2 CAR NSA1 NSA2
A320 DDR	ME FE NA2 CAR NSA1 NSA2
A321 DNK, NOR, S	Voir page 11 - See page 11 - Ver página 11
A322 GRL(DNK)	NA1 NA2
A323 E	EU NA2 NA3
A324 E	EU NA2 NA3 SA NSA1 SAM CAR
SUP A325 E	
A326 ETH	EU FE ME NA2 NSA1
A327 FNL	EU NA2 NA3 ME
A328 FNL	EU NA2 NA3 ME SA NSA1 NSA2
A329 FNL	EU NA2 NA3 ME SA NSA1 NSA2 FE SEA CWP CEP NP NA1 CAR
A330 TRD, GUI	CAR

	A331	GUI	NSA1
	A332	GUI	NA2 NSA2
	A333	GUI	CWP
	A334	ATN	CAR SAM1
	A335	ATN	CAR SAM1 SAM2 NA2 NA3
	A336	IND	FE ME SEA
	A337	IRL, PNG	Voir page 11 - See page 11 - Ver página 11
	A338	IRL	Voir page 11 - See page 11 - Ver página 11
	A339	MLT, ISR	EU ME NSA2
	A340	ISR	ME EU NSA2 NSA1 NA2 NA3 CAR
	A341	LBR	AFI SA SAT NA3
	A342	MAU	NSA2 EU NA2 ME IO
	A343	NPL	ME SEA
	A344	NZL	SP SEA CWP FE CEP NA1 NA2
	A345	NZL	9D
MOD	A346	SMO(NZL)	9B
	A347	PHL	FE SEA ME EU CWP CEP SP
	A348	PNG	CWP SEA FE SP 9B
MOD	A349	EGY, POL	EUR
	A350	POL	EUR et national FIS - and national FIS - y nacional FIS
	A351	POR	EU NA2 NA3 CAR SA SAM2 NSA1 NSA2
	A352	non utilisé -	not used - no utilizada
	A353	SEN	SA NSA1
MOD	A354	INS, MLA, SNG	FE SEA
	A355	TCH	NA1 NA2 NA3 EU CAR SA ME SEA
	A356	URG	SAM1
	A357	URG	SAM2
	A358	URG	SA
	A359	URG	Voir page 12 - See page 12 - Ver página 12
	A360	URS, BLR, UKR	Voir page 12 - See page 12 - Ver página 12
	A361	USA	Voir page 12 - See page 12 - Ver página 12
	A362	USA	Voir page 12 - See page 12 - Ver página 12
	A363	YUG	2 3

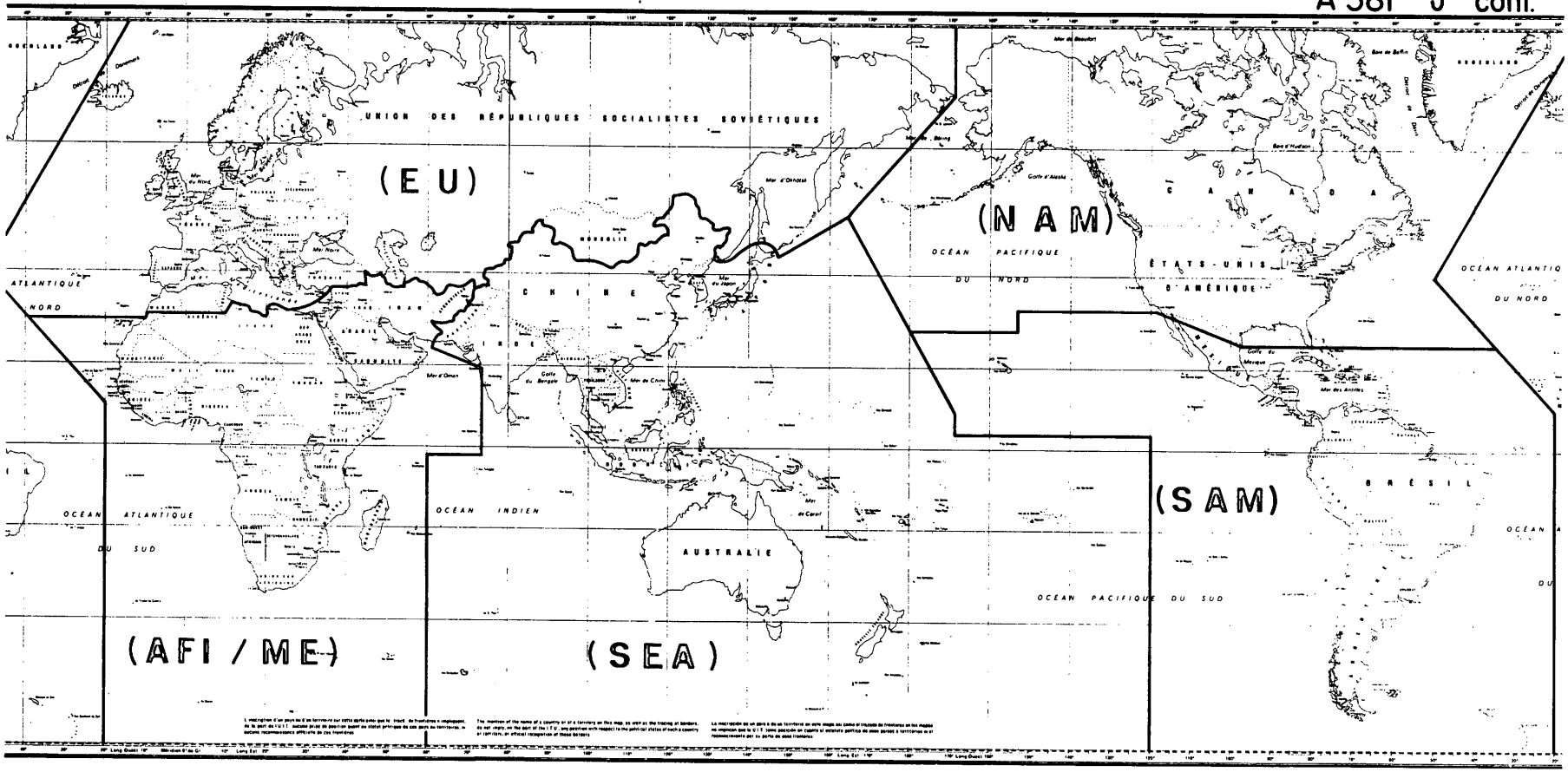
	A364	YUG	NSA2
	A365	F	Voir page 12 - See page 12 - Ver página 12
	A366	VEN	12G
	A367	FJI	SP
	A368	FJI	SP SEA
	A369	G	EUR NAT
	A370	G	EUR NAT AFI
	A371	G	PAC SEA
	A372	G	EUR NAT AFI MID
	A373	G	PAC SEA MID
	A374	G	Voir page 12 - See page 12 - Ver página 12
	A375	ARG	Voir page 13 - See page 13 - Ver página 13
	A376	IND	Voir page 13 - See page 13 - Ver página 13
	A377	SUR	Voir page 13 - See page 13 - Ver página 13
	A378	PNG	Voir page 13 - See page 13 - Ver página 13
	A379	PNG	Voir page 13 - See page 13 - Ver página 13
	A380	MLA	FE SEA ME EU SP
	A381	J	Voir page 13 - See page 13 - Ver página 13
	A382	CHL, PRG	SAM1 SAM2
	A383	CHL	SAM1 SAM2 CAR SP SA EU
	A384	CHL	CAR SP SA EU
	A385	FNL	Voir page 13 - See page 13 - Ver página 13
	A386	FNL	Voir page 13 - See page 13 - Ver página 13
	A387	BOL	SAM SAT CAR NAT EU
	A388	YEM	EU NA2
	A389	PRG	CAR SAM1 SAM2
	A390	PRG	CAR SAM1 SAM2 EU
	A391	PRG	CAR SAM2 EU
	A392	PRG	NA3 CAR EU
	A393	STP, YEM	NSA1 NSA2
	A394	GAB	4B
ADD	A395	EGY	AFI
ADD	A396	YMS	AFI ME
ADD	A397	YMS	AFI ME SEA
ADD	A398	YMS	AFI ME SEA EU
ADD	A399	YMS	SEA EU

A308 AUS	La lettre-circulaire N° 386 demande que les zones d'exploitation des voies attribuées au contrôle d'exploitation à grande distance soient indiquées sur la base des ZLAMP. Le problème des zones d'allotissement pour le contrôle d'exploitation à grande distance n'a pas encore été résolu. L'Australie est d'avis que la Conférence administrative mondiale des radiocommunications devra spécifier une méthode pour déterminer les fréquences à allotir, à l'échelon mondial ou par zones, pour les besoins du contrôle d'exploitation. On trouve dans la colonne 10 de l'Annexe 2 à la lettre-circulaire N° 386 une liste des besoins de l'Australie en matière de fréquences pour le contrôle d'exploitation à grande distance. Les ZLAMP indiquées dans l'en-tête de la colonne sont les zones en direction desquelles une station australienne pourrait être amenée à émettre.	Circular-letter No. 386 requests that the areas of operation of the long-distance operational control channels be stated in terms of MWARAs. The problem of allotment areas for long-distance operational control is a problem that has still to be resolved. Australia is of the opinion that a method to determine the frequencies to be allotted on a world-wide or Sectional areas basis for operational control requirements must be resolved at the World Administrative Radio Conference. Column 10 of Annex 2 of Circular-letter No. 386 has been completed and lists the long-distance operational control frequency requirements of Australia. The MWARAs shown at the head of the column are the areas into which an Australian station could be expected to operate.	En la carta circular N.° 386 se solicita que las zonas de explotación de los canales para el control operacional a larga distancia se indiquen en forma de ZRMP. El problema de las zonas de adjudicación para el control operacional a larga distancia está todavía por resolver. Australia considera que el método para determinar las frecuencias que han de adjudicarse con carácter mundial o por zonas y subzonas para las necesidades del control de operaciones debe decidirlo la Conferencia Administrativa Mundial de Radiocomunicaciones. En la columna 10 del Anexo 2 a la carta circular N.° 386 se han enumerado las frecuencias que Australia necesita para el control de operaciones a larga distancia. En el encabezamiento de la columna se han indicado las ZRMP que corresponden a las zonas previstas de operación de la estación australiana.
A321	Famille commune pour DNK, NOR et S.	Common family for DNK, NOR and S.	Familia de frecuencias común para DNK, NOR y S.
A337 PNG IRL	Bandes de fréquences des 3 ou 3,5 MHz.	3 or 3.5 MHz frequency bands.	Bandas de frecuencias de 3 ó 3,5 MHz.
A338 IRL	Bandes de fréquences des 4,7 ou 5,6 MHz.	4.7 or 5.6 MHz frequency bands.	Bandas de frecuencias de 4,7 ó 5,6 MHz.

A359	URG	L'Uruguay estime que, à moins de modifier les limites de la ZLAMP SA, il faudra créer dans l'Atlantique Sud une nouvelle ZLAMP pour le trafic aérien entre Montevideo et la ville de Johannesburg en Afrique du Sud. Une famille de fréquences, dans les bandes énumérées dans le formulaire ci-joint (formulaire MWARA XXX), devrait être allotie à cette fin. Etant donné le trafic réduit prévisible dans la ZLAMP XXX concernant le contrôle d'exploitation à grande distance, et au cas où il serait permis d'utiliser les fréquences de la ZLAMP XXX à cette fin, on pourrait renoncer à utiliser la famille de fréquences indiquée pour ce contrôle d'exploitation.	Uruguay considers that unless the boundaries of MWARA SA are modified, a new MWARA should be created in the South Atlantic in order to cater for air traffic between Montevideo and the city of Johannesburg in South Africa. A family of frequencies in the bands listed in the attached form (Form MWARA XXX) would have to be allotted for this purpose. Given the low estimated traffic requirements for long-distance operational control in MWARA XXX, the family of frequencies listed for that purpose may be dispensed with if the MWARA XXX frequencies are authorized for such operational control.	Uruguay estima necesario - salvo que se ajusten los límites de la ZRMP SP - crear una nueva ZRMP en el Océano Atlántico Sur, con la finalidad de atender el tránsito aéreo entre Montevideo y la ciudad de Johannesburgo en África del Sur, para lo cual se requeriría la adjudicación de una familia de frecuencias en las bandas que se detallan en el formulario que se acompaña (Formulario ZRMP XXX). Dado el reducido tráfico que se estima cursar en control de operaciones a larga distancia en la ZRMP XXX, se prescinde de la familia de frecuencias que se detalla para esa finalidad, en el caso de que se permita utilizar las frecuencias de la ZRMP XXX para dicho control de operaciones.
A360	URS	Mêmes fréquences URS, BLR, UKR.	Same frequencies URS, BLR, UKR.	Las mismas frecuencias para URS, BLR, UKR.
A361	USA	Voir la proposition USA/4/39 (ADD27/73A) - Document N° 4 de la Conférence	See proposal USA/4/39 (ADD27/73A) - Document No. 4 of the Conference	Véase la proposición USA/4/39 (ADD27/73A) - Documento N.° de la Conferencia
A362	USA	Mêmes fréquences USA, HWA, PTR, PLM, SMA, ALS, GUM, PHX, WAK, MDW, MRL, MRA, CAR, HWL, JON, VIR, SWN.	Same frecuencies USA, HWA, PTR, PLM, SMA, ALS, GUM, PHX, WAK, MDW, MRL, MRA, CAR, HWL, JON, VIR, SWN.	Las mismas frecuencias para USA, HWA, PTR, PLM, SMA, ALS, GUM, PHX, WAK, MDW, MRL, MRA, CAR, HWL, JON, VIR, SWN.
A365	F	Deux familles à vocation mondiale pour une assignation exclusive à PARIS.	Two world-wide families for assignment exclusively to PARIS.	Dos familias de frecuencias mundiales para su asignación exclusiva a PARÍS.
A374	G	Les ZLAMP sont spécifiées de façon approximative seulement, pour donner une indication des portées de service prévues.	The MWARA areas are approximate only and are included for the purpose of giving an indication of the service ranges expected.	Las zonas ZRMP, que únicamente son aproximadas, se incluyen para facilitar una indicación sobre los alcances de servicio previstos.

	A375	ARG	Le service d'exploitation ou service complémentaire doit encore être défini. En particulier, pour les communications à grande distance.	Operational or complementary service to be defined. Particularly for long-distance communications.	Servicio operacional o complementario por definir. Especialmente para comunicaciones a larga distancia.
	A376	IND	Concernant les besoins en fréquences pour les ZLAMP et pour le contrôle d'exploitation international à grande distance, les renseignements fournis sont basés sur la répartition actuelle et sur les prévisions qu'il est possible de faire.	As regards frequency requirements for MWARA and international long-distance operation control, the information included is based on existing allocation and whatever could be foreseen.	En lo que respecta a las necesidades de frecuencias para la ZRMP y para el control de operaciones internacional a larga distancia, la información incluida se ha basado en las adjudicaciones existentes y en las previsiones que se han formulado.
SUP	A377	SUR			
	A378	PNG	Bandes de fréquences des 4,7, 5,6 ou 6,6 MHz	4.7, 5.6 or 6.6 MHz frequency bands	Bandas de frecuencias de 4,7, 5,6 ó 6,6 MHz
	A379	PNG	Bandes de fréquences des 9, 10 ou 11,3 MHz	9, 10 or 11.3 MHz frequency bands	Bandas de frecuencias de 9, 10 ó 11,3 MHz
	A381	J	Concernant la planification des zones pour les stations aéronautiques effectuant le contrôle d'exploitation à grande distance, cette Administration propose la création de nouvelles zones de ce genre, de manière à diviser le monde entier en cinq zones, comme indiqué dans la carte ci-jointe (voir page 14).	As far as the areas planning for aeronautical stations for long-distance operational control are concerned, this Administration would like to make a proposal for establishment of such new areas as to divide the whole world into five areas, as indicated in the map enclosed herewith (see next page 14).	En lo que respecta a la planificación de las zonas de estaciones aeronáuticas para el control de operaciones a larga distancia, esta Administración formulará una propuesta de establecimiento de estas nuevas zonas dividiendo el mundo entero en cinco zonas, de conformidad con el mapa que se adjunta (véase página 14).
ADD	A385	FNL	Bandes de fréquences des 5,6 ou 6,6 MHz	5.6 or 6.6 MHz frequency bands	Bandas de frecuencias 5,6 ó 6,6 MHz
ADD	A386	FNL	Bandes de fréquences des 11,3 ou 13,3 MHz	11.3 or 13.3 MHz frequency bands	Bandas de frecuencias 11,3 ó 13,3 MHz

A 381 J cont.


UNION DES RÉPUBLIQUES SOCIALISTES SOVIÉTIQUES
(E U)
(N A M)
(S A M)
(AFI / ME)
(S E A)
CANADA
ÉTATS-UNIS D'AMÉRIQUE
CHINE
INDE
AUSTRALIE
BRÉSIL
OCÉAN PACIFIQUE DU NORD
OCÉAN ATLANTIQUE DU NORD
OCÉAN ATLANTIQUE DU SUD
OCÉAN INDIEN
OCÉAN PACIFIQUE DU SUD
Mer d'Oman
Golfe du Bengale
Mer de Chine
Mer d'Okhotsk
Golfe d'Alaska
Mer de Beaufort
Baie de Baffin
Baie d'Hudson
Golfe du Mexique
Mer des Antilles
Mer de Corail
Mer du Japon
Mer Noire
Mer du Nord
Détroit de Danemark
Mer de Béring

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/24-F/E/S
13 février 1978
Original : français,
anglais,
espagnol

GROUPE DE TRAVAIL 5B

RASSEMBLEMENT DES BESOINS DE FREQUENCES

Le tableau annexé ci-après donne la liste des besoins de fréquences pour les besoins en matière de contrôle d'exploitation à grande distance (LDOCC), en fonction des besoins de fréquences qui avaient été présentés par les administrations avant le 13 février 1978 à 12 heures.

Annexe : 1

WORKING GROUP 5B

COLLATION OF FREQUENCY REQUIREMENTS

Taking into account the frequency requirements submitted by Administrations up to 1200 hours on 13 February 1978, the enclosure shows the collated frequency requirements for Long Distance Operational Control Communications (LDOCC).

Annex : 1

GRUPO DE TRABAJO 5B

COTEJO DE NECESIDADES DE FRECUENCIAS

Teniendo en cuenta las necesidades de frecuencias presentadas por las Administraciones hasta las 12.00 horas del 13 de febrero de 1978, en el Anexo se muestran las necesidades de frecuencias cotejadas para las comunicaciones del control de operaciones a larga distancia (LDOCC).

Anexo : 1

K. KING
Président du Groupe de travail 5B

ARCHIVES U.I.T. GENÈVE

ANNEXE - ANNEX - ANEXO

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
MOD	AFG		1 A304			1 A304	1 A304	1 A304	1 A304	1 A304	1 A304	1 A304		
	AFS						1 A302	1 A302		1 A302		1 A302	1 A302	
			1 A303			1 A303	1 A303	1 A303						
MOD	AGL		1 A305			1 A305		1 A305			1 A305	1 A305	1 A305	
ADD	ALG	1	2	1		2	1	2	1	2	2	2	2	
	ALS (USA)													A362
MOD	ARG			1 A306			1 A306	1 A306			1 A306	1 A306		A375
				1 A307			1 A307	1 A307		1 A307	1 A307	1 A307		
ADD	ARS	1 A301	1 A301	2 A301		1 A301	1 A301	1 A301	1 A301	1 A301	2 A301	2 A301	2 A301	
	ATN (HOL)					1 A334	1 A335		1 A335		1 A335	1 A335	1 A335	
	AUS	1 A309	1 A309	1 A309		1 A309	2 A309	1 A309	1 A309	2 A309	3 A309	3 A309		A308
	B							1 A310	1 A310	1 A310	1 A310	1 A310	1 A301	
	BEL			1 A301			1 A301		1 A301		1 A301	1 A301	1 A301	
	BHR		1 A311				1 A311	1 A311	1 A311		1 A311	1 A311	1 A311	
	BLR													A360
ADD	BOL		1 A387				1 A387		1 A387		1 A387	1 A387	1 A387	
	CAN		2 A301	2 A301		2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	
	CAR (USA)													A362
ADD	CHL			1 A382			1 A382	1 A383		1 A382	1 A384	1 A384		
	CHN		2			2		2		1	2	2	1	
MOD	CME			1			1	1		1		1	1	
	CPV	1 A312					1 A312		1 A312			1 A312		
ADD	CTI		1			1	2	2		1	1	1		

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)[1]	5.6	6.6	9	10	11.3	13.3	18	22		
MOD	CUB	1		1		1		1		1	1	1			
MOD	D		1 A313	2 A313		1 A315	1 A315		1 A301		1 A301	1 A301	1 A301		
	DDR		1 A317	1 A318		1 A318	1 A318	1 A319		1 A319	1 A320	1 A320			
MOD	DNK			1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	A321	
MOD	E		1 A317	1 A323		2 A324	1 A324	2 A301		2 A301	2 A301	1 A301	1 A301		
ADD	EQA		3			3	3	3	1	1					
	ETH						2 A326	2 A326	2 A326	2 A326	2 A326	2 A326			
	F	2 A301					2 A301		2 A301		2 A301	2 A301	2 A301	A365	
	FJI			1 A367		1 A367	1 A368	1 A368		1 A368	1 A368	1 A368			
MOD	FNL	1 A301		1 A301		1 A301		1 A301		1 A301		1 A301		A385	A386
	G	1 A369	1 A370 1 A371			1 A371	1 A372 1 A373	1 A372 1 A373	2 A301		2 A301	1 A301		A374	
ADD	GAB						2 A394	2 A394							
	GRC	1 A301		1 A301			1 A301	1 A301		1 A301	1 A301	1 A301			
	GRL (DNK)	1 A322	1 A322	1 A322	1 A322	1 A322	1 A322								
	GUI							1 A330	1 A331	1 A304	2 A332	1 A333			
	GUM (USA)													A362	
ADD	HNG					1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301		
	HOL			1 A317		1 A301		1 A301			1 A301	1 A301	1 A301		
ADD	HVO		1			1	1	2	1		1				
	HWA (USA)													A362	
	HWL (USA)													A362	

1) Pour l'explication des Observations, voir page 8

1) *For explanation of Remarks see page* 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)[1]	5.6	6.6	9	10	11.3	13.3	18	22	
ADD	I			2 A301			1 A301	1 A301	2 A301	1 A301	2 A301	1 A301	1 A301	
	IND	1 A336				1 A336		1 A336		1 A336	1 A336			A376
			1 A301				1 A301		1 A301		1 A301	1 A301		
ADD	INS							2	2	2	2	2		A354
	IRL	2 A301		2 A301				1 A301						A337 A338
ADD	IRN	1	1	1			2	2	3	3	3	3	3	
MOD	ISR	2 A339	1 A339			2 A339	1 A339	2 A340		2 A340	2 A340	2 A340	1 A340	

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance *(LDOCC)*

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia *(LDOCC)*

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
	J					1 A301	1 A301	2 A301	1 A301	1 A301	2 A301	2 A301		A381
	JON (USA)													A362
ADD	KEN	1				1	1	1			1		1	
ADD	KOR						1	1	2	1	1	1		
ADD	KRE		1	1		1		1		1	1			
	LBR		1 A341				1 A341	1 A341		1 A341	1 A341	1 A341	1 A341	
ADD	LBY	1 A301	1 A301	1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301		
MOD	MAU			1 A342			1 A342			1 A342			1 A342	
	MDW (USA)													A362
ADD	MEX	1		1			1	1		1		1		
	MLA	1 A354				1 A354		1 A314			1 A380	1 A316	1 A317	
	MLT	2 A339	2 A339	2 A339		2 A339	2 A339	2 A339	2 A339	2 A339	2 A339	2 A339		
	MRA (USA)													A362
	MRL (USA)													A362
ADD	MTN			1		1		1						
ADD	NGR		1 A301					1 A301					1 A301	
ADD	NIG							2		2	2	2	2	
MOD	NOR			1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	A321
	NPL			1 A343			1 A343	1 A343						

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance (LDOCC)

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia (LDOCC)

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
	NZL		1 A344				1 A344		1 A344		1 A344	1 A344	1 A344	
				1 A345			1 A345							
	PAK	1		1		1		2		1				
	PHL	1 A347					1 A347	1 A347		1 A347	1 A347	1 A347	1 A347	
	PHX (USA)													A362
	PLM (USA)													A362
	PNG	2 A346		2 A346				2 A346						A337 A378 A379
		1 A348		1 A348				1 A348			1 A348	1 A348		A337 A378 A379
	POL	1 A349	2 A350	1 A349		2 A350	2 A301	2 A301		1 A301	1 A301	1 A301		
	POR		1 A351				1 A351	1 A351			1 A351	1 A351		
ADD	PRG	1 A382	1 A382	1 A382		1 A382	1 A389		1 A390		1 A391	1 A392		
	PTR (USA)													A362
ADD	QAT		1					1		1	1	1		A 311
	ROU	1 A301	2 A301	2 A301		2 A301	2 A301	2 A301	2 A301	2 A301	2 A301	2 A301		
MOD	S			1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301		A321
MOD	SEN			1 A353		1 A353		1 A353		1		1		
	SMA (USA)													A362
	SMO (NZL)		1 A346				1 A346	1 A346		1 A346				
	SNG					1 A354		1 A354			1 A354			
ADD	STP		1			1	1	1		1	1	1		
	SUI	1 A301	1 A301	1 A301		1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	1 A301	
MOD	SUR					1		1		1	1	1	1	

1) Pour l'explication des Observations, voir page 8

1) For explanation of Remarks see page 8

1) Para la explicación de las Observaciones véase página 8

Récapitulation des besoins en matière de contrôle d'exploitation à grande distance *(LDOCC)*

Summary of long-distance operational control requirements (LDOCC)

Resumen de las necesidades relativas al control operacional a larga distancia *(LDOCC)*

		3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18	22	
	SWN (USA)													A362
	TCH	2 A317 1 A355	1 A317	2 A317		1 A317 1 A355	1 A317	1 A317	1 A317		1 A317 1 A355	1 A355	1 A355	
ADD	TGK	1				1	1	1			1		1	
	TON						6							
	TRD							1 A330						
ADD	TUN	1	2	1		2	1	2	1	2	2	2	2	
	UKR													A360
	URG	1 A356 1 A357 1 A358 1 A359				1 A356 1 A357 1 A358 1 A359		1 A356 1 A357 1 A358 1 A359	1 A358	1 A356 1 A357 1 A359	1 A356 1 A357 1 A358 1 A359	1 A356 1 A357 1 A358 1 A359	1 A356	A359
	URS		1 A301			2 A301	3 A301	2 A301	1 A301	3 A301	3 A301	3 A301	2 A301	A360
	USA	3 A301	6 A301	3 A301		6 A301	8 A301	4 A301	8 A301	6 A301	6 A301	8 A301		A361 A362
MOD	VEN	1 A366					1 A366		1 A366		1 A366	1 A366		
	VIR (USA)													A362
	WAK (USA)													A362
ADD	YEM					1 A393	1 A393	1 A304	1 A317	1 A311	1 A311	1 A388		
	YUG								1 A301	2 A363	1 A364 1 A301	1 A317		
	ZAI										2			
ADD	ZMB						1	1	1	1	1			

1) Pour l'explication des Observations, voir page 8

1) *For explanation of Remarks see page* 8

1) Para la explicación de las Observaciones véase página 8

Explications des Observations - Explanation of Remarks - Explicación de las Observaciones

MOD A301 ARS, B, BEL, CAN, D, DNK, E, F, FNL, G. GRC, HNG, HOL, I, IND, IRL, J, LBY, NGR, NOR, POL, ROU, S, SUI, URS, USA, YUG	Mondiale - Worldwide - Mundial
	NSA1 SA CAR SAM NA EU SEA FE NSA2
A302 AFS	
A303 AFS	7E
MOD A304 AFG, GUI, YEM	ME
MOD A305 AGL	NSA1 NSA2 EU SA SAM2 NA3 CAR
MOD A306 ARG	SAM ATL - N/S
A307 ARG	SAM - PAC
A308 AUS	Voir page 11 - See page 11 - Ver página 11
A309 AUS	CWP SP NP SEA MID IO SAM AFI FE
A310 B	SA CWP NA3 EU CAR SAM1 CEP NSA1 NSA2
A311 BHR, YEM	EU ME
A312 CPV	SA
A313 D	EU 1 2A 2C
A314 MLA	FE SEA ME SP
A315 D	EU ME NA NSA1 NSA2
A316 MLA	ME EU SP
A317 YUG, E, DDR, HOL, MLA, TCH, YEM	EU
A318 DDR	EU ME NA2 CAR
A319 DDR	EU ME FE NA2 CAR NSA1 NSA2
A320 DDR	ME FE NA2 CAR NSA1 NSA2
A321 DNK, NOR, S	Voir page 11 - See page 11 - Ver página 11
A322 GRL(DNK)	NA1 NA2
MOD A323 E	EU NA2 NA3
MOD A324 E	EU NA2 NA3 SA NSA1 SAM CAR
SUP A325 E	NA2 NA3 SA SAM
A326 ETH	EU FE ME NA2 NSA1
A327 FNL	EU NA2 NA3 ME
A328 FNL	EU NA2 NA3 ME SA NSA1 NSA2
A329 FNL	EU NA2 NA3 ME SA NSA1 NSA2 FE SEA CWP CEP NP NA1 CAR
A330 TRD, GUI	CAR

A331	GUI	NSA1
A332	GUI	NA2 NSA2
A333	GUI	CWP
A334	ATN	CAR SAM1
A335	ATN	CAR SAM1 SAM2 NA2 NA3
A336	IND	FE ME SEA
A337	IRL, PNG	Voir page 11 - See page 11 - Ver página 11
A338	IRL	Voir page 11 - See page 11 - Ver página 11
A339	MLT, ISR	EU ME NSA2
A340	ISR	ME EU NSA2 NSA1 NA2 NA3 CAR
A341	LBR	AFI SA SAT NA3
MOD A342	MAU	NSA2 EU NA2 ME IO
A343	NPL	ME SEA
A344	NZL	SP SEA CWP FE CEP NA1 NA2
A345	NZL	9D
A346	PNG, SMO(NZL)	9B
A347	PHL	FE SEA ME EU CWP CEP SP
A348	PNG	CWP SEA FE SP 9B
A349	POL	EUR
A350	POL	EUR et national FIS - and national FIS - y nacional FIS
A351	POR	EU NA2 NA3 CAR SA SAM2 NSA1 NSA2
A352	non utilisé -	not used - no utilizada
A353	SEN	SA NSA1
A354	MLA, SNG	FE SEA
A355	TCH	NA1 NA2 NA3 EU CAR SA ME SEA
A356	URG	SAM1
A357	URG	SAM2
A358	URG	SA
A359	URG	Voir page 12 - See page 12 - Ver página 12
A360	URS, BLR, UKR	Voir page 12 - See page 12 - Ver página 12
A361	USA	Voir page 12 - See page 12 - Ver página 12
A362	USA	Voir page 12 - See page 12 - Ver página 12
A363	YUG	2 3

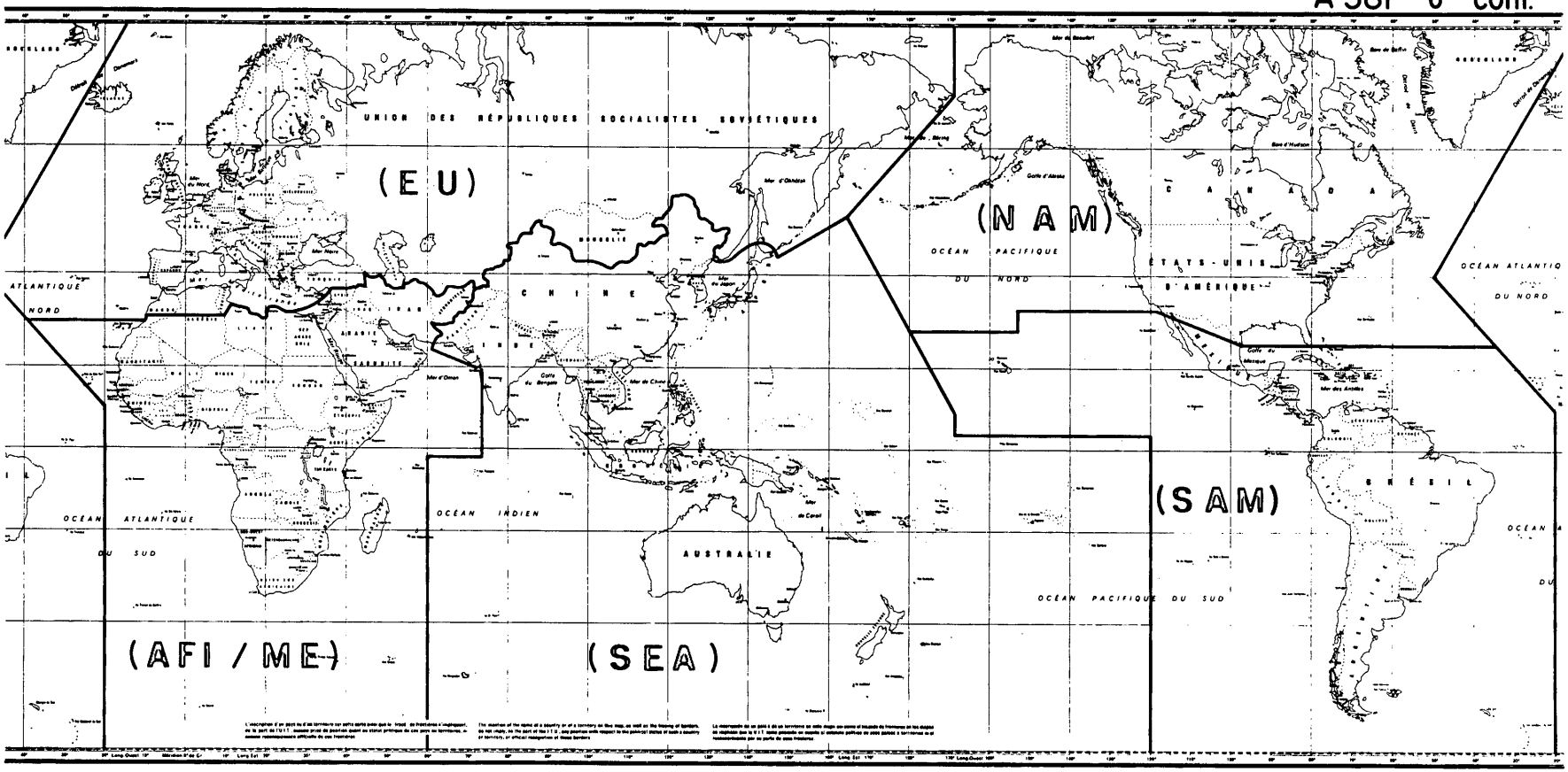
	A364	YUG	NSA2
	A365	F	Voir page 12 - See page 12 - Ver página 12
	A366	VEN	12G
	A367	FJI	SP
	A368	FJI	SP SEA
	A369	G	EUR NAT
	A370	G	EUR NAT AFI
	A371	G	PAC SEA
	A372	G	EUR NAT AFI MID
	A373	G	PAC SEA MID
	A374	G	Voir page 12 - See page 12 - Ver página 12
	A375	ARG	Voir page 13 - See page 13 - Ver página 13
	A376	IND	Voir page 13 - See page 13 - Ver página 13
	A377	SUR	Voir page 13 - See page 13 - Ver página 13
	A378	PNG	Voir page 13 - See page 13 - Ver página 13
	A379	PNG	Voir page 13 - See page 13 - Ver página 13
	A380	MLA	FE SEA ME EU SP
	A381	J	Voir page 13 - See page 13 - Ver página 13
	A382	CHL, PRG	SAM1 SAM2
	A383	CHL	SAM1 SAM2 CAR SP SA EU
	A384	CHL	CAR SP SA EU
ADD	A385	FNL	Voir page 13 - See page 13 - Ver página 13
ADD	A386	FNL	Voir page 13 - See page 13 - Ver página 13
ADD	A387	BOL	SAM SAT CAR NAT EU
ADD	A388	YEM	EU NA2
ADD	A389	PRG	CAR SAM1 SAM2
ADD	A390	PRG	CAR SAM1 SAM2 EU
ADD	A391	PRG	CAR SAM2 EU
ADD	A392	PRG	NA3 CAR EU
ADD	A393	STP, YEM	NSA1 NSA2
ADD	A394	GAB	4B

A308 AUS	La lettre-circulaire N° 386 demande que les zones d'exploitation des voies attribuées au contrôle d'exploitation à grande distance soient indiquées sur la base des ZLAMP. Le problème des zones d'allotissement pour le contrôle d'exploitation à grande distance n'a pas encore été résolu. L'Australie est d'avis que la Conférence administrative mondiale des radiocommunications devra spécifier une méthode pour déterminer les fréquences à allotir, à l'échelon mondial ou par zones, pour les besoins du contrôle d'exploitation. On trouve dans la colonne 10 de l'Annexe 2 à la lettre-circulaire N° 386 une liste des besoins de l'Australie en matière de fréquences pour le contrôle d'exploitation à grande distance. Les ZLAMP indiquées dans l'en-tête de la colonne sont les zones en direction desquelles une station australienne pourrait être amenée à émettre.	Circular-letter No. 386 requests that the areas of operation of the long-distance operational control channels be stated in terms of MWARAs. The problem of allotment areas for long-distance operational control is a problem that has still to be resolved. Australia is of the opinion that a method to determine the frequencies to be allotted on a world-wide or Sectional areas basis for operational control requirements must be resolved at the World Administrative Radio Conference. Column 10 of Annex 2 of Circular-letter No. 386 has been completed and lists the long-distance operational control frequency requirements of Australia. The MWARAs shown at the head of the column are the areas into which an Australian station could be expected to operate.	En la carta circular N.° 386 se solicita que las zonas de explotación de los canales para el control operacional a larga distancia se indiquen en forma de ZRMP. El problema de las zonas de adjudicación para el control operacional a larga distancia está todavía por resolver. Australia considera que el método para determinar las frecuencias que han de adjudicarse con carácter mundial o por zonas y subzonas para las necesidades del control de operaciones debe decidirlo la Conferencia Administrativa Mundial de Radiocomunicaciones. En la columna 10 del Anexo 2 a la carta circular N.° 386 se han enumerado las frecuencias que Australia necesita para el control de operaciones a larga distancia. En el encabezamiento de la columna se han indicado las ZRMP que corresponden a las zonas previstas de operación de la estación australiana.
A321	Famille commune pour DNK, NOR et S.	Common family for DNK, NOR and S.	Familia de frecuencias común para DNK, NOR y S.
A337 PNG IRL	Bandes de fréquences des 3 ou 3,5 MHz.	3 or 3.5 MHz frequency bands.	Bandas de frecuencias de 3 ó 3,5 MHz.
A338 IRL	Bandes de fréquences des 4,7 ou 5,6 MHz.	4.7 or 5.6 MHz frequency bands.	Bandas de frecuencias de 4,7 ó 5,6 MHz.

A359	URG	L'Uruguay estime que, à moins de modifier les limites de la ZLAMP SA, il faudra créer dans l'Atlantique Sud une nouvelle ZLAMP pour le trafic aérien entre Montevideo et la ville de Johannesburg en Afrique du Sud. Une famille de fréquences, dans les bandes énumérées dans le formulaire ci-joint (formulaire MWARA XXX), devrait être allotie à cette fin. Etant donné le trafic réduit prévisible dans la ZLAMP XXX concernant le contrôle d'exploitation à grande distance, et au cas où il serait permis d'utiliser les fréquences de la ZLAMP XXX à cette fin, on pourrait renoncer à utiliser la famille de fréquences indiquée pour ce contrôle d'exploitation.	Uruguay considers that unless the boundaries of MWARA SA are modified, a new MWARA should be created in the South Atlantic in order to cater for air traffic between Montevideo and the city of Johannesburg in South Africa. A family of frequencies in the bands listed in the attached form (Form MWARA XXX) would have to be allotted for this purpose. Given the low estimated traffic requirements for long-distance operational control in MWARA XXX, the family of frequencies listed for that purpose may be dispensed with if the MWARA XXX frequencies are authorized for such operational control.	Uruguay estima necesario - salvo que se ajusten los límites de la ZRMP SP - crear una nueva ZRMP en el Océano Atlántico Sur, con la finalidad de atender el tránsito aéreo entre Montevideo y la ciudad de Johannesburgo en África del Sur, para lo cual se requeriría la adjudicación de una familia de frecuencias en las bandas que se detallan en el formulario que se acompaña (Formulario ZRMP XXX). Dado el reducido tráfico que se estima cursar en control de operaciones a larga distancia en la ZRMP XXX, se prescinde de la familia de frecuencias que se detalla para esa finalidad, en el caso de que se permita utilizar las frecuencias de la ZRMP XXX para dicho control de operaciones.
A360	URS	Mêmes fréquences URS, BLR, UKR.	Same frequencies URS, BLR, UKR.	Las mismas frecuencias para URS, BLR, UKR.
A361	USA	Voir la proposition USA/4/39 (ADD27/73A) - Document N° 4 de la Conférence	See proposal USA/4/39 (ADD27/73A) - Document No. 4 of the Conference	Véase la proposición USA/4/39 (ADD27/73A) - Documento N.° de la Conferencia
A362	USA	Mêmes fréquences USA, HWA, PTR, PLM, SMA, ALS, GUM, PHX, WAK, MDW, MRL, MRA, CAR, HWL, JON, VIR, SWN.	Same frecuencies USA, HWA, PTR, PLM, SMA, ALS, GUM, PHX, WAK, MDW, MRL, MRA, CAR, HWL, JON, VIR, SWN.	Las mismas frecuencias para USA, HWA, PTR, PLM, SMA, ALS, GUM, PHX, WAK, MDW, MRL, MRA, CAR, HWL, JON, VIR, SWN.
A365	F	Deux familles à vocation mondiale pour une assignation exclusive à PARIS.	Two world-wide families for assignment exclusively to PARIS.	Dos familias de frecuencias mundiales para su asignación exclusiva a PARÍS.
A374	G	Les ZLAMP sont spécifiées de façon approximative seulement, pour donner une indication des portées de service prévues.	The MWARA areas are approximate only and are included for the purpose of giving an indication of the service ranges expected.	Las zonas ZRMP, que únicamente son aproximadas, se incluyen para facilitar una indicación sobre los alcances de servicio previstos.

	A375	ARG	Le service d'exploitation ou service complémentaire doit encore être défini. En particulier, pour les communications à grande distance.	Operational or complementary service to be defined. Particularly for long-distance communications.	Servicio operacional o complementario por definir. Especialmente para comunicaciones a larga distancia.
	A376	IND	Concernant les besoins en fréquences pour les ZLAMP et pour le contrôle d'exploitation international à grande distance, les renseignements fournis sont basés sur la répartition actuelle et sur les prévisions qu'il est possible de faire.	As regards frequency requirements for MWARA and international long-distance operation control, the information included is based on existing allocation and whatever could be foreseen.	En lo que respecta a las necesidades de frecuencias para la ZRMP y para el control de operaciones internacional a larga distancia, la información incluida se ha basado en las adjudicaciones existentes y en las previsiones que se han formulado.
SUP	A377	SUR			
	A378	PNG	Bandes de fréquences des 4,7, 5,6 ou 6,6 MHz	4.7, 5.6 or 6.6 MHz frequency bands	Bandas de frecuencias de 4,7, 5,6 ó 6,6 MHz
	A379	PNG	Bandes de fréquences des 9, 10 ou 11,3 MHz	9, 10 or 11.3 MHz frequency bands	Bandas de frecuencias de 9, 10 ó 11,3 MHz
	A381	J	Concernant la planification des zones pour les stations aéronautiques effectuant le contrôle d'exploitation à grande distance, cette Administration propose la création de nouvelles zones de ce genre, de manière à diviser le monde entier en cinq zones, comme indiqué dans la carte ci-jointe (voir page 14).	As far as the areas planning for aeronautical stations for long-distance operational control are concerned, this Administration would like to make a proposal for establishment of such new areas as to divide the whole world into five areas, as indicated in the map enclosed herewith (see next page 14).	En lo que respecta a la planificación de las zonas de estaciones aeronáuticas para el control de operaciones a larga distancia, esta Administración formulará una propuesta de establecimiento de estas nuevas zonas dividiendo el mundo entero en cinco zonas, de conformidad con el mapa que se adjunta (véase página 14).
ADD	A385	FNL	Bandes de fréquences des 5,6 ou 6,6 MHz	5.6 or 6.6 MHz frequency bands	Bandas de frecuencias 5,6 ó 6,6 MHz
ADD	A386	FNL	Bandes de fréquences des 11,3 ou 13,3 MHz	11.3 or 13.3 MHz frequency bands	Bandas de frecuencias 11,3 ó 13,3 MHz

A 381 J cont.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OCÉAN INDIEN
OCÉAN ATLANTIQUE DU SUD
OCÉAN PACIFIQUE DU SUD
Mer d'Okhotsk
Golfe d'Alaska
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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Addendum No. 1 to
Document No. DT/25-E
13 February 1978
Original : English

COMMITTEE 5

ADD 27/145A

Regional and Domestic Air Route Area-10

(RDARA-10)

From the point 50°N 164°E to 66°N 169°W. Then along the 169°W meridian to the North Pole. Then through the points 82°N 30°E, 82°N00°, 73°N00, 73°N 15°W. Then along the 15°W meridian to 72°N. Then through the points 40°N 50°W, 40°N 65°W to 44° 30'N 73°W, 41°N 81°W, 41°N 88°W, 48°N 91°W 48°N 127°W, 50°N 130°W, then westward to close at 50°N 164°E.

ADD 27/150A

Regional and Domestic Air Route Area-11

(RDARA-11)

From the point 29°N 180° through the points 50°N 164°E, 50°N 127°W. Then along the border between the United States of America and Canada to 46°N 67°W, then to 40°N 65°W, 40°N 50°W, 25°N 35°W, 25°N 98°W, 33°N 119°W, 33°N 153°W, 29°N 153°W to close at 29°N 180°.

ADD 27/152B

Regional and Domestic Air Route Area-12

(RDARA-12)

From the point 03° 30'N 170°W to the point 10°N 170°W, then along the ITU boundary between Regions 2 and 3 to 29°N 180°, and thence to 29°N 153°W, 33°N 153°W, through the points 33°N 120°W, 35°N 120°W, 32°N 104°W, 25°N 91°W, 26°N 91°W, 26°N 79°W, 27°N 79°W 27°N 76° 30'W, 25°N 70°W, 25°N 35°W and along the ITU boundary between Regions 1 and 2 to 00° 20°W. Thence through the points 00° 44°W, 04° 24'N 50° 39W. Then along the boundary between Brazil and French Guiana, Surinam, Guyana, Venezuela, Columbia to the junction of Brazil, Peru and Columbia then along the boundary between Peru and Columbia and Peru and Equador to the point 04°S 93°W. Then to the point 05°S 93°W and through the points 05°S 120°W, 03° 30'N 120°W to close the area at 03° 30'N 170°W.

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(Geneva, 1978)

Document No. DT/25-E
13 February 1978
Original : French
English
Spanish

COMMITTEE 5

The Annex below sets out the decisions reached at the second meeting of Working Group 5A on the RDARA boundaries.

The Annex does not describe the boundaries of Sub-Areas 6B, 6C, 6D, 6F (Nos. 27/128 to 27/130, 27/132), 7B (27/135), which will be dealt with in another document.

The map of the RDARA will be definitively established once decisions have been adopted on all RDARA.

E.D. DUCHARME
Chairman of Working Group 5A

Annex : 1

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A N N E X

MOD 27/105 Sub-Area 1A

From the point 65°N 26°W, and through the points 40°N 50°W, 40°N 20°W, 60°N 20°W, 60°N 26°W, to the point 65°N 26°W.

MOD 27/106 Sub-Area 1B

From the North Pole along the 15°W meridian to the point 72°N 15°W, then through the points 65°N 26°W, 60°N 26°W, 60°N 20°W to the point 50°N 20°W, thence east along the territorial waters between the Channel Islands and French coastline, reaching the latter at the meridian 03°W. Thence following the north-east border of France, touching Belgium, Luxembourg and the Federal Republic of Germany. Thence along the border between Switzerland and the Federal Republic of Germany, and along the border between the latter and Austria. Thence along the border between the Czeckoslovak Socialist Republic and the Federal Republic of Germany, then along the border between the Federal Republic of Germany and the German Democratic Republic towards the Baltic Sea. Then west along the coastline of the Federal Republic of Germany to the border between the latter and Denmark. Along this border to the North Sea. Thence along the 55°N parallel to a point 55°N 04°E, then through the points 56°N 03°E, 59°N 02°E, 62°N 01°E. Thence along the 01°E meridian to the North Pole.

MOD 27/107 Sub-Area 1C

From the North Pole along the meridian 01°E to the point 62°N 01°E. Thence through the points 59°N 02°E, 56°N 03°E, 55°N 04°E and then east along the 55°N parallel and the border between Denmark and the Federal Republic of Germany to the Baltic Sea, and along the Baltic Sea coast of the Federal Republic of Germany to the border between the Federal Republic of Germany and the German Democratic Republic. Along this border touching the western borders of the Czeckoslovak Socialist Republic and Austria to the Swiss border. Thence eastward along the southern borders of Austria and Hungary, thence along the border between Hungary and Roumania, thence, along the border between the U.S.S.R. and the following countries: Hungary, the Czeckoslovac Socialist Republic and Poland. Thence to the Baltic Sea along the U.S.S.R., Baltic Sea coast, to the border between Finland and the U.S.S.R. at 70°N 32°E, then along the 32°E meridian to the North Pole.

NOC 27/108

MOD 27/109 Sub-Area 1E

From the point 50°N 20°W, through the points 40°N 20°W, 40°N 50°W, 30°N 39°W, 30°N 10°W, 31°N 10°W, to the point 31°N 10°E. Then along the Libya-Tunisian borders to the Mediterranean, thence along the Tunisian coast to intersect the 10°E meridian. Thence to the point 43°N 10°E; thence to the border between Italy and France and between Italy and Switzerland, Switzerland and Austria, Switzerland and the Federal Republic of Germany, and between France and the Federal Republic of Germany, France and Luxembourg, and France and Belgium to the Channel coast. Thence west through the territorial waters between the Channel Islands and the French coast to the point 50°N 20°W.

MOD 27/156 Sub-Area 12D

From the point 02°N 79°W, Balboa, City of Panama and Colon, 13°N 77°W, 13°N 70°W, 08°N 70°W, 06°N 67°W, 01°N 66°W, 04°S 70°W along the border between Colombia, Peru and Ecuador, to close the sub-area at 02°N 79°W.

NOC 27/157

MOD 27/158 Sub-Area 12F

From the point 02°N 79°W, Balboa, City of Panama and Colon, 13°N 77°W, 13°N 70°W, 08°N 70°W, 06°N 67°W, 01°N, 66°W, 04°S 70°W along the border between Colombia, Peru and Ecuador, to close the sub-area at 02°N 79°W.

MOD 27/159 Sub-Area 12G

From the point 07°N 73°W, and through the points 14°N 73°W, 14°N 58°W, 01°31'N 58°W and along the borders of Brazil with British Guiana, Venezuela, Colombia through the points 1°57'N 68°W, 05°N 69°W, to close the sub-area at 07°N 73°W.

MOD 27/160 Sub-Area 12H

From the point 05°N 70°W , and through the points 08°45'N 60°W, 08°N 58°W, 08°N 49°W, 04°10'N 51°36'W, and along the borders of Brazil with French Guiana, Surinam, British Guiana, Venezuela and Colombia to the junction of the borders of Brazil, Colombia and Peru, to close the sub-area at 05°N 70°W.

NOC 27/161

ADD 27/161A Sub-Area 12J

From the point 04°S 93°W, and through the points 02°N 93°W, 02°N 79°W. Then along the border between Ecuador and Colombia to the junction with the borders of Colombia, Peru and Ecuador. Thence along the border between Peru and Ecuador to close the sub-area at 04°S 93°W.

ADD 27/161B Regional and Domestic Air Route Area-13

(RDARA-13)

From the South Pole along the 120°W meridian to 05°S. Then through the points 05°S 93°W, 04°S 82°W, and along the southern border of Ecuador, Colombia, Venezuela, British Guiana, Surinam, French Guiana, to the point 04°24'N 50°39'W. Then through the points 04°24'N 47°W, 00°32°W to the point 00°20°W, and along the 20°W meridian to the South Pole.

NOC 27/162

NOC 27/163

MOD 27/164 Sub-Area 13C

From the point 15°S 47°W and through the points 20°S 44°W, 23°19'S 42°W,25°S 45°W, 22°30'S 50°39'W, 19°52'S 58°W, and along the border of Brazil with Paraguay, Bolivia, Peru, Colombia, Venezuela, British Guiana, Surinam and French Guiana to 04°24'N 50°39'W, 04°24'N 47°W, to close the sub-area at 15°S 47°W.

NOC 27/165

NOC 27/166

NOC 27/167

NOC 27/168

NOC 27/169

NOC 27/170

MOD 27/171 Sub-Area 13J

From the point 15°S 47°W through the points 20°S 44°W, 23°19'S 42°W, 29°S 40°W, 35°S 45°W, and thence along the borders of Brazil with Uruguay, Argentina, Paraguay and Bolivia to the point 19°52'S 58°W, then through the point 18°S 57°37'W to close the sub-area at 15°S 47°W.

MOD 27/172 Sub-Area 13K

From the point 22°30'S 50°39'W and through the points 25°S 45°W, 29°S 40°W, 20°S 32°W, 00°32°W, 04°24'N 47°W, 04°24'N 50°39'W, to close the sub-area at 22°30'S 50°39'W.

ADD 27/173A Regional and Domestic Air Route Area-14

(RDARA-14)

From the South Pole along the 110°E meridian to 10°S. Then through the points 10°S 145°E, 19°S 153°E, 27°S 160°E. Then along the 160°E meridian to the South Pole.

ADD 27/173B Sub-Area 14A

From the South Pole along the 110°E meridian to 19°S. Then through the points 19°S 118°E, 24°S 120°E, 24°S 131°E. Then along the 131°E meridian to the South Pole.

ADD 27/173C Sub-Area 14B

From the point 19°S 110°E to the point 10°S 110°E thence to 10°S 131°E, 24°S 131°E, 24°S 120°E, 19°S 118°E to the point 19°S 110°E.

ADD 27/173D Sub-Area 14C

From the point 24°S 131°E to the point 10°S 131°E thence to 10°S 139°E, 24°S 139°E to the point 24°S 131°E.

ADD 27/173E Sub-Area 14D

From the South Pole along the 131°E meridian to 24°S then through the points 24°S 139°E, 27°S 139°E, 27°S 142°E, 34°S 142°E, 34°S 139°E. Then along the 139°E meridian to the South Pole.

ADD 27/173F Sub-Area 14E

From the point 24°S 139°E along the 139°E meridian to 10°S then through the points 10°S 145°E, 19°S 153°E to the point 24°S 139°E.

ADD 27/173C Sub-Area 14F

From the point 27°S 139°E along the 139°E meridian to 24°S then through the points 19°S 153°E, 27°S 160°E to the point 27°S 139°E.

ADD 27/173H Sub-Area 14G

From the South Pole along the 139°E meridian to 34°S then through the points 34°S 142°E, 27°S 142°E, 27°S 160°E. Then along the 160°E meridian to the South Pole.

ANNEXE - ANNEX - ANEXO

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AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/26-E
13 February 1978
Original: English

WORKING GROUP 6A

In response to the wish of the Working Group 6A, the categories of messages relating to the safety of aircraft and flight regularity, are annexed herewith. These extracts have been taken from Chapter 5, Volume II of the Annex 10 to the Convention on the International Civil Aviation.

K. OLMS
Chairman of Working Group 6A

Annex

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/27-E
13 February 1978
Original: English

WORKING GROUP 6A

Following the discussion which took place in Working Group 6A, the following alternatives are presented as possible revision of the provisions of 27/20:

1. MOD 27/20 The International Civil Aviation Organization (ICAO) co-ordinates communications in the Aeronautical Mobile (R) Service for international aeronautical operations and this Organization shall be consulted in any international use of frequencies in the Plan for MWARA, VOLMET and WORLD-WIDE purposes (excluding the common frequencies 3023 and 5680 kHz). ICAO may be consulted, where desired by Administrations in the international use of RDARA and Sub-RDARA frequencies.

2. MOD 27/20 The International Civil Aviation Organization (ICAO) co-ordinates communications of the Aeronautical Mobile (R) Service with international aeronautical operations and this Organization should be consulted in the operational use of the frequencies in the Plan.

K. OLMS
Chairman of Working Group 6A

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/28-E
14 February 1978
Original: English
French
Spanish

WORKING GROUP 6B

PROPOSALS CONCERNING THE TRANSITION TO THE NEW PLAN

I. Dates of coming into force of the Final Acts of the Conference and of the revised allotment plan

Dates mentioned in the Annex to Document No. 21 (ICAO Document 9187 COM/76) are as follows:

- Entry into force of the Final Acts of the Conference: 1 April 1979
- Entry into force of the new Frequency Allotment Plan (Appendix 27 Rev.): 1 February 1983
- Proposals from CAN, D, PHL, USA and ZAI mention the same dates. Proposals F/22/1, MAU/33/1, SUI/34/4, J/44/32 and E/67 broadly endorse the ICAO recommendations.
- Proposals G/43/69 and B/65/67 mention the same date (1.2.1983) for the entry into force of the revised Plan but it is proposed that the Final Acts should enter into force on 1 January 1980.

II. Steps to be taken during the transition period

The text of a draft resolution dealing with this subject and contained in the Annex to Document No. 21 (Document 9187, COM/76) is reproduced hereafter.

ADP

RESOLUTION No. Aer 7

RELATING TO THE IMPLEMENTATION OF THE NEW ARRANGEMENT OF HIGH FREQUENCY BANDS ALLOCATED EXCLUSIVELY TO THE AERONAUTICAL MOBILE (R) SERVICE BETWEEN 2850 AND 17 970 kHz

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that each of the high frequency bands allocated exclusively to the aeronautical mobile (R) service by the Administrative Radio Conference, Geneva, 1959, and modified by the Extraordinary Administrative Radio Conference, Geneva, 1966, has been further modified by this conference to provide for SSB techniques;

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b) that a considerable number of both aircraft and aeronautical stations will be transferred from existing frequencies to the new frequencies and channels designated by the present Conference;

c) that changes in frequency assignments should be made as soon as possible so that the advantages of the new channels designated by the present Conference may be realized at the earliest opportunity;

d) that the transfer of assignments should be made with the least possible disruption of the service rendered by each station;

e) that the transfer of assignments should be made in such a manner that harmful interference between stations involved is avoided during the implementation period;

f) that the Final Acts of this Conference will enter into force on 1 April 1979:

g) that the new Frequency Allotment Plan contained in Appendix 27 (Rev) will enter into force on 1 February 1983;

recognizing

a) that the aeronautical mobile (R) service is a safety service

b) that some frequencies have been allotted for world-wide use

resolves

1. that the implementation of the decisions made by the present Conference relating to the new arrangements of the high frequency bands allocated to the aeronautical mobile (R) service should follow an orderly procedure for the transfer of existing services from the old to the new assignments and for the introduction of new services;

2. that between the entering into force of the Final Acts of this Conference on 1 April 1979 and the entering into force of the new Frequency Allotment Plan contained in Appendix 27 (Rev) on 1 February 1983, the transition to single sideband operation shall be made in accordance with the following provisions:

2.1 the carrier (reference) frequency of the single sideband channel in the upper half of the previous double sideband channel shall be the same as the carrier (reference) frequency of that channel;

2.2 the carrier (reference) frequency of the single sideband channel in the lower half of the previous double sideband channel shall be 3 kHz lower than the carrier (reference) frequency of the previous double sideband channel;

2.3 that, prior to 1 February 1983, Aeronautical and Aircraft stations fitted with single sideband equipment may employ either half of the previous double sideband channel (the single sideband carrier (reference) frequency being that in 2.1 and 2.2 above), or a channel in the new frequency plan on a non-interference basis to the existing users of channels in the present plan. Operational use of the channels concerned shall be co-ordinated with the International Civil Aviation Organization in accordance with No. (MOD) 27/20 of Appendix 27 to the Radio Regulations;

3. that on 1 February 1983, the frequencies appearing in Appendix 27 to the Radio Regulations, shall be replaced by the frequencies appearing in Section II, Article I, Appendix 27 (Rev);

4. that unless otherwise specified in the Final Acts of this Conference radiotelephone stations in the Aeronautical Mobile (R) Service operating in the bands between 2850 and 17970 kHz shall comply with the following conditions:

4.1 installations of new double sideband equipment in aircraft stations shall not be permitted after 1 April 1979; however, administrations shall endeavour to discontinue the installations of double sideband equipment at the earliest possible date prior to 1 April 1979;

4.2 installations of new double sideband equipment in aeronautical stations shall not be permitted after 1 April 1979; aeronautical stations shall be capable of single sideband operation at the earliest possible date; furthermore; they shall discontinue double sideband emissions as early as possible, and, in any event, not later than 1 February 1983;

4.3 until 1 February 1983, aeronautical and aircraft stations equipped for single sideband operation shall also be equipped to transmit class A3H emissions where required to be compatible with reception by double sideband equipment;

4.4 as of 1 February 1983, the use of classes of emission A2H, A3J, A7J and A9J only shall be authorized. Double sideband operations may, however, be continued in exceptional cases for domestic use until 1 February 1987, provided that harmful interference which may be caused to the International Aeronautical Mobile (R) Service operating in the single sideband mode be resolved by application of Article 15 of the ITU Radio Regulations, noting in particular RR 667 and RR 674. The Administrations requiring such an extension of the full implementation of single sideband are, nevertheless, urged to cease double sideband operations as soon as possible.

1) Proposals USA/4/63*and D/9/1, are identical. Proposal PHL/54/1 is the same but contains only the first sentence of paragraph 4.4.

2) Proposal ZAI/56/52 is identical but is intended to cover the bands up to 22 000 kHz.

3) Proposals F/22/1, MAU/33/1, SUI/34/4, J/44/32 and E/67 broadly endorse the ICAO recommendations.

4) Proposal U.S.S.R. contained in Document No. 29 is reproduced hereafter:

URS/29/5 5. Procedure for reviewing the Frequency Allotment Plan

The switchover to a new frequency grid with reduced channel spacing, as distinct from the 7 kHz and 8 kHz separation specified in the present Appendix 27, will mean changing the nominal frequencies in the Table under No. 27/16 and at the same time transferring all stations in the Aeronautical Mobile (R) Service to new channels. To retain the use of the channels in the present Appendix 27 which has evolved in the course of joint operation and to simplify the task of preparing a new Frequency Allotment Plan for the Aeronautical Mobile (R) Service, the USSR Administration considers that the following revision procedure should be applied :

URS/29/6 5.1 to establish a frequency grid divided up according to frequency range with a channel separation of 6 kHz, keeping in each band the nominal carrier of the first (lowest frequency) channel;

URS/29/7 5.2 to transfer the allotments of the present Plan (Nos. 27/195 - 27/207) to new nominal frequencies by shifting them all towards the lower frequencies in each band. However, to ensure reliable communications during the transition period, the switchover to new nominal frequencies should not be made simultaneously on all frequency ranges;

URS/29/8 5.3 to stipulate that by the end of the transition period all the allotments referred to in point 5.2 should be transferred to the single sideband system, using the upper sideband;

*) See also USA Document No. 25 submitted as an information document.

URS/29/9 5.4 to provide for the establishment of additional single sideband channels :

5.4.1 with a carrier frequency situated 3 kHz below the carrier of the channels referred to in point 5.1;

5.4.2 formed, with a 3 kHz spacing, in the bands released from double sideband operation by the reduction of the channel separation specified in the present Appendix 27 to 6 kHz;

5.4.3 created in the 21 960 - 22 000 kHz band.

The channels referred to in points 5.4.2 and 5.4.3 will continue to be available for use during the transition period after the completion of the stage referred to in point 5.2, i.e., until the date of the entry into force of the new Appendix 27 (as an illustration, see Annex 3, Chart modifying the Table of Frequencies in the 17 900 - 17 970 kHz band).

5) Proposal B/65/67 is as follows:

B/65/67 ADD Resolution Nº Aer 2 (F)

Relating to the use of Single Sideband Technique in the bands allocated exclusively to the Aeronautical Mobile (R) Service between 2850 - 17 970 kHz

The World Administrative Radio Conference, Geneva, 1978

considering

a) that the Extraordinary Administrative Radio Conference, Geneva, 1966 resolved that Administrations should effect, as soon as possible, a progressive conversion of their HF radiotelephone services in the Aeronautical Mobile (R) Service from double sideband to single sideband operations;

b) that the Final Acts of this Conference will enter into force on January 1, 1980;

c) that the revised Frequency Allotment Plan contained in Appendix 27 will enter into force on February 1, 1983;

resolves

that, unless otherwise specified in the Final Acts of this Conference, radiotelephone stations in the Aeronautical mobile service operating in the bands between 2850 and 17 790 kHz shall comply with the following conditions:

1. as from January 1, 1980 any new installations of double sideband equipament in aeronautical and aircraft stations shall not be permitted; however, administrations shall endeavour to discontinue the use of double sideband equipment at the earliest possible date and in any case not later than February 1, 1983;

2. as from January 1, 1980, frequency assignments made in accordance with Appendix 27, Edition of 1968 may continue in force until February 1. 1983;

3. as from January 1, 1980 frequency assignments under the new frequency allotment plan may be implemented; however, the use of such frequencies must not interference with frequency assignments made under the frequency allotment plan contained in Appendix 27, Edition of 1968;

4. as from January 1, 1980 any new installations of single sideband equipment at aeronautical and aircraft stations using frequencies from the new frequency allotment plan are not required to be compatible with double sideband systems;

5. as from January 1, 1980 any new installations of single sideband equipment in aircraft using frequencies from the present frequency allotment plan are not required to be compatible with double sideband systems if communication is required only with aeronautical and aircraft stations using single sideband systems;

6. as from January 1, 1980 any new installations of single sideband equipment at aeronautical stations using frequencies from the present allotment plan are required to be compatible with double sideband systems until February 1, 1983.

6) Proposal CAN/20/54 reads as follows:

CAN/20/54 **ADD** Resolution No. C

Relating to the use of Single Sideband Technique in the bands allocated exclusively to the Aeronautical Mobile (R) Service between 2850 - 22000 kHz

The World Administrative Radio Conference, Geneva, 1978

considering

a) that the Extraordinary Administrative Radio Conference, Geneva, 1966 resolved that Administrations should effect, as soon as possible, a progressive conversion of their HF radiotelephone services in the Aeronautical Mobile (R) Service from double sideband to single sideband operations;

b) that the Final Acts of this Conference will enter into force on April 1, 1979;

c) that the revised Frequency Allotment Plan contained in Appendix 27 will enter into force on February 1, 1983;

resolves

that, unless otherwise specified in the Final Acts of this Conference, radiotelephone stations in the Aeronautical mobile service operating in the bands between 2850 and 22000 kHz shall comply with the following conditions:

1. as from April 1, 1979 any new installations of double sideband equipment in aeronautical and aircraft stations shall not be permitted; however, administrations shall endeavour to discontinue the use of double sideband equipment at the earliest possible date and in any case not later than February 1, 1983;

2. as from April 1, 1979, frequency assignments made in accordance with Appendix 27, Edition of 1968 may continue in force until February 1, 1983;

3. on the reference frequency 2182 kHz, the requirement for class A3H emissions will continue beyond February 3, 1983;

4. as from April 1, 1979 frequency assignments under the new frequency allotment plan may be implemented; however, the use of such frequencies must not interfere with frequency assignments made under the frequency allotment plan contained in Appendix 27, Edition of 1968;

5. As from April 1, 1979 any new installations of single sideband equipment at aeronautical and aircraft stations using frequencies from the new frequency allotment plan are not required to be compatible with double sideband systems;

6. as from April 1, 1979 any new installations of single sideband equipment in aircraft using frequencies from the present frequency allotment plan are not required to be compatible with double sideband systems if communication is required only with aeronautical and aircraft stations using single sideband systems;

7. as from April 1, 1979 any new installations of single sideband equipment at aeronautical stations using frequencies from the present allotment plan are required to be compatible with double sideband systems until February 1, 1983;

8. for aircraft station and aeronautical station transmitters not exceeding 400 W PEP first installed before April 1, 1979 and for aeronautical station transmitters exceeding 400 W PEP in use until January 1, 1989 the mean power of any A2H, A3H or A7J/A9J emission supplied to the antenna transmission line of an aeronautical or aircraft station on any discrete frequency, shall be less than the mean power (Pm) of the transmitter in accordance with the following table:

Frequency separation Δ from the assigned frequency kHz	Minimum attenuation below mean Power (Pm) db
$2 \leq \Delta < 6$	25
$6 \leq \Delta < 10$	35
$10 \leq \Delta$	Aircraft stations: 40 Aeronautical stations: $43 + 10 \log_{10}$ Pm (watts)

7) Proposal PNG/90/1 reads as follows:

2. Transition procedures

In analyzing the procedures necessary to effect the transition two distinct parts were considered, i.e. the re-equipping of the aircraft and aeronautical station to have A3J emission capability and the rechannelling to the newly agreed allotments.

It is not considered desirable to rechannel to the newly agreed allotments prior to the conversion to the A3J class of emission as the wider bandwidth of the existing receivers as compared to receivers designed for A3J class of service would mean that some increase in interference would be unavoidable particularly if any additional channels created were utilized for worldwide allocations.

It is therefore proposed to firstly re-equip all aircraft and aeronautical stations using the existing (R) band allotments with equipments capable of both the A3H and A3J classes of emission.

During the time of re-equipping all voice communications would use the A3 and A3H classes of emission.

Once the re-equipping is complete then, at an agreed date all voice transmissions using A3 and A3H classes of emissions would cease and the A3J class of emission would be used. There is some advantage in changing to the A3J class of emission prior to the change to the new allotments as interference which may arise during the changes to the new allotments would possibly be less severe if both aircraft and aeronautical stations were using the A3J class of emission at the changeover time.

Once all aircraft and aeronautical stations have changed to the A3J class of emission then at an agreed date all aeronautical stations would change to the newly agreed allotments.

Aircraft fitted with fixed channel equipments would have to ensure fitment of a limited number of the new allotments prior to the changeover date.

Such aircraft may be subject to geographical or hours of operations restrictions until such time as they are fitted with the required new channels for full operations.

Aircraft with equipments capable of being fitted with both the new and old allotments will change to the new allotments at the same time as the aeronautical stations change and would not be unduly affected.

3. Proposal

PNG/90/1 That the problems facing developing countries be taken into account in the formulation of the transition procedures.

F. URBANY
Chairman of Working Group 6B

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/29-E
14 February 1978
Original: English
French
Spanish

WORKING GROUP 6B

Proposals concerning the procedures to be applied with respect to notices and to assignments recorded in the MIFR, during the transition period and after the entry into force of the Plan

These questions are dealt with in two draft resolutions contained in the Annex to Document No. 21 (ICAO Document 9187, COM/76) the text of which is reproduced hereafter.

ADD

RESOLUTION No. Aer 6 - (A)

RELATING TO THE TREATMENT OF NOTICES CONCERNING FREQUENCY ASSIGNMENTS TO AERONAUTICAL STATIONS IN THE AERONAUTICAL MOBILE (R) SERVICE IN THE BANDS ALLOCATED EXCLUSIVELY TO THAT SERVICE BETWEEN 2850 AND 17 970 kHz

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the Final Acts of this Conference will enter into force on 1 April 1979;

b) that the new Frequency Allotment Plan contained in Appendix 27 (Rev) will enter into force at 0001 hours G.M.T. on 1 February 1983;

c) that some administrations may wish to implement certain provisions of the revised Frequency Allotment Plan in advance of the latter date when this may be done without causing harmful interference to stations working in accordance with the present Frequency Allotment Plan;

d) that it will therefore be necessary to provide an interim procedure to facilitate transition from the present Frequency Allotment Plan to the new Frequency Allotment Plan;

resolves

1. that during the period between the date of entry into force of the Final Acts and the date of entry into force of the new Frequency Allotment Plan:

1.1 the provisions of Nos. 553 to 558 of the Radio Regulations, shall continue to be applied in the examination of notices concerning frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the bands allocated exclusively to that service between 2850 and 17 970 kHz;

1.2 all such assignments shall be recorded in the Master International Frequency Register according to the findings reached by the I.F.R.B;

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1.3 the date to be entered in Column 2a or 2b of the Master International Frequency Register shall be as follows:

a) if the finding is favourable with respect to Nos. 554 to 557, the date of 29th April 1966 shall be entered in Column 2a;

b) if the finding is favourable with respect to No. 558, the date of 29th April 1966 shall be entered in Column 2b;

c) for all other assignments (including those which may be in conformity with the revised Frequency Allotment Plan but not in conformity with the present Frequency Allotment Plan) the date of receipt of the notice by the I.F.R.B. shall be entered in Column 2b;

1.4 any assignment which is in accordance with the revised Frequency Allotment Plan shall be so indicated by the insertion by the I.F.R.B. of an appropriate symbol in the Remarks Column of the Master International Frequency Register;

2. that on the date of coming into force of the new Frequency Allotment Plan, the I.F.R.B. shall examine those frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the bands allocated exclusively to that service between 2850 and 17.970 kHz, which are contained in the Master International Frequency Register from the point of view of their conformity with the new Frequency Allotment Plan following the relevant parts of the procedure described in Nos. 553 to 559 of the Radio Regulations, and shall record against them in the Master International Frequency Register a date in Column 2a or 2b as follows:

2.1 assignments with double sideband emission (A3), mentioned in paragraph 4.4 of Resolution Aer 7, and already appearing in the Master Register on the date of coming into force of the new Frequency Allotment Plan, shall retain the date recorded in column 2a or 2b as appropriate until 1 February 1983. A date in column 2a for a frequency assignment using double sideband (A3) as mentioned in paragraph 4.4 of proposed Resolution Aer 7, shall be transferred to column 2b on 2 February 1983. On 1 January 1987 the IFRB shall review the entries and, in consultation with Administrations concerned, cancel those entries which are no longer in use, retaining the others for information only, without a date in column 2b.

2.2 assignments found favourable with respect to Nos. 554 to 557 shall have (the date of signing of the AWARC Agreement, Geneva, 1978) entered in column 2a;

2.3 assignments found favourable with respect to No. 558 shall have (the date of signing of the AWARC Agreement, Geneva, 1978) entered in column 2b;

2.4 all other assignments shall have (the day AFTER the date of signing the AWARC Agreement, Geneva, 1978) entered in column 2b;

3. that, on the date of entry into force of the new Frequency Allotment Plan, the allotments therein shall replace in the Master International Frequency Register those allotments in the present Frequency Allotment Plan;

invites

administrations to notify to the I.F.R.B. as soon as possible the cancellation of frequency assignments released as a consequence of bringing into use the allotments in the new Frequency Allotment Plan.

Proposals USA/4/64, D/10/2 and ZAI/56/53 are identical. Proposal G/43/58 is also the same with the exception of the reference to Resolution /Aer2 - (A)/ in paragraph 2.1. Proposals F/22/1, MAU/33/1 SUI/34/4, J/44/32 and E/67 broadly endorse the ICAO recommendations

ADD

RESOLUTION No. Aer 6 - (B)

RELATING TO THE IMPLEMENTATION OF THE FREQUENCY ALLOTMENT PLAN IN THE HIGH FREQUENCY BANDS ALLOCATED EXCLUSIVELY TO THE AERONAUTICAL MOBILE (R) SERVICE BETWEEN 2850 AND 17 970 KHZ

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the bands allocated exclusively (between 2850 and 17 970 kHz) to the aeronautical mobile (R) Service by the Administrative Radio Conference, Geneva, 1959, were modified by the Extraordinary Administrative Radio Conference, Geneva, 1966;

b) that the 1966 Conference set up procedures to be followed by administrations relating to the implementation of the modifications;

c) that the necessary provisions were made for the IFRB to carry out these procedures;

recognizing

d) that the aeronautical mobile (R) service is a safety service;

e) that the present conference has further modified the said bands to provide for SSB techniques;

f) that there is a need for all administrations to implement the modifications made by the present conference, with a view to avoiding any harmful interference to the services rendered by stations operating in accordance with the Radio Regulations;

resolves

1. that the assignments existing in the Master Register on 1 February 1983 which are not in conformity with the decisions of the present Conference on that date shall be treated as follows:

1.1 the IFRB will send relevant extracts from the Master Register to the administrations concerned, within 30 days from 1 February 1983, advising that, in accordance with the terms of the present resolution, the assignments concerned are to be transferred to the appropriate bands within a period of 180 days after the dispatch of the extracts;

1.2 if an administration does not notify the IFRB of the transfer within the prescribed period, the original entry shall be retained in the Master Register without a date in Column 2 and with a suitable remark in the Remarks column. The administrations shall be advised of this action;

2. that, if an administration so desires, the IFRB shall give it all necessary assistance. In so doing, the IFRB shall apply the provisions of Nos. 629 to 633 of the Radio Regulations.

Proposals USA/4/78, D/11/1, G/43/62, ZAI/56/67 and B/65/68 are identical. Proposals F/22/1, MAU/33/1, SUI/34/4, J/44/32 and E/67 broadly endorse the ICAO recommendations.

F. URBANY
Chairman of Working Group 6B

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/30-E
13 February 1978
Original: English

WORKING GROUP 6A

ARTICLE 3

Frequencies for common use

27/... The frequencies [3023 kHz and 5680 kHz] are intended for common use on world-wide basis (see RR488):

27/... aboard aircraft for:

a) communications with approach and aerodrome control;

b) communication with an aeronautical station when other frequencies of the station are either unavailable or unknown;

27/... at aeronautical stations for aerodrome and approach control under the following conditions:

a) with mean power limited to a value of not more than 20 watts in the antenna circuit;

b) special attention must be given in each case to the type of antenna used in order to avoid harmful interference;

c) the power of aeronautical stations which use these frequencies in accordance with the above conditions may be increased to the extent necessary to meet certain operational requirements subject to co-ordination between the administrations directly concerned and those whose services may be adversely affected;

27/... [The specific application of these frequencies within the conditions and for the purposes mentioned above may be decided at ICAO meetings.]

27/... The use of these frequencies is also authorized for inter-communication between stations in the aeronautical mobile service and mobile stations engaged in co-ordinated air-surface search and rescue operations including communication between these stations and participating land stations.

27/... These channels may be used for A1 or A3 emission, in accordance with special arrangements. Such channel shall not be subdivided.

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/31-E
14 February 1978
Original: English

WORKING GROUP 6A

RESOLUTIONS AND RECOMMENDATIONS

In response to the decision of Working Group 6A, the Sub-Working Group 6A2 proposes the following action:

1. SUP Resolution No. 14
2. ADD Resolution No. B
3. ADD Resolution No. C
4. ADD Recommendation No. A
5. ADD Recommendation No. B

C.-J. DHENIN
Chairman of
Sub-Working Group 6A2

Annexes: 4

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RESOLUTION B

Relating to the Use of Frequencies of the Aeronautical Mobile (R) Service

The World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978,

considering

a) that the Allotment Plan adopted in 1966 and developed for the use of high frequency channels for the Aeronautical Mobile (R) Service (Appendix 27 to the Radio Regulations, Geneva) has been substantially revised by this conference;

b) that air operations are subject to continuous changes;

c) that these changes require attention by the administrations concerned, but,

d) that, in seeking to satisfy new communication requirements, no decision should be taken that will prevent or handicap the coordinated utilization of those high frequency (R) band allotments as prescribed in the Plan;

e) that the families of frequencies allotted to the Major World Air Route Areas (MWARAS), Regional and Domestic Air Route Areas (RDARAS) and Sub-Areas and VOLMET areas have been chosen considering propagation conditions which allow for the selection of the most suitable frequencies for the distance involved;

f) that specific steps should be taken to ensure that the correct order of frequency is used;

g) that it is essential to distribute the communication traffic load as uniformly as possible over frequencies available;

h) that frequencies have been allotted for world-wide use

resolves

that administrations, individually or in collaboration, take the necessary steps:

1. to make as great a use as possible of higher frequencies in order to lessen the load on the high frequency (R) bands;

2. to make as great a use as possible of antennas of appropriate directivity and efficiency in order to minimize possibilities of mutual interference within an area or between areas;

3. to coordinate the use of families of frequencies necessary for a given route segment in accordance with the technical principles in Appendix 27 and, in the light of the propagation data available, in order that the most appropriate frequencies be used with an aircraft at a given distance from the aeronautical station providing service over the route segment concerned;

4. to improve operating techniques and procedures and to use equipment which will make it possible to attain the highest possible efficiency in handling air-ground high frequency communications;

5. to collect precise data on the operation of their high frequency communication systems, particularly that having a bearing on technical and operating standards, so as to facilitate future re-examination of this Plan.

RESOLUTION C

Relating to the use of higher frequency bands in the Aeronautical Mobile (R) Service for communication and for meteorological broadcasts

The World Administrative Radio Conference on the Aeronautical Mobile (R) Service, Geneva, 1978,

considering

a) that from an aeronautical viewpoint, higher frequency bands can provide a more reliable and more interference free communication system than HF;

b) that from a technical and operational viewpoint, the use of VHF by aviation has progressed significantly;

c) that the future possibility of communications utilizing satellite technology is now recognized;

d) that owing to the ever increasing development of aeronautical telecommunications in all areas of the world, there is an increasing demand for frequencies for communication and for meteorological broadcasts to aircraft in flight.

resolves

that Administrations, taking into account the respective economic and technical factors, consider to the maximum extent possible, meeting their requirements for communication and for meteorological broadcasts by frequencies in the VHF and UHF bands allocated to the Aeronautical Mobile (R) Service and the Aeronautical Mobile Satellite (R) Service.

RECOMMENDATION A

Relating to the development of Techniques which would help to reduce congestion in the High Frequency bands allocated to the Aeronautical Mobile (R) Service

The Aeronautical World Administrative Radio Conference, Geneva, 1978, considering

considering

a) that several administrations are actively engaged in the development of communication techniques the wider use of which in the aeronautical mobile (R) service, would help to reduce congestion in the high frequency bands allocated to that service; such developments include the use of higher frequencies with remotely controlled stations, high-powered transmitters employing directional antennae, space radiocommunication techniques and automatic data transmission;

b) that knowledge of these developments would be useful to other administrations in considering the application of these techniques to their aeronautical mobile (R) communication services;

(c) that the International Civil Aviation Organization (ICAO) is actively engaged in coordinating the operational development of such techniques;

recommends

administrations engaged in such developments to inform the I.F.R.B. periodically of the progress achieved;

instructs

the I.F.R.B. periodically to circulate the information so obtained to administrations and to ICAO.

RECOMMENDATION B

to the 1979 General WARC relating to the suppression of Resolution No. 13 in respect of the Aeronautical Mobile (R) Service.

The Aeronautical Mobile (R) Service Conference, Geneva, 1978,

considering

a) that Resolution No. 13 was of the opinion that the Aeronautical Mobile Service Plans contained in the then Appendix 26 of the Radio Regulations would have to be reviewed;

b) that Resolution No. 13 was also of the opinion that an Extraordinary Administrative Radio Conference should be convened to review Appendix 26 and associated Radio Regulations and to complete its work before the next Ordinary Administrative Radio Conference;

c) that the Administrative Radio Conferences referred to were duly held in 1964, 1966, and 1978 and the Plans have been reviewed;

d) that no further Administrative Radio Conferences are to be convened before the 1979 General WARC;

recommends

that in so far as the Aeronautical Mobile (R) Service is concerned the 1979 General WARC should suppress Resolution No. 13;

invites Administrations

to consider whether Resolution No. 13 could be suppressed completely and to submit to the 1979 General WARC proposals to this effect.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/32-F/E/S
14 février 1978
Original : anglais

GROUPE DE TRAVAIL 5C

MANDAT DU GROUPE DE TRAVAIL 5C

Réviser les matrices de partage préparées par l'IFRB en vue de les vérifier et d'améliorer autant que possible les possibilités de partage.

WORKING GROUP 5C

TERMS OF REFERENCE OF WORKING GROUP 5C

To review the sharing matrices prepared by the IFRB with a view to verify them and to improve the sharing possibilities therein where possible.

GRUPO DE TRABAJO 5C

MANDATO DEL GRUPO DE TRABAJO 5C

Examinar las matrices de compartición preparadas por la IFRB a fin de verificarlas y, de ser posible, incrementar las posibilidades de compartición que ofrecen.

M. CHEF
Président de la Commission 5

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/33-E
14 February 1978
Original: English

WORKING GROUP 5B

FREQUENCY REQUIREMENTS FOR MAJOR WORLD AIR ROUTE AREAS
(MWARAS)

Having considered Document No. DT/16 at its third meeting, on 14 February 1978, the Working Group 5B agreed on the frequency requirements for the MWARAs as shown below.

Frequency Group	I	II	III	IV	V
Bands	3, 3.5 MHz	4.7, 5.6, 6.6 MHz	9, 10, 11.3 MHz	13.3 MHz	18 MHz
Areas					
CEP	2	4	3	2	1
CWP	2	5	3	1	1
EA	3	3	3	2	1
EUR	2	4	3	-	1
INO	1	1	1	1	1
NAT	7	7	7 (9 MHz) + 3 (11.3 MHz)	2	2
NCA	3	4	4	1	1
NP	1	4	2	1	1
SAM	2	3	4	1	1
SAT	4	4	4	2	1
SEA	3	3	3	2	1
SP	1	2	2	2	1

K. KING
Chairman of Working Group 5B

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/34-E
14 February 1978
Original : English

COMMITTEE 5

Ad-hoc Working Group on VOLMET Area Pacific

VOLMET AREA - PACIFIC

The Ad-hoc Working Group on VOLMET Area Pacific, comprising representatives from the delegations of Australia, Fiji, France, IATA, Japan, New Zealand, Papua New Guinea, UK and USA, concluded discussions with the recommendation that the PAC-MET Allotment Area should be defined in keeping with the recommendation of the ICAO COM DIV Meeting and those proposals of the Federal Republic of Germany, France, Mauritius and New Zealand. This definition is published in Document No. DT/1 on page 94, under MOD 27/182.

The Group also concluded with the recommendation that the PAC-MET reception area should be defined as follows :

MOD 27/183 The PAC-MET reception area is defined by a line drawn from the point 60°N 100°E through the points 75°N 160°W, 75°N 110°W, 65°S 110°W, 65°S 145°E, ~~80°N-160°W,-75°N-90°W,-60°N-85°W,-20°N-120°W, 40°N-120°W,-50°S-170°W,-50°S-145°E~~, 28°S 145°E, 03°S 129°E, 05°N 80°E, 40°N 80°E, to the point 60°N 100°E.

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/35-E
14 February 1978
Original: English

COMMITTEE 5

Major World Air Route Area - NORTH CENTRAL ASIA
(MWARA-NCA)

From the North Pole through the points 75°N 10°E, 60°N 25°E, 30°N 25°E, 30°N 73°E, 37°N 73°E, 49°N 85°E, 42°N 97°E, 42°N 110°E, 54°N 123°E, 45°N 133°E, 40°N 124°E, 30°N 124°E, 25°N 135°E, 65°N 170°W, to the North Pole.

Annex : 1 map

M. CHEF
Chairman of Committee 5

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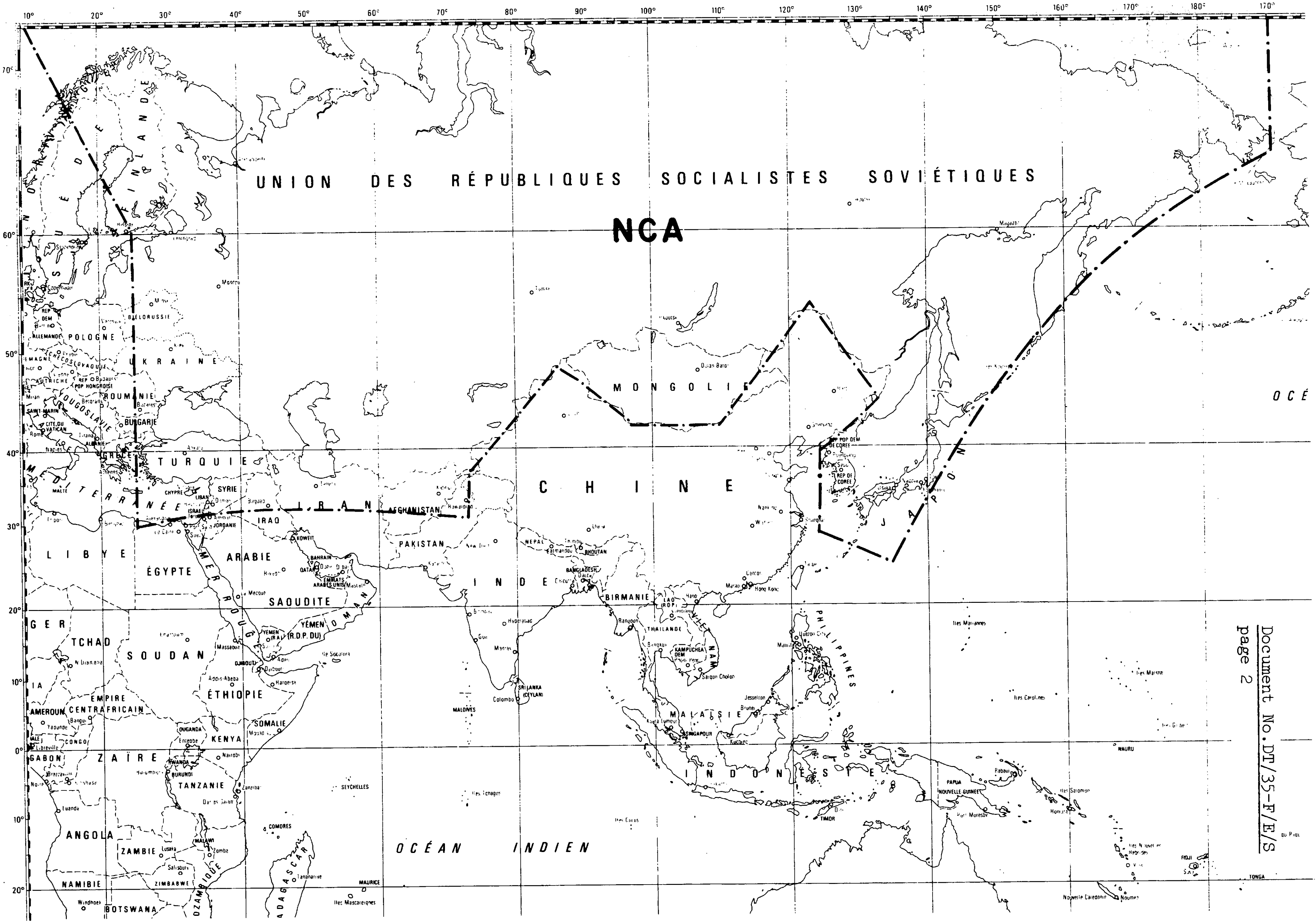
10°
20°
30°
40°
50°
60°
70°
80°
90°
100°
110°
120°
130°
140°
150°
160°
170°
180°
170°
UNION DES RÉPUBLIQUES SOCIALISTES SOVIÉTIQUES
NCA
SUÈDE
FINLANDE
NORVÈGE
POLOGNE
BÉLORUSSIE
UKRAINE
ROUMANIE
BULGARIE
YOUGOSLAVIE
TCHÉCOSLOVAQUIE
AUTRICHE
REP POP HONGROISE
ALLEMANDE
REP DEM
SAINT-MARIN
CITÉ DU VATICAN
ALBANIE
GRÈCE
TURQUIE
MÉDITERRANÉE
MALTE
CHYPRE
LIBAN
SYRIE
ISRAEL
JORDANIE
IRAQ
IRAN
AFGHANISTAN
PAKISTAN
KOWEIT
BAHRAIN
QATAR
EMIRATS ARABES UNIS
ARABIE SAOUDITE
OMAN
YÉMEN (RA)
YÉMEN (R.D.P. DU)
MER ROUGE
LIBYE
ÉGYPTE
TCHAD
SOUDAN
ÉTHIOPIE
DJIBOUTI
SOMALIE
KENYA
OUGANDA
EMPIRE CENTRAFRICAIN
CAMEROUN
CONGO
GABON
ZAÏRE
RWANDA
BURUNDI
TANZANIE
ANGOLA
ZAMBIE
MALAWI
ZIMBABWE
MOZAMBIQUE
NAMIBIE
BOTSWANA
MADAGASCAR
COMORES
SEYCHELLES
MAURICE
Iles Mascareignes
MONGOLIE
CHINE
INDE
NEPAL
BHOUTAN
BANGLADESH
BIRMANIE
SRI LANKA (CEYLAN)
MALDIVES
LAO (RDP)
THAILANDE
KAMPUCHEA DEM
VIET NAM
MALAISIE
SINGAPOUR
INDONÉSIE
PHILIPPINES
REP POP DEM DE CORÉE
REP DE CORÉE
JAPON
TIMOR
PAPUA NOUVELLE GUINÉE
NAURU
Iles Mariannes
Iles Carolines
Iles Salomon
Iles Nouvelles Hébrides
FIDJI
TONGA
Nouvelle Calédonie
Nouméa
OCÉAN INDIEN
OCÉ

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/36-E
15 February 1978
Original : English/French

WORKING GROUP 6A

FREQUENCIES FOR COMMON USE

1. Working Group 6A, in relation to paragraph 4 of its first Report to Committee 6 (Document No. 144), proposes the version of Article 3, Section II, Part II of Appendix 27 annexed hereto.

2. As a consequence of the proposed action, the consequential following action is proposed :

/ SUP 27/17
SUP 27/18
SUP 27/19 /

	1	2	3
MOD 27/196	/ 3023 /	World-wide, (R) and (OR)	See Art 3
MOD 27/201	/ 5680 /	World-wide, (R) and (OR)	See Art 3

K. OLMS
Chairman of Working Group 6A

Annex : 1

ARCHIVES U.I.T. GENÈVE

A N N E X

ARTICLE 3

Frequencies for common use

27/... Frequencies /3 023 kHz and 5 680 kHz/ are intended for common use on a world-wide basis.

27/... The use of these frequencies in any part of the world is authorized aboard aircraft for :

a) communications with approach and aerodrome control;

b) communication with an aeronautical station when other frequencies of the station are either unavailable or unknown;

27/... at aeronautical stations for aerodrome and approach control under the following conditions :

a) with mean power limited to a value of not more than 20 watts in the antenna circuit;

b) special attention must be given in each case to the type of antenna used in order to avoid harmful interference;

c) the power of aeronautical stations which use these frequencies in accordance with the above conditions may be increased to the extent necessary to meet certain operational requirements subject to coordination between the Administrations directly concerned and those whose services may be adversely affected.

27/... Notwithstanding these provisions, the frequency 5 680 kHz may also be used at aeronautical stations for communication with aircraft stations when other frequencies of the aeronautical stations are either unavailable or unknown. However, this use shall be restricted to such areas and conditions that harmful interference cannot be caused to other authorized operations of stations in the Aeronautical Mobile Service.

27/... /Particulars regarding the use of these channels for the above purposes may be determined by the meetings of ICAO./

27/... Frequencies /3 023 kHz and 5 680 kHz/ may also be used by stations of other mobile services participating in coordinated air-surface search and rescue operations, including communications between these stations and participating land stations. Aeronautical stations are authorized to use these frequencies to establish communications with such stations.

27/... These channels may be used for /A1 or A3/ emissions, in accordance with special arrangements. Such channels shall not be subdivided.

/ 27/... All stations participating directly in coordinated search/rescue operations and using frequencies 3 023 kHz and 5 680 kHz shall transmit solely on the upper single sideband (see also MOD 27/73) except in the cases provided for in Numbers 27/50 and 27/73.

Emissions of Class A3 and A3H may be used in accordance with / Resolution Aer 2-(A), paragraph 4.4) /.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/37-E
15 February 1978
Original :French

WORKING GROUP 6A

FREQUENCY 3 023 kHz

Sub-group 6A2 proposes that frequency 3 023.5 kHz should be replaced by frequency 3 023 kHz in the following provisions of the Radio Regulations :

No. 201A

No. 205A

No. 969A

No. 1326C

Appendix 26

Resolution Aer 1

C.J. DHENIN
Chairman of Sub-group 6A2

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/38-E
16 February 1978
Original : English

WORKING GROUP 5B

FREQUENCY REQUIREMENTS FOR VOLMET AREAS

Having considered Document No. DT/16 at its fourth and fifth meetings, on 15 and 16 February 1978, the Working Group 5B agreed on the frequency requirements for the VOLMET Areas as shown below.

Frequency Group	I	II	III	IV	V
Bands	3, 3.5 MHz	4.7, 5.6, 6.6 MHz	9, 10, 11.3 MHz	13.3 MHz	18 MHz
VOLMET Areas					
AFI-MET	2	3	3	2	-
CAR-MET	1	1	1 (11.3 MHz)	1	-
EUR-MET	3	3	3	2	-
MID-MET	3	3	3	1	-
NAT-MET	2	2	2	2	-
NCA-MET	1	4	2	1	-
PAC-MET	2	3	2	2	-
SAM-MET	1	1	1	1	-
SEA-MET	3	3	3	1	1

K. KING
Chairman of Working Group 5B

ARCHIVES U.I.T. GENEVE

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/39-E
17 February 1978
Original : English

WORKING GROUP 5B

FREQUENCY REQUIREMENTS FOR RDARAs

Having considered Document No. DT/21 at its fifth to ninth meetings, on 16 and 17 February 1978, Working Group 5B agreed on the frequency requirements for the RDARAs as shown in the Annex.

K. KING
Chairman of Working Group 5B

Annex : 1

ARCHIVES
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A N N E X E

A N N E X

A N E X O

Groupe de fréquences Frequency Group Grupo de frecuencias	I	II	III	IV	V	Voie commune à Common channel to Canal común a
Bandes Bands Bandas (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	
1	-	1	2	1	-	
1A	-	-	-	-	-	
1B	1	4	1	-	-	
1C	4	4	3	-	-	
1D	6	6	4	1	-	
1E	1 1*	2	1	-	-	1E 4A
2	- -	- 1*	10 3*	3 -	1 -	3
2A	22 2*	25 2*	5 2*	- -	- -	2C
2B	15 4*	24 6*	2 4*	- -	- -	2C
2C	24 2* 4*	21 2* 6*	6 2* 4*	- - -	- - -	2A 2B
3	- -	- 1*	7 3*	2 -	2 -	2
3A	15 3*	17 4*	4 3*	- -	- -	3C

Groupe de fréquences Frequency Group Grupo de frecuencias	I	II	III	IV	V	Voie commune à Common channel to Canal común a
Bandes Bands Bandas (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	
3B	19 2*	22 3*	10 3*	- -	- -	3C
3C	15 2* 3*	17 3* 4*	- 3* 3*	- - -	- - -	3B 3A
4	-	-	-	2	1	
4A	5 1*	7 2*	7 2*	3	-	1E 4A 4A 4B
4B	3	6 2*	2 2*	1	-	4A 4B
5	-	-	6	2	2	
5A	1 1*	2 2*	2 1*	1	-	5A 5C
5B	4	6	4	-	-	
5C	1 1*	- 2*	- 1*	-	-	5A 5C
5D	2	6	2	-	-	
6	-	-	2	1	1	
6A	3 2*	10 2*	7 2*	- 1*	- -	6E
6B	4 -	6 -	4 2*	1 -	1 -	6F
6C	2 -	8 -	4 -	- 1*	- -	6F
6D	3	9	4	1	-	
6E	5 2*	8 2*	8 2*	- 1*	- -	6A

Groupe de fréquences Frequency Group Grupo de frecuencias	I	II	III	IV	V	Voie commune à Common channel to Canal común a
Bandes Bands Bandas (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	
6F	4 - -	3 - -	2 2* -	- - 1*	- - -	6B 6C
6G	37	61	35	5	1	
7	-	2	2	1	-	
7A	-	-	-	-	-	
7B	5	6	4	-	-	
7C	2	3	3	-	-	
7D	1	1	1	-	-	
7E	2	3	2	-	-	
7F	-	-	-	-	-	
8	-	-	-	-	-	
9	-	3	4	1	-	
9A	-	-	-	-	-	
9B	4 4*	6 4*	6 4*	- -	- -	9C
9C	- 4* 1*	- 4* -	- 4* 2*	- - -	- - -	9B 9D
9D	1 1*	2 -	- 2*	- -	- -	9C
10	-	4	6	1	1	
10A	9	14	9	-	-	
10B	5	13	3	-	-	

Groupe de fréquences Frequency Group Grupo de frecuencias	I	II	III	IV	V	Voie commune à Common channel to Canal común a
Bandes Bands Bandas (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	
10C	3	11	2	-	-	
10D	5	13	2	-	-	
10E	5	10	4	-	-	
10F	1	4	2	-	-	
11	-	-	-	-	-	
11A	-	-	-	-	-	
11B	11	18	8	1	1	
11C	-	-	-	-	-	
12	1	1	6	1	1	
12A	2	2	-	-	-	
12B	-	-	-	-	-	
12C	5	14	6	-	-	
12D	2	4	2	-	-	
12E	- 1* - - 4*	5 2* 3* 1* -	3 1* 2* - -	- - - - -	- - - - -	 12J 12F 12F 12H 12F 12G 12H
12F	1 - - - 1* 4*	3 3* 1* 1* - -	2 2* - - - -	- - - - - -	- - - - - -	 12E 12E 12H 12H 12J 12E 12G 12H
12G	1 4*	6 -	- -	- -	- -	 12E 12F 12H

Groupe de fréquences Frequency Group Grupo de frecuencias	I	II	III	IV	V	Voie commune à Common channel to Canal común a
Bandes Bands Bandas (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	
12H	- - - 4*	- 1* 1* -	- - - -	- - - -	- - - -	 12F 12E 12F 12E 12F 12G
12I	-	-	-	-	-	
12J	3 1* 1*	4 2* -	3 1* -	- - -	- - -	 12E 12F
13	-	-	-	1	1	
13A	- -	- -	1* -	- -	- 1*	13B 13B 13E 13F
13B	- - -	- - -	- 1* -	- - -	- - 1*	 13A 13A 13E 13F
13C	6 -	10 -	7 -	- 2*	- -	 13K
13D	4 -	4 2*	4 1*	- -	- -	 13M
13E	1 1* -	1 6* -	1 1* -	- 1* -	- - 1*	 13F 13A 13B 13F
13F	4 1* -	2 6* -	5 1* -	- 1* -	- - 1*	 13E 13A 13B 13E
13G	5	6	7	-	-	
13H	4	6	6	1	-	
13I	3 1*	6 2*	2 -	- -	- -	 13J

Groupe de fréquences Frequency Group Grupo de frecuencias	I	II	III	IV	V	Voie commune à Common channel to Canal común a
Bandes Bands Bandas (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	
13J	6 1* -	10 2* -	5 - 1*	- - -	- - -	13I 13K
13K	7 - -	10 - -	8 1* -	- - 2*	- - -	13J 13C
13L	-	-	-	-	-	
13M	4 -	4 2*	4 1*	- -	- -	13D
13N	2	3	2	-	-	
14	3	4	8	2	1	
14A	2	5	3	-	-	
14B	2	5	3	-	-	
14C	2	5	3	-	-	
14D	2	5	3	-	-	
14E	2	5	3	-	-	
14F	2	5	3	-	-	
14G	2	5	3	-	-	

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document No. DT/40-F/E/S
18 Février 1978
Original : français
anglais
espagnol

DISTRIBUTION LIMITEE AUX CHEFS DE DELEGATION (suivant décision de la Commission de Direction en date du 16 février 1978)

LIMITED DISTRIBUTION TO THE HEADS OF DELEGATIONS (according to the decision of the Steering Committee on 16 February 1978)

DISTRIBUCIÓN LIMITADA A LOS JEFES DE DELEGACIÓN (según decisión de la Comisión de Dirección de fecha 16 de febrero de 1978)

PROJET DE PLAN - DRAFT PLAN - PROYECTO DE PLAN

Compte tenu des besoins de fréquences définis par le Groupe de travail 5B, des décisions prises le 15 février 1978 par la Commission 5 au sujet des limites des zones aéronautiques et des critères de partage indiqués dans le Document N° 126(Rév.1), adopté par la Commission 4, un premier projet de plan a été établi.

Un résumé des résultats obtenus figure dans l'Annexe 1.

Les résultats détaillés relatifs à chaque bande de fréquences sont donnés dans l'Annexe 2. Les matrices de partage utilisées sont décrites dans l'Annexe 3. L'Annexe 4 indique les besoins de fréquences sur lesquels on s'est fondé (cf. Doc. 164 à 185 et DT/39).

Taking into account the frequency requirements agreed to in Working Group 5B, the decisions taken by Committee 5 on 15 February 1978 on the boundaries of the aeronautical areas, and the sharing criteria given in Document No. 126(Rev.1), adopted by Committee 4, a first draft plan has been prepared.

A summary of the results obtained appears in Annex 1.

Detailed results for each frequency band appear in Annex 2. The sharing matrices that were used appear in Annex 3. Annex 4 contains the frequency requirements that were used.(cf. Documents Nos. 164-185 and DT/39).

Teniendo en cuenta las necesidades de frecuencias sobre las que se ha llegado a un acuerdo en el Grupo de trabajo 5B, las decisiones que la Comisión 5 ha tomado el 15 de febrero de 1978 sobre los límites de las zonas aeronáuticas y los criterios de compartición expuestos en el Documento N.° 126(Rev.1), adoptado por la Comisión 4, se ha preparado un primer proyecto de plan.

El resumen de los resultados obtenidos figura en el Anexo 1.

Los resultados detallados para cada banda de frecuencias aparecen en el Anexo 2. El Anexo 3 contiene las matrices de compartición que se han utilizado, y el Anexo 4, las necesidades de frecuencias que se han empleado (ref. Doc. 164 a 185 y DT/39).

M. CHEF
Président de la Commission 5

ARCHIVES U.I.T. GENÈVE

ANNEXE 1 - ANNEX 1 - ANEXO 1

Resumé des résultats obtenus

Summary of results obtained

Resumen de los resultados obtenidos

Bande MHz	Nombre total de voies disponibles dans la bande	Nombre total de voies requises pour satisfaire aux besoins declarés pour ZLAMP, ZLARN et VOLMET
Band MHz	Total number of channels available in the band	Total number of channels required to satisfy the declared requirements for MWARA, RDARA and VOLMET
Banda MHz	Número total de canales disponibles en la banda	Número total de canales requeridos para satisfacer las necesidades declaradas para ZRMP, ZRRN y VOLMET
3	57	90
3.5	33	75
4.7	16	76
5.4 (Reg.2)	9	10
5.6	66	85
6.6	53	58
9	49	56
10	31	55
11.3	41	53
13.3	33	65
18	23	23

ANNEXE 2 - ANNEX 2 - ANEXO 2

Résultats detaillés pour chaque bande de fréquence

Detailed results for each frequency band

Resultados detallados para cada banda de frecuencia

Titre des colonnes

Column headings

Títulos de las columnas

Colonne 1	Numéro de référence, suivi d'un numéro de ligne, dans l'ordre consécutif à chaque bande de fréquence
Column 1	Reference number followed by a line number in consecutive order within each frequency band
Columna 1	Número de reference seguido de un número de línea por orden consecutivo en cada banda de frecuencia
Colonne 2	Zone d'emploi autorisé
Column 2	Authorised area of use
Columna 2	Zona de uso autorizado
Colonne 3	Observations
Column 3	Remarks
Columna 3	Observaciones

Colonne 2	M = ZLAMP / MWARA / ZRMP
Column 2	R = ZLARN / RDARA / ZRRN
Columna 2	V = VOLMET

Colonne 3	voie commune à
Column 3	CC = common channel to
Columna 3	canal común a

1		2															3 MHz				3
01	001	R	6G	12E	12F	12G	12H	13I	13J	10F	9D	7E	12A	14G	3B	1C	CC	12E	12F	12G	12H
	002																CC	13I	13J		
02	003	R	6G	12E	12F	12G	12H	13H	7D	14G	3B	1C	1B	10B			CC	12E	12F	12G	12H
03	004	R	6G	12E	12J	13H	3B	7B	14D	10B	1E						CC	12E	12J		
04	005	R	6G	12F	12J	13I	14E	3B	7B	10D							CC	12F	12J		
05	006	R	6G	13E	13F	3B	10D	7C	1B*								CC	13E	13F		
06	007	R	6G	13I	3B	10C	12F	4B													
07	008	R	2C	2A	9B	9C	13F	10C	12G	2B							CC	2C	2A		
	009																CC	9B	9C		
08	010	R	6G	13F	3B	12C	5D														
	011	V	VNAT																		
09	012	R	2C	2B	9B	9C	13J	12J	10E	10A							CC	2C	2B		
	013																CC	9B	9C		
10	014	R	6G	13J	12C	3B	4A	1B*													
11	015	R	2C	2B	13J	14C	12C	10A									CC	2C	2B		
12	016	M	SP																		
	017	R	6G	13J	12J	3B	10E														
13	018	M	CEP																		
	019	R	2A	13G	14A	10E	6D														
14	020	R	2C	13G	14B	11B	6B	2B													
15	021	R	3C	3A	13G	14	11B	3B	4A								CC	3C	3A		

BANDE/*BAND*/BANDA kHz

1		2							3 MHz		3
16	022	R	6G	13M	11B	3B	4A				
17	023	R	2A	13M	14	11B	6B	2B			
18	024	M	NCA								
	025	R	2C	13K	9B	11B	2B				
19	026	M	NP	SAT					CC	3C	3A
	027	R	3C	3A	13C	9B	3B	5C			
20	028	M	SAM								
	029	R	6G	13C							
21	030	R	2A	13N	6C	2B					
	031	V	VCAR								
22	032	R	2C	13C	10A	6D					
23	033	R	3C	3B	13D	1D			CC	3C	3B
24	034	M	NAT								
	035	R	6G	13D	6F						
25	036	R	2A	13K	12D	10A	6E				
26	037	R	2C	13K	10A	2B					
27	038	M	SAT								
	039	R	3C	13K	18*						
28	040	M	CAR								
	041	R	6G	6F							
29	042	M	CWP								
	043	R	2A								
	044	V	VSAM								
30	045	R	2C	10A	2B						
31	046	R	3A	12	6E						

1	2	3
	-4-	3 MHz
32 047	R 3C 1D	
33 048	M NAT	
049	R 6G	
34 050	R 2A	
051	V VPAC	
35 052	M NCA	
053	R 2C 2B	
36 054	R 3A 6E	
37 055	R 3C 1D	
38 056	M NAT	
057	R 6G	
39 058	M SEA	
059	R 2A	
40 060	R 2C 2B	
41 061	M SEA	
062	R 3A	
42 063	R 3C	
064	V VAFI	
43 065	M NAT	
066	R 6G	
44 067	R 2A	
45 068	R 2C	
46 069	R 3A	
47 070	R 3C 5A	

1	2	3
		3 MHz
48 071	R 6G	
49 072	R 2A	
50 073	R 2C	
51 074	R 3A	
52 075	R 3C	
53 076	R 6G	
54 077	R 2A	
55 078	R 2C	
56 079	R 3A	
57 080	R 3C	
58 081	R 6G	
59 082	M AFI EA	
60 083	R 2A	
61 084	R 2C	
62 085	R 3A	
63 086	R 3C	
64 087	R 6A 6E	CC 6A 6E
65 088	R 6G	
66 089	V VEUR	

BANDE/*BAND*/BANDA kHz

1	2 -6-	3 MHz 3
67 090	R 3A	
091	V VMID	
68 092	V VSEA	
69 093	M AFI EA	
70 094	M MID	
71 095	R 2A	
72 096	R 2C	
73 097	R 3C	
74 098	R 5B	
75 099	R 6A	
76 100	R 6G	
77 101	V VEUR	
78 102	R 3A	
103	V VMID	
79 104	V VNCA	
80 105	V VSEA	
81 106	M AFI	
82 107	M EUR	
83 108	M INO	
84 109	M MID	

BANDE/*BAND*/BANDA kHz

1	2	3
85 110	R 2A	3 MHz
86 111	R 2C	
87 112	R 3C	
88 113	R 5B	
89 114	R 6A	
90 115	R 6G	

BANDE/*BAND*/BANDA kHz

-8-

1	2											3.5 MHz 3				
01 001	R	6G	1E	4A	9C	9D	10B					CC	1E	4A		
002												CC	9C	9D		
02 003	R	2C	2A	9C	9B	12E	12F	12G	12H	7C	10B	CC	2C	2A		
004												CC	9C	9B		
005												CC	12E	12F	12G	12H
03 006	R	6G	12E	12F	12G	12H	1C	7B	10B	14F		CC	12E	12F	12G	12H
04 007	R	2C	2B	9C	9B	12D	13F	10A	7B			CC	2C	2B		
008												CC	9C	9B		
05 009	M	NAT														
010	R	6G	13F	7B	12A	14F										
06 011	M	CAR										CC	2C	2B		
012	R	2C	2B	13H	6C	7E										
07 013	M	NAT														
014	R	6G	13I													
08 015	M	CEP														
016	R	2C	6F	13C												
09 017	M	NAT														
018	R	6G	13H													
10 019	M	SAM														
020	R	2C	6F	10C												
11 021	M	SAT														
022	R	6G	1B*													
12 023	M	CWP														
024	R	2A	5D	10E	12J											
13 025	R	2C	6D	10A	10E	13M										

BANDE/*BAND*/BANDA kHz

1	2							3.5 MHz 3		
14 026	R	6G								
027	V	VNAT								
15 028	R	2A	6E	4B	13E	12C	14C			
16 029	R	2C	6B	14	12C	13K				
17 030	M	SAT						CC	3C	3A
031	R	3C	3A	9B						
18 032	R	3C	3B	9B	10D			CC	3C	3B
033	V	VAFI								
19 034	R	6G	4A	13C	10D					
20 035	R	2A	6E	4B	13D	10D	14D			
21 036	R	2C	6B	14A	11B	13G				
22 037	R	3B	5A	5C	13K	14B		CC	5A	5C
23 038	R	6G	1C	13C						
24 039	R	2A	10A	14E	13G					
25 040	R	2B	13K							
26 041	R	2C	13M							
27 042	R	3A	4A	13D						
28 043	R	3B	6A	6E	11B	13J		CC	6A	6E
29 044	R	6G	11B	13J	1B*					
30 045	R	2A	11B	13N						
31 046	R	2B	11B							

1	2			3
				-10-
32 047	R	2C	11B	3.5 MHz
33 048	R	3A		
34 049	M	AFI		
050	R	3B		
35 051	R	3C	1D	
36 052	R	6G		
37 053	R	2A		
38 054	R	2B		
39 055	R	2C		
40 056	R	3A		
41 057	M	AFI		
058	R	3B		
42 059	R	3C	1D	
43 060	R	6G		
44 061	R	2A		
45 062	R	2B		
46 063	R	2C		
47 064	R	3A		
48 065	M	AFI		
066	R	3B		
49 067	R	3C	1D	

1	2	3
50 068	R 6G	3.5 MHz
51 069	M MID	
52 070	R 2A	
53 071	R 2B	
54 072	R 2C	
55 073	R 3A	
56 074	R 3B 5B	
57 075	R 3C	
58 076	R 6G	
59 077	V VEUR	
60 078	V VMID	
61 079	V VPAC	
62 080	V VSEA	
63 081	M EA	
64 082	M EUR	
65 083	M MID	
66 084	M NCA	
67 085	M SEA	
68 086	R 2A	

BANDE/*BAND*/BANDA kHz

1	2	3
	- 12 -	3.5 MHz
69 087	R 2B	
70 088	R 2C	
71 089	R 3A	
72 090	R 3B 5B	
73 091	R 3C	
74 092	R 6A	
75 093	R 6G	

BANDE/*BAND*/BANDA kHz

1		2								4·7 MHz 3		
01	001	R	2C	2A	9B	9C	12F	7E	10F	CC	2C	2A
	002									CC	9B	9C
02	003	R	2C	2B	13D	13M	6C	10B		CC	2C	2B
	004									CC	13D	13M
03	005	R	6G	13E	13F	4B	10B			CC	13E	13F
04	006	R	2C	2B	13E	13F	10	14B		CC	2C	2B
	007									CC	13E	13F
05	008	M	SAT									
	009	R	6G	12A								
06	010	M	SP									
	011	R	2B	10E	13J							
07	012	R	3C	3A	4A	4B	14C	13G		CC	3C	3A
	013									CC	4A	4B
08	014	M	CEP									
	015	R	6G	4B								
09	016	R	2A	11B	6C	7C	13I					
10	017	R	2B	11B	9B	13I						
11	018	R	2C	11B	14A	13H						
12	019	R	3A	4A	4B	9				CC	4A	4B
13	020	R	6G	11B	7B							
14	021	R	2A	11B	7B	14E						

1	2	3
	-14-	4.7 MHz
15 022	R 2B 10E 13J 14D	
16 023	R 2C 10E 6B 13J	
17 024	R 3A 4A 13M 14F	
18 025	R 6G 10E 13J	
19 026	M CAR	
027	R 2A 6B	
20 028	R 2B 10B 13C 14G	
21 029	R 2C 10B 13C	
22 030	R 3A 4A	
23 031	R 3C 3B 4A	CC 3C 3B
24 032	R 6G 10B 13K	
25 033	R 2A 10A 12G	
26 034	R 2B 10A 12J	
27 035	R 2C 10A 13K	
28 036	R 3A 10C 13K	
29 037	M AFI	
038	R 3B	
30 039	R 3C 10D	
31 040	R 6G 10C	
32 041	M EUR	
042	R 12C	

1	2			3
				4.7 MHz
33 043	M	NAT	SEA	
34 044	R	2A	12C	
35 045	R	2B	12C	
36 046	R	2C	12C	
37 047	R	3A	10D	
38 048	M	AFI		
049	R	3B		
39 050	R	3C	10D	
40 051	M	NAT		
052	R	6D		
41 053	M	SAM		
054	R	6G		
42 055	M	MID		
056	R	12D		
43 057	M	NP		
058	R	1D		
44 059	R	2A	12E	
45 060	R	2B		
46 061	R	2C		
47 062	R	3A		
48 063	R	3B	5D	
49 064	R	3C		

1	2 <16-	3
50 065	R 5B	4.7 MHz
51 066	M NAT	
067	R 6A	
52 068	R 6D 1C	
53 069	R 6E 1B	
54 070	R 6G	
55 071	V VAFI	
56 072	V VEUR	
57 073	V VMID	
58 074	V VNCA	
59 075	V VPAC	
60 076	V VSEA	
61 077	M CWP	
078	R 1D	
62 079	M EA	
63 080	M MID	
64 081	M NCA	
65 082	R 2A	
66 083	R 2B	
67 084	R 2C	

1	2	3
68 085	R 3A	4.7 MHz
69 086	R 3B 5D	
70 087	R 3C	
71 088	R 5B	
72 089	R 6A	
73 090	R 6D	
74 091	R 6E	
75 092	R 6F	
76 093	R 6G	

1	2	3
		5.4 MHz (REG.2)
01 001	R 12F 12E 13I 13J 10	CC 12F 12E
002		CC 13I 13J
02 003	R 12F 12H 11B 10F 13F 13J	CC 12F 12H
03 004	R 10C 13D 12D 10E	
04 005	R 12C 13G 12J 10A 10D	
05 006	R 10D 13G 10A 12E	
06 007	R 10A 13N	
07 008	R 13I 10B 13H	
08 009	R 10B 13J 13H	
09 010	R 13H 11B 13K	
10 011	R 11B	

BANDE/*BAND*/BANDA kHz

1		2															3			
																	5.6 MHz			
01	001	R	6G	5A	5C	9B	9C	12E	12F	12H	13I	13J	10	2A	7B	14A	CC	5A	5C	
	002																CC	9B	9C	
	003																CC	12E	12F	12H
	004																CC	13I	13J	
02	005	R	6G	12E	12F	13E	13F	2C	4B	7D	10E	10B	9	14A	13K		CC	12E	12F	
	006																CC	13E	13F	
03	007	R	6G	12E	12J	13E	13F	2C	4B	10E	10B	12A	14	13J			CC	12E	12J	
	008																CC	13E	13F	
04	009	R	6G	13D	13M	2C	5D	10E	10B	12C	9B	14D					CC	13D	13M	
05	010	R	6G	13E	13F	12	10C	14	2A	5A	7B	13J	10F				CC	13E	13F	
06	011	R	6G	14E	7C															
	012	V	VCAR																	
07	013	R	6G	14B	9D															
	014	V	VNAT																	
08	015	M	SAT																	
	016	R	6G	9B	14D	10A														
09	017	R	6G	14C																
	018	V	VSAM																	
10	019	M	SAM																	
	020	R	6G	1B	5D	14G														
11	021	M	SP																	
	022	R	6G	12G	13N	1B	7E													
12	023	M	CEP																	
	024	R	6G	13G	1C	7	14F													
13	025	M	CEP																	
	026	R	6G	13K	1C	13H														

1	2											3		
												5.6 MHz		
14 027	M	CAR												
028	R	6G	1D	14G										
15 029	M	CAR												
030	R	6G	1D	14G										
16 031	R	6G	2C	11B	12F	13K	9B	13H						
17 032	R	6G	2C	11B	12G	13I								
18 033	R	6G	2C	11B	12G	13I								
19 034	R	6G	2C	11B	12J									
20 035	R	6G	11B	13C										
21 036	R	3C	3A	6A	6E	1E	6C	10A	12C	10D	13C	CC	3C	3A
037												CC	6A	6E
22 038	R	3C	3B	6E	6C	10C	12C	13C				CC	3C	3B
23 039	R	6G	10A	12C	10D	13C								
24 040	R	2B	2C	6F	10A	12C	10D	13M				CC	2B	2C
25 041	M	AFI												
042	R	3B	6C											
26 043	R	6G	10C	12D	13D									
27 044	R	2B	2C	6D	10C	12E						CC	2B	2C
28 045	M	AFI												
046	R	3B												
29 047	R	6G	2A	4A	10C	12E								
30 048	R	2B	6D	4A	10D	13D								

BANDE/*BAND*/BANDA kHz

1	2					3
						5.6 MHz
31 049	R	3B	5B	6D	10D	
32 050	R	6G	2A			
33 051	R	2B	6E	6B		
34 052	R	3B	5B			
35 053	R	3C	2A	6A		
36 054	R	6G	2A			
37 055	R	2B	6E	6B		
38 056	R	3B	6A			
39 057	R	3C	2A	6A		
40 058	R	6G	2A			
41 059	R	2B				
42 060	R	3A	6A			
43 061	R	3B				
44 062	R	3C	2A			
45 063	R	6G				
46 064	R	2B				
47 065	R	3A				
48 066	R	3B				
49 067	R	3C				

BANDE/*BAND*/BANDA kHz

1	2 -22-	5.6 MHz 3
50 068	R 6G	
51 069	R 2B	
52 070	R 3A	
53 071	R 3B	
54 072	R 3C	
55 073	R 6G	
56 074	M CWP	
57 075	M EUR	
58 076	M MID	
59 077	M NAT SEA	
60 078	M NCA	
61 079	R 2B	
62 080	R 3A	
63 081	R 3B	
64 082	R 3C	
65 083	R 6G	
66 084	V VAFI	
67 085	V VEUR	
68 086	V VMID	

BANDE/*BAND*/BANDA kHz

5.6 MHz

1	2	3
69 087	V VNCA	
70 088	V VPAC	
71 089	V VSEA	
72 090	M CWP	
73 091	M EA	
74 092	M EUR	
75 093	M INO	
76 094	M MID	
77 095	M NAT	
78 096	M NCA	
79 097	M NP	
80 098	R 2 3	CC 2 3
81 099	R 2B	
82 100	R 3A	
83 101	R 3B	
84 102	R 3C	
85 103	R 6G	

1		2													6.6 MHz 3		
01	001	R	6G	2C	2A	9B	9C	12E	12F	13E	13F	10	4B	13K	14A	CC	2C	2A
	002															CC	9B	9C
	003															CC	12E	12F
	004															CC	13E	13F
02	005	R	6G	9B	9C	12E	12J	7E	13K	13E	14A	10A				CC	9B	9C
	006	V	VEUR													CC	12E	12J
03	007	M	NAT															
	008	R	6G	5A	13D	12C	9	14D										
04	009	M	NAT															
	010	R	6G	13M	9B	14D	12C	13I										
05	011	R	6G	1D	7C	13N	10A	9B										
	012	V	VNAT															
06	013	M	SAT															
	014	R	6G	2C	5D	10B	12C	12J	14	10E								
07	015	M	AFI															
	016	R	6G	12E	10B	2A	10F	9D	14B	13J								
08	017	M	AFI	CEP														
	018	R	6G	12F	2A	13J	14											
09	019	M	AFI															
	020	R	6G	11B	2A	13G	14B											
10	021	M	EUR															
	022	R	6G	7	11B	13C	13F	14B										
11	023	M	NP													CC	2C	2B
	024	R	2C	2B	6E	5D	12G	13H	10E	14C								
12	025	M	CAR															
	026	R	6G	2C	4B	10A	13G	14C										

BANDE/*BAND*/BANDA kHz

1		2									6·6 MHz 3		
13	027	M	NP								CC	2C	2B
	028	R	2C	2B	6E	12G	7B	14C					
14	029	M	CAR								CC	3C	3A
	030	R	3C	3A	5A	5C	6D	14G	1B		CC	5A	5C
15	031	M	SAM								CC	3C	3A
	032	R	3C	3A	6A	6E	1	6C	10B	7B	CC	6A	6E
16	033	R	3C	3B	14E	10C	12C				CC	3C	3B
	034	V	VAFI										
17	035	R	6G	2C	10A	10D	13C	14E					
18	036	R	2B	6D	4A	10C	13C						
19	037	M	MID										
	038	R	3B	1E	6C	10C	13C						
20	039	R	6G	2C	10D	13K	14E						
21	040	R	2B	6D	4A	10D	12D						
22	041	M	MID										
	042	R	3B	6C	11B								
23	043	R	6G	2A	14F	11B							
24	044	R	2B	6F	1C	14F	11B						
25	045	R	3B	1D	14F								
	046	V	VMID										
26	047	M	SEA										
	048	R	3C	2C									
27	049	R	6G	2A									
28	050	M	CWP										
	051	R	2B										

BANDE/*BAND*/BANDA kHz

- 26 -

6·6 MHz

1	2				3
29 052	M	CWP			
053	R	3A	5B		
30 054	R	3B	2C	6E	
31 055	R	3C	2C		
32 056	R	6G	2A		
33 057	R	2B	6B		
34 058	R	3A	5B	6B	
35 059	R	3B	6A		
36 060	R	3C	6A		
37 061	R	6G	2A		
38 062	R	2B			
39 063	R	3A	6A		
40 064	R	3B	6A		
41 065	R	3C			
42 066	R	6G	2A		
43 067	V	VNCA			
44 068	R	2B			
45 069	R	3A			
46 070	R	3B			
47 071	R	3C			

BANDE/*BAND*/BANDA kHz

1	2	3
48 072	R 6G 2A	6.6 MHz
49 073	V VNCA	
50 074	V VPAC	
51 075	V VSEA	
52 076	M EA	
53 077	M NCA	
54 078	R 2B	
55 079	R 3A	
56 080	R 3B	
57 081	R 3C	
58 082	R 6G	

1		2 - 28 -									9 MHz 3		
01	001	R	6G	4A	4B	9C	9D	12E	12F	13H	10F	CC	4A	4B
	002											CC	9C	9D
	003											CC	12E	12F
02	004	M	SP									CC	4A	4B
	005	R	6G	4A	4B	13D	13M	10B				CC	13D	13M
03	006	M	CEP									CC	13E	13F
	007	R	6G	13E	13F	4A	14D							
04	008	R	6G	12	1C	7C	14D							
05	009	R	6G	12	14D									
06	010	R	6G	12	14F									
07	011	R	6G	14F	7B									
	012	V	VNAT											
08	013	M	NAT											
	014	R	6G	13F	14F									
09	015	M	NAT											
	016	R	6G	13F	14G									
10	017	M	NAT											
	018	R	6G	14G	13H									
11	019	M	NAT											
	020	R	6G	14G	13I									
12	021	R	2C	2A	9C	9B	10	13C	7B			CC	2C	2A
	022											CC	9C	9B
13	023	R	3C	3A	9C	9B	4A	12D				CC	3C	3A
	024											CC	9C	9B

1	2	9 MHz 3
14 025	R 3C 3B 12E 9B	CC 3C 3B
026	V VAFI	
15 027	M NAT	
028	R 6G	
16 029	R 2C 2B 10 9 13C	CC 2C 2B
17 030	M SAM	CC 2 3
031	R 2 3 14B	
18 032	M CAR	CC 5A 5C
033	R 3B 5A 5C 9B	
19 034	M NAT	CC 6A 6E
035	R 6A 6E 9	
20 036	M NAT	
037	R 6G	
21 038	M CAR	CC 2C 2B
039	R 14 2C 2B	
22 040	M AFI CWP	
041	R 12F 10B	
23 042	M SAT	
043	R 3 14 10D	
24 044	R 3B 6D 12J	
045	V VEUR	
25 046	R 6A 10A 14 13C 10E	
26 047	M EUR	
048	R 6E 3B 14A 11B 13K	
27 049	R 6G 4A 10B 13K	
28 050	R 12C 13K	
051	V VSEA	

BANDE/*BAND*/BANDA kHz

-30-

1	2	3
29 052	M EA	9MHz
053	R 13G 11B	
30 054	R 14C 3 10E 13M	
31 055	R 14E 3 10E 13M	
32 056	M AFI	
057	R 6F 10C 13D	
33 058	M MID	
059	R 6C 10A 13G	
34 060	R 1D 6D 3B 11B 13G	
35 061	R 2 6C 10A 13J	
36 062	R 2A 6E 14A 10C 13J	
37 063	R 2C 6B 14 10D 13N	
38 064	R 3A 14B 12C	
39 065	R 5 6B 14B 12C	
40 066	R 6A 14A	
41 067	R 6G	
42 068	R 14C	
069	V WHID	
43 070	M AFI	
071	R 14E	
44 072	M MID	
073	R 14C	
45 074	M NCA	
075	R 14E	

BANDE/*BAND*/BANDA kHz

1	2	3
46 076	M SEA	9MHz
47 077	R 1D	
48 078	R 2	
49 079	R 2A 6E	
50 080	R 2C	
51 081	R 3A	
52 082	R 5	
53 083	R 5A	
54 084	R 6	
55 085	R 6A	
56 086	R 6G	

1	2							10 MHz 3		
01 001	R	6G	9C	9D	13J	13K	10F	CC	9C	9D
002								CC	13J	13K
02 003	R	6G	12E	12F	7B			CC	12E	12F
03 004	R	6G	13A	13B	4B			CC	13A	13B
04 005	H	SAT								
006	R	6G								
05 007	R	6G	12							
06 008	H	CAR						CC	2	3
009	R	2	3	7E	14	12J				
07 010	R	6G								
011	V	VSAM								
08 012	R	2	9C	9B	13C			CC	9C	9B
09 013	R	3C	3A	7	11B			CC	3C	3A
10 014	R	3C	3B	13H				CC	3C	3B
015	V	VEUR								
11 016	R	6G	12							
12 017	R	2	10	13J						
13 018	R	2B	2C	10	13J			CC	2B	2C
14 019	H	AFI								
020	R	3B	13F							
15 021	R	6B	6F	1E	13G			CC	6B	6F

1		2					3
							10 MHz
16	022	M	SP				
	023	R	6E	1C	13C		
17	024	R	6G	11B	13H		
18	025	R	10A				
	026	V	VAFI				
19	027	R	13K				
	028	V	VPAC				
20	029	M	NCA	SAM			
21	030	R	2	9	13K		
22	031	M	SAM				
	032	R	2A	7C	6B		
23	033	R	2C	6B	12C	13H	
24	034	R	3	4A	12C	13I	
25	035	M	AFI				
	036	R	3B				
26	037	R	5	11B	9B		
27	038	R	5B	9B	12D		
28	039	R	6A	10A	13K		
29	040	R	6E	1B	10A	13D	
30	041	M	CEP				
	042	R	6G	13G			
31	043	R	6C	12E			
	044	V	VMID				
32	045	R	13D				
	046	V	VNCA				

BANDE/*BAND*/BANDA kHz

-34-

1	2			3
33 047	R	13G		10 MHz
048	V	VSEA		
34 049	M	CHP		
050	R	1	13N	
35 051	M	EA		
36 052	M	EUR	NP	
37 053	M	INO		
38 054	M	MID		
39 055	M	NCA		
40 056	M	SEA		
41 057	R	1D	6D	
42 058	R	2		
43 059	R	2A	7D	
44 060	R	2B		
45 061	R	2C		
46 062	R	3	4A	
47 063	R	3A		
48 064	R	3B	5A	
49 065	R	5		
50 066	R	5B		

BANDE/*BAND*/BANDA kHz

1	2	3
51 067	R 5D	10 MHz
52 068	R 6A	
53 069	R 6E	
54 070	R 6F	
55 071	R 6G	

1	2 -36-	11.3 MHz 3
01 001	R 6G 12E 12J 7B	CC 12E 12J
02 002	M SAT CEP	
003	R 6G	
03 004	R 6G 12	
04 005	R 6G	
006	V VNAT	
05 007	M SAM	CC 2 3
008	R 2 3 14	
06 009	R 6G	
010	V VCAR	
07 011	R 2 9B 9C 10E 13J	CC 9B 9C
08 012	R 2C 2A 10 13G 14	CC 2C 2A
09 013	R 3C 3A 7 11B	CC 3C 3A
10 014	R 3C 3B 14 13D	CC 3C 3B
015	V VEUR	
11 016	R 6G 11B 13F 7E	
12 017	M NAT SEA	
13 018	R 2 10 13E	
14 019	R 2C 2B 9 13K	CC 2C 2B
15 020	M AFI	
021	R 3B 13H	

1	2				11.3 MHz 3		
16 022	R	6A	6E	12C	CC	6A	6E
17 023	M	CAR					
024	R	6G					
18 025	R	10A					
026	V	VAFI					
19 027	M	MID	CAR				
20 028	M	NAT					
029	R	6E					
21 030	R	2	6C	12F			
22 031	R	2C	12J				
23 032	R	3	4A	13M			
24 033	M	AFI					
034	R	3B	13F				
25 035	R	5	9B	12E			
26 036	R	5B	13C				
27 037	R	6A	10A	13C			
28 038	R	6G	13K				
29 039	R	9B	13H				
040	V	VMID					
30 041	V	VNCA					
31 042	R	4B					
043	V	VPAC					
32 044	V	VSEA					

-38-

1		2				3		
33 045	M	CWP				11.3 MHz		
046	R	1						
34 047	M	EA						
35 048	M	EUR	NP					
36 049	M	MID						
050	R	10A						
37 051	M	NAT						
052	R	6E						
38 053	M	NCA						
39 054	R	1C	6B	6F		CC	6B	6F
40 055	R	1D						
41 056	R	2						
42 057	R	2A	7C					
43 058	R	2B						
44 059	R	2C						
45 060	R	3	4A					
46 061	R	3A						
47 062	R	3B	5D					
48 063	R	5						
49 064	R	5B						
50 065	R	6						

BANDE/*BAND*/BANDA kHz

1	2	3
51 066	R 6A	11.3 MHz
52 067	R 6D	
53 068	R 66	

1	2 -40-	13.3 MHz 3
01 001	M AFI	
02 002	R 6G 13E 13F	CC 13E 13F
03 003	M AFI	
04 004	R 6G	
005	V VCAR	
05 006	M AFI	
06 007	R 2	
07 008	R 4A	
08 009	R 6G	
010	V VNAT	
09 011	V VAFI	
10 012	V VEUR	
11 013	V VPAC	
12 014	M AFI	
13 015	M CEP	
016	R 1D	
14 017	M EA	
15 018	M MID	
16 019	M NAT	

BANDE/*BAND*/BANDA kHz

1	2	3
17 020	M SAT	13·3 MHz
18 021	M SEA	
022	R 13H	
19 023	M SP	
20 024	R 2	
21 025	R 3	
22 026	R 4	
23 027	R 4A	
24 028	M CEP	
029	R 5	
25 030	R 6G	
031	V VNAT	
26 032	M INO	CC 13C 13K
033	R 13C 13K	
27 034	R 14 13C 13K	CC 13C 13K
28 035	V VAFI	
29 036	V VEUR	
30 037	V VHID	
31 038	V VNCA	
32 039	V VPAC	
33 040	R 6D	
041	V VSAM	

1	2	3
	— 42 —	13·3 MHz
34 042	V VSEA	
35 043	M AFI	
36 044	M CAR	
37 045	M CWP	
38 046	M EA	
39 047	M MID	
40 048	M NAT	
41 049	M NCA	
42 050	M NP	
43 051	M SAM	
44 052	M SAT	
45 053	M SEA	
46 054	M SP	
47 055	R 1	
48 056	R 2	
49 057	R 3	
50 058	R 4	
51 059	R 4A	
52 060	R 4B	

1	2	3
		13.3 MHz
53 061	R 5	
54 062	R 5A	
55 063	R 6	
56 064	R 6A 6E 11B	CC 6A 6E
57 065	R 6B	
58 066	R 6C 6F	CC 6C 6F
59 067	R 6G	
60 068	R 7	
61 069	R 9	
62 070	R 10	
63 071	R 12	
64 072	R 13	
65 073	R 14	

1	2	3
		18 MHz
01 001	M AFI	
02 002	R 3	
03 003	M CEP	
004	R 5	
04 005	M SAM	
006	V VSEA	
05 007	M AFI	
06 008	M CAR	
009	R 14	
07 010	M CWP	
011	R 4	
08 012	M EA	CC 13A 13B 13E 13F
013	R 13A 13B 13E 13F	
09 014	M EUR SP	
10 015	M INO	
11 016	M MID	
017	R 11B	
12 018	M NAT	
13 019	M NCA	
14 020	M NP	
15 021	M SAT	
022	R 6B	

1	2	3
16 023 M SEA 024 R 13		18 MHz
17 025 R 2		
18 026 R 3		
19 027 R 5		
20 028 R 6		
21 029 R 6G		
22 030 R 10		
23 031 R 12		

ANNEXE 3 - ANNEX 3 - ANEXO 3

MATRICES DE PARTAGE - SHARING MATRICES - MATRICES DE COMPARTICION

V - - -	Indique Indicates Indica	Zone VOLMET VOLMET Area Zona VOLMET

☐ Indique un partage possible
Indicates sharing possible
Indica que la compartición es posible

☒ Indique un partage impossible
Indicates sharing not possible
Indica que la compartición no es posible

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```
A                 0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
 2850- 3025       5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5

                VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344445555566666666777777789999111111111111111111111111111111111111111111111
                ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222223333333333333344444444
                FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                IRRDTACMTA

          VAFI 0
          VCAR X0
          VEUR XX0
          VMID XOX0
05        VNAT XXXX0
          VNCA XOXXX0
          VPAC XXOXXX0
          VSAM XXXOXOX0
          VSAT 000000000
10        VSEA XOXXOXX000
          AFI  XXXXXXXXOX0
          CAR  XXXOXOXXOOX0
          CEP  OXOOXOXX000X0
          CWP  000XOXXOOXOOX0
15        EA   XOXXOXXOOX000X0
          EUR  XXXXXXOOOXXOOX0
          INO  XOXXOXXOOXXOOXXX0
          MID  XOXXOXXOOXXOOXXXX0
          NAT  XXXXXXOXOOXXXOOXOX0
20        NCA  XOXXOXXOOXXOOXOXXXX0
          NP   OXOXXXXOOXOXXXXOXXXX0
          SAM  XXOOXOXXOOXXXOOOOXOOO
          SAT  XXXXXXOXOOXXOOOXXXXXOX0
          SEA  XOXXOXXOOXXOOXXOXXOXXOOO
25        SP   OXOOOOXOOXOXXXOOXOOOXXOX0
          1    XXXXXXOXOXXOOOXXXXXXOXXXOO
          1A   XOXOXXOOOXXOOOOXOXXOOXOOOX0
          1B   XOXXXXOOOOOOOOOXOXXXOOOOOXOO
          1C   XOXXXXOOOXOOOOOXOXXXOOOOOXXOO
30        1D   XOXXXXOOOXOOOOXXXXXOOOXXOXXXOO
          1E   XXXXXXOXOOXOOOOXOXXOOOOOOXXXXOO
          2    XOXXXXXOOXXOOXXXXXXXOOXXOXXXXXOO
          2A   XOXXXXOOOXXOOOXXXXXXOOXOOXXXXXXOO
          2B   XOXXOXXOOXXOOXXXXXXOOOOXOXXXXXXOO
35        2C   XOXXXXOOOXXOOOXXXXXOOOXXOXXXXXXXOO
          3    OOXXOXXOOXXOOXXXXXXOOOXOXOXXXOXXXO
          3A   OOXOOXXOOXXOOXXXXXXOOOOOXOXXXOXXXOO
          3B   OOOOOXXOOXOOOXXOOXOXOOOXOXOOOOOXXXXOO
          3C   OOXXOXXOOXXOOXXXXXXOOOXOOOOOOOXXXXXOO
40        4    XXXXXXOOOXXOOOOXXXXOOXOOOXXXXXXXXXOOOOO
          4A   XXXXXXOXOXXOOOOXXXXXOXXOOXXXXXXXXXOOOOX0
          4B   XOXXXXOXOOXXOOOXXXXXOXXOOXXOOXXOOOOOOOOXX0
          5    XOXXOXXXOXXOOOXXXXXXOOXXOXOXXXXXXXXXXOXXXX0
          5A   XOXXOXXXOXXOOOXXXXXXOOXXOXOXXXXXXXXXXOOXXXX0
45        5B   XOXXOXXOOXXOOOXXXXXXOOOXOXOXXXXXXXXXXOXXXOXX0
          5C   XOXXOXXOOXXOOOXXXXOXOOOXOXOOOXOXXXXOOOOXXXXXX0
          5D   XOXXOXOXOXXOOOXXXXOXOOXXOXOXXXXXOXXOOOOXXXXXXX0
          6    XOXXOXXOOXXOXXXXXXOXOOOXXXOOOXOXXXXXXXOOOXXXXX0
          6A   XOXXOXXOOXXOOXXXXXOXOOOXOXOOOXOXXXXXXOXOOOXXXXX0
50        6B   OOOOOXXOOXOOXXXOOXOXOOOXXOOOOOOOOOXXXXOOOOOOOXX0
          6C   XOOOOXXOOXOOXXXOXOOXOOOXXOOOOOOOOOXOXXOOOOOOOXXX0
          6D   XOOXOXXOOXOOOXXOXXOXXOOXOOOOOOOXOXOXOXXOOOXOXXOXXX0
          6E   XOXXOXXOOXXOOXXOXXOXXOOXOOOOOOOXOXXXOOXOOOXXXXXXXXX0
          6F   XOOXOXXOOXOOOXXOXXOXXOOXOOOOOOOXOXOXXXXOOOXOXXOXXXXX0
55        6G   XOXXOXXOOXXOOXXXXXOXXOOXOXOOOXOXXXXXXOXOOOXXXXOXXXXXOO
          7    XXXXXOOXOXXOOOXXXXXXOXXXOXOOOXOOOOOOOOOXXXXXXXXXOOOOXOOO
          7A   XXXOXOOXOOXOOOOOXOOOOXXOOOOOOOOOOOOOOOOXXXXOOOXOOOOOOOX0
          7B   XOXXOOOXOOXOOOOXXXOOOOXOOXOOOXOOOOOOOOOXXXXXOXXOOOOOOOXX0
          7C   XOXXOOOOOXXOOOXXXXOXOOXXOXOOOXOOOOOOOOOXXXXXXXXXOOOOXOOXXX0
60        7D   XOOXOOOOOXXOOOXOXXOOOOXXOOOOOOOOOOOOOOOXOXXXOXOOOOOOXOOXXXX0
          7E   XOOXOOOXOOXOOOOOXXOOOOXOOOOOOOOOOOOOOOOXXXXXOXXOOOOOOOXXXXX0
          7F   OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
          8    XOOXOOXOOXXOOXXOXOOOOOXXXOOOOOOOOOOOOOOOOOXXXXXXOOOXXXXXXOXXXOO
          9    OXOOXOXXOXOXXXXOXOXOOOOXXOOOOOOOOOOOOOOOOOOOOOOXOXXXOXXOOOOOOOOO
65        9B   OOOOOOXOOXOOXXXOXOOOOXOXXOOOOOOOOOOOOOOOOOOOOOXOXXXOXXOOOOOOOOX0
          9C   OXOOXOXXOXOXXXOOXOXOOXOOXOOOOOOOOOOOOOOOOOOOOOXOOXOOOOOOOOOOOXX0
          9D   OOOOOOXOOXOOXXOOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOOXOOOOOOOOOOOOOOXXX0
          10   XXXOXXXXOXXXXXXOOXXXXXOXXXXOXXOOOOXOXXXXOOOOOOXOXOOOXXOOOOOOOOOOO
          10A  OXOOXXXXOXOXXXXOOOXXXOOOOOOOOOOOOOXOXXOOOOOOOXOXOOOXXOOOOOOOOOOXO
70        10B  OXXOXXXXOXOXXOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXO
          10C  OXXOXXXXOOOXXOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXX0
          10D  OXXOXOXXOOOXXOOXOOXOXOOOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXX0
          10E  XXXOXOXXOOXXOOOXOOXOXOXOOXXXOXXOOOOOOOOOXXOOOOOOOOOOOOOOOOOOOXOXXX0
          10F  OOXOXOOOOOOXOOOOOOXOOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXO
75        11   XXXOXXXXOXXXXXXOOXXXXXOXXXOOOXOOOOXOXXXXXOOOOOXOXXOOXXOOOOOOOXOOOXXXXXOO
          11A  OXOOOXXXOXOXXXOOOOXXXOOXOOOOOOOOOOXOXXOOOOOOOOXOXXOOXXOOOOOOOXOOOXXXXOOXO
          11B  XXXOXOXXOOOXXOOOOXOXXXOXXXOOOXOOOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOXXXXXXOXXO
          11C  XXXOXOOXOOXXOOOXOOXOOXXOOXXOOOXOOOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOXOXXXXOXOXO
          12   XXXOXXXXOXXXXXXOOXOXXXXOXXXOOOXOOOOOOOXXXOOOOOXOXXOOOOXOOOOOOXXXOXXXXXXOXXXO
80        12A  OOOOOXXOOXOXXXOOOOOXOOOXOOOOOOOOOOOOOOOOOOOOOXOXXOOOOOOOOOOXXXOXXOOOOXXXOXO
          12B  OOOOOOOOOOOXXXOOOOXOXXOOXOOOOOOOOOOOOOOOOOOOOXOXXOOOOOOOOOOOXXXOXXXXOOOXXOXXO
          12C  OOOOOOOOOOOXXOOOOOXOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXOXOXOXXOXXXXXOXO
          12D  XXOOXOXXOOXXXOOOOOXOOXXOOXOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXXOXOXXXOXXO
          12E  OXOOXOXXOOOXXOOOOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOXXXOXOXXXOXXXO
85        12F  XXOOXOXXOOOXXOOOOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXOXXXXO
          12G  XXOOXOOXOOXXOOOOOOXOOXXOOXOOOOOOOOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOXOOOOXOXOXXXOXXXXXO
          12H  XXOOXOOXOOXXOOOOOOXOOXXOOOOOOOOOOOOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXOXXXXXO
          12I  XXXOXOOXOOXXOOOXOOXOOXXOOXOOXXOOOOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXOXXXOOXXXXXO
          12J  OXOOXOOXOOOXXOOOOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOXOXXXOXXXXXXXO
90        13   XXOOXOXXOOXXXOOOOOXOOXXOOOOOOOOOOOOOOOOXXXOOOOOOOOOOOOXXOOOOOOOOOOOOOOOOXOXXXOXXXXXXXXO
          13A  OXOOXOXXOOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXXXXOXXO
          13B  OXOOXOXXOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXOOOOOOXXXO
          13C  XXOOXOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXOXXXXXXXXXOO
          13D  XXOOXOOXOOOXOOOOOOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXXXXXXXXXXXO
95        13E  XXOOXOOXOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOOXXXXOXXXXXO
          13F  XXOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOOOOOOOXXXXXXO
          13G  XXOOXOOXOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOOOOOOOXXXOXXXXO
          13H  XXOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOOOOOOOXXOXXXXXO
          13I  XXOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXOOOOOOOOOOOOOOOOOOXOOOOOOOOOXXOXXXXXO
00        13J  XXOOXOOXOOOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXOOOOOOOOOOOOOOOOOOOXOOOOOOOOOXXOXXXXXXO
          13K  XXOOXOOXOOXXOOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOXXXOOOOOOOOOOXXOOOOOOOOOOOOOOOOOOOXOOOOOOOOOXXOXXXXXXO
          13L  XXOOXOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXOOOOOOOOOOOOXXOOOOOOOOOOOOOOOOOOOXOOOOOOOOOXXOXXXXXXXXO
          13M  OOOOXOOXOOOOOOOOOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOXXXXXXXXXXXXXXXXXXXO
          13N  OOOOXOOXOOOXOOOOOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOXXXXXXXXXOXXXXXXXXXXO
05        14   XOOOOOXOOXOOOXXOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXXXXXOOOOOOOXXXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
          14A  XOOOOOXOOXOOOXXOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXOOXXOOOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXO
          14B  XOOOOOXOOXOOOXXOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXOXXXOOOOOOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXO
          14C  OOOOOOXOOXOOOXXOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXOOXXOOOOOOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXX
          14D  XOOOOOXOOXOOOXXOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXOOXOOOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXO
10        14E  OOOOOOXOOXOOOXXOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXXOXOOOOOOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXO
          14F  OOOOOOXOOXOOOXXOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXXOOOOOOOOOXXXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXXO
          14G  OOOOOOXOOXOOOXOOXOOOOOOXXOOOOOOOOOOOOOOOOOOOOXOOXXOOOOOOOOOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXXXO

                VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344445555566666666777777789999111111111111111111111111111111111111111111111
                ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222223333333333333344444444
                FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                IRRDTACMTA

                 0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
                 5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5
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A                0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
 3400- 3500      5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5

                 VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111111
                 ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
                 FAUIACAAAEIRPP RODTA MTA                                          ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                 IRRDTACMTA

          VAFI 0
          VCAR X0
          VEUR XX0
          VMID X0X0
05        VNAT XXXX0
          VNCA X0XXX0
          VPAC XXXXXX0
          VSAM XXXXXXX0
          VSAT 000000000
10        VSEA X0XX0XX000
          AFI  XXXXXXXX0X0
          CAR  XXX0X0XX00X0
          CEP  0X00XXXX0X0X0
          CWP  X00X0XX00X00X0
15        EA   X0XX0XX00XX00X0
          EUR  XXXXXXXX0XXX00X0
          INO  X0XX0XXX0XX00XXX0
          MID  X0XX0XXX0XX00XXXX0
          NAT  XXXXXXXX0XXXX00X0X0
20        NCA  X0XXXXXX0XX0XXXXXX0
          NP   0X0XXXXX0X0XXXX0XXXX0
          SAM  XXX0X0XX00XXX00000X000
          SAT  XXXXXX0X00XX000XXXXX0X0
          SEA  X0XX0XX00XX00XXXXX0XX000
25        SP   XX00XXXX0X0XXX00X000XX0X0
          1    XXXXXXXX0XXX00XXXXXX0XXX00
          1A   XXXXXX0X00XX000X0XXX0XX00X0
          1B   XXXXXXXX0XXX000X0XXX00X00XX0
          1C   XXXXXXXX0XX000XXXXXX00X00XXX0
30        1D   XXXXXX0X0XX000XXXXXX00XX0XXXX0
          1E   XXXXXX0X0XXX000X0XXX0XX00XXXXX0
          2    X0XXXXXX0XX00XXXXXXX0XX0XXXXXX0
          2A   X0XXXXX00XX000XXXXXX00XX0XXXXXXX0
          2B   X0XX0XX00XX00XXXXXXX00X0X00XXXXX0
35        2C   X0XXXXXX0XX000XXXXXX00XX0XXXXXXXX0
          3    X0XX0XX00XX0XXXXXXX000X0X0XXXXXXXX0
          3A   X0XX0XX00XX00XXXXXX000X0X0XXXXXXXX0
          3B   00XX0XX00X00XXXX0XXX000X0000000XXXXXX0
          3C   00XX0XX00XX00XXXX0X000X0000000XXXXXXX0
40        4    XXXXXX0X0XXX000XXXXX0XX00XXXXXXXXX00000
          4A   XXXXXX0X0XX0000XXXXX0XX00XXXXXXXXX0000X0
          4B   XXXXXX0X0XXX000XXXXX0XX00XX00XXX00X0000XX0
          5    X0XX0XXX0XX000XXXXXX00XX0X0XXXXXXXXX0XXXX0
          5A   X0XX0XXX0XX000XXXXXX00XX0X0XXXXXXXXXX00XXXX0
45        5B   X0XX0XX00XX000XXXXXX000X0X0XXXXXXXXXX0XXXXXX0
          5C   X0XX0XX00XX000XXXX0X000X0X000X0XXXXX0XXXXXXX0
          5D   X0XX0XXX0XX000XXXXXX00XX0X0XXXX0XX0X00XXXXXX0
          6    X0XX0XX00XX0XXXXX0XX00XXX000X0XXXXXXXXX0XXXXX0
          6A   X0XX0XX00XX00XXXX0XX00X0X000X0XXXXX0XXX0XXXXX0
50        6B   X0000XX00X00XXX0XX0XX00XX000000X0X0XXXX00000000XX0
          6C   X0000XX00X00XXX0X00XX00XX0000000000X0XX00000000XXX0
          6D   X00X0XX00X000XX0XX0XX00XX000000X0X0X00X000X0XX0XXXX0
          6E   X0XX0XX00XX00XX0XX0XX00X0000000X0XXX00X000XXXXXXXXX0
          6F   X00X0XX00XX00XX0XX0XX00X0000000X0X0XXXX000X0XX0XXXXX0
55        6G   X0XX0XX00XX00XXXX0XX00X0X000X0XXXXXXXX000XXXXXXXXXXX0
          7    XXXXXXXX0XX000XXXXXX0XXX0X000X000000000XXXXXXXXXX00XXX00
          7A   XXX0X00X0XX00000X0X00XXX0000000000000000XXXX000X000000000X0
          7B   XXXXXX0X0XX0000XXX0X00X00X000X000000000XXXXXXXX00000000XX0
          7C   X0XX0XXX0XX000XXXX0X00XX0X000X000000000XXXXXXXXXX00XXX0XXX0
60        7D   X0XX00XX0XX000X0XX0000XX000000000000000XXXXX0XXXX00XXX0XXXX0
          7E   XXXX000X0XX00000XX0000X000000000000000XXXXX0XX000000000XXXXX0
          7F   X0XX0X0X0X000000000000000000000000000X000000000000000000000
          8    X0XX00X00XX00XX0XX00000XX000000000000000XXXXXXXXXXXXXXXXXX00
          9    0X00XXXX0X0XXXX0X00X0X0XX000000000000000000000X0XXX0XX000000000
65        9B   00000XX00X00XXX0X00X0X0XX000000000000000000000X0XXX0XX000000000X0
          9C   0X00X0XX0X0XXX00X0000X00X000000000000000000000X0XX000000000000XX0
          9D   000000X00X00X00X000000XX000000000000000000000X000X000000000000XXX0
          10   XXX0XXXX0XXXXXX00XXXXX0XXXXXXXX00X0XXXXX00000X0XX00XX000000000000
          10A  0X00XXXX0X0XXXX000XXX000X000000000X0XX000000000X0XX00XX000000000000X0
70        10B  0XX0XXXX0X0XX00000XXX000000000000X0X000000000000000000000000000000XX0
          10C  0XX0XXXX0X0XX00000XXX000000000000X0X0000000000000000000000000000000XXX0
          10D  0XX0X0XX000XX00X00X0XXX00XXXX0X000000000000000000000000000000000000XXXX0
          10E  XXX0X0XX00XXX00X00X0XXX00XXXXXX0000000XXX000000000000000000000000X0XXXX0
          10F  00X0X000000000000X000000XXXX000000000000000000000000000000000000X0XXXX0
75        11   XXX0XXXX0XXXXXX00XXXXX0XXXX00X0000X0XXXXX00000X0XX00XX000000000XXX0XXXXX00
          11A  0X00XXXX0XXXXX000XXXX00X000000000X0XX000000000X0XX00XX000000000XXX0XXXXX00X0
          11B  XXX0XXXX000XXX0000X0XXX0XXX000X000000000XXX000000000000000000000X0X0XXXXXX0XX0
          11C  XXX0X00X00XX000X00X00XX00XXX00X000000000XXX000000000000000000000000X0XXXX0XXX0
          12   XXX0XXXX0XXXXX0X00X0XXX0XXX000X0000X0X0XXX00000X0XX0000XX000000XXXXXXXXX0XXXX0
80        12A  0X000XXX00XXXX000000XX00X000000000X0X000000000X0XX000000000000XXXXX0X000XXX0X0
          12B  0X00XXXX0X0XXX0000X0XX00X000000000000000000000XXX0XXXXX00XXX0XX0
          12C  0X00X0XX000XX00000X0XXX0X000000000000000000000000000000000000X0X0XXXXX0XXXXX0X
          12D  XX00X0XX00XXX00000X00XX00XX000X000000000XXX000000000000000000000000X0XXXX0X0XXX0XXX
          12E  0X00X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000X00XXX0X0XXX0XXXX
85        12F  XX00X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000X000XX0X0XXX0XXXXX
          12G  XXX0X00X00XX000000X00XX00XX000X000000000XXX000000000000000000000000X000XX0X0XXX0XXXXXX
          12H  XXX0X00X00XX000000X00XX00XX000X000000000XXX000000000000XX000000000X0000X0X0XXX0XXXXXXX
          12I  XXX0X00X00XX000X00X00XX00XX000X000000000XXX000000000000000000000X000XX0X0XXX0XXXXXXXX
          12J  0X00X0XX000XX00000X00XX0X000000000000000000000000000000000000000X0X000000000X0XXX0XXXXXXXX
90        13   XXX0X0XX00XXX00000X00XX0XX000X000000000XXX000000000000000XX000X00X0X000000000X0XXX0XXXXXXXXXX
          13A  0X00X0XX000XX00000X00XX0X000000000000000000000000000000000000000X0X000000000X0XXX0XXXXXXXXXX
          13B  0X00X0XX000XX00000X00XX0X000000000000000000000000000000000000000X0X000000000000X0X00X0000XXX0
          13C  XX00X00X00XX000000X00XX00X0000X000000000X0X000000000000000XX000000000000000000X0XXX0XXXXXXXXXX0X
          13D  XX00X00X000X000000X00XX000000000000000000000000000000000000000000000000000000000X0XXXXXXXXXXXX0
95        13E  XX00X0XX000X000000X00XX0X000000000000000000000000000000000000000000000000000000000X0XXXXXXXXXXXX
          13F  XX00X0XX000X000000000XX0X000000000000000000000000000000000000000000000000000000000X0X000X000XXXXXX0
          13G  XX00X0XX000X000000X00XX000000000000000000000000000000000000XX000000000000000000000X0XXXXXXXXXXXXX0
          13H  XX0000XX000000000000XX0X000000000000000000000000000000000000XX000000X0X000000000000X00000X0000XXXXXXX0
          13I  XX00X00X000X000000000XX000000000000000000000000000000000000000XX000000000000000000000X00000X00X0XX0XXXXX0
00        13J  XX00X00X00XX000000X00XX000000000000000000X0X000000000000000XX000000000000000000000X000XXXXXXXXX0XXXXXX0
          13K  XXX0X00X00XX000000X00XX00X0000X000000000XXX000000000000000XX000000000000000000000X0XXX000XXXXXXXX0XXXXXX0
          13L  XXX0X00X00XX000000X00XX000000000000000000XXX000000000000000XX000X000000000000000X00XX000XX0XXX0XX0XXXXXXXX0
          13M  XX00X0XX000X000000X00XX000000000000000000000000000000000000000000000000000000000X0XXX0XXXXXXXXXXXXXXXXXX0
          13N  XX00X00X000X000000X00XX000000000000000000000000000000000000XX000000000000000000000X0X0XXXXXXXX0XXXXXXXXXX0
05        14   X00000X00X000XX0X000000XX000000000000000000000000X00XXXX0000000XXX0X000000000000000000000000000000000000
          14A  X00000X00X000XX0X000000XX000000000000000000000000X00XXXX0000000XXX0X0000000000000000000000000000000000000X0
          14B  X00000X00X000XX0X000000XX000000000000000000000000X00XXXX0000000XXX0X00000000000000000000000000000000000000XX0
          14C  X00000X00X000XX0X000000XX000000000000000000000000X00XXXX0000000XXX0X000000000000000000000000000000000000000XXX0
          14D  X00000X00X000XX0X000000XX000000000000000000000000X00XX0XX000000XXX0X0000000000000000000000000000000000000000XXXX0
10        14E  000000X00X000XX0X000000XX000000000000000000000000X00XX0XX000000XXX0X00000000000000000000000000000000000000000XXXXX0
          14F  000000X00X000XX0X000000XX000000000000000000000000X00XX0XX000000XXX0X000000000000000000000000000000000000000000XXXXXX0
          14G  X00000X00X000XX0X000000XX000000000000000000000000X00XX0XX000000XXX0X0000000000000000000000000000000000000000000XXXXXXX0

                 VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111111
                 ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
                 FAUIACAAAEIRPP RODTA MTA                                          ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                 IRRDTACMTA

                 0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
                 5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5
```

```
A                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
 4650- 4700      5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344445555566666666777777789999111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

       VAFI 0
       VCAR X0
       VEUR XX0
       VMID XXX0
05     VNAT XXXX0
       VNCA XXXXX0
       VPAC XXXXXX0
       VSAM XXXXXXX0
       VSAT 000000000
10     VSEA X0XX0XX000
       AFI  XXXXXXXX0X0
       CAR  XXX0XXXX00X0
       CEP  0XX0XXXX0X0X0
       CWP  XXXX0XXX0X0XX0
15     EA   X0XX0XX00XX0XX0
       EUR  XXXXXXXX0XXX00X0
       INO  XXXX0XXX0XX0XXXX0
       MID  XXXXXXXX0XX00XXXX0
       NAT  XXXXXXXX0XXXXXXXX0
20     NCA  XXXXXXXX0XX0XXXXXX0
       NP   XXXXXXXX0X0XXXX0XXXX0
       SAM  XXX0X0XX00XXXX0X00X0X0
       SAT  XXXXXXXX0XXXX0XXXXXX0X0
       SEA  X0XX0XX00XX00XXXXX0XX000
25     SP   XX00XXXX0X0XXXX0X0XXXXXX0
       1    XXXXXXXX0XXX00XXXXXXXXX00
       1A   XXXXXXXX0XXX000XXXXXXXX00X0
       1B   XXXXXXXX0XXX00XXXXXXX0XX0XX0
       1C   XXXXXXXX0XX000XXXXXXX0XX0XXX0
30     1D   XXXXXXXX0XX000XXXXXX00XX0XXXX0
       1E   XXXXXXXX0XXX00XXXXXX0XXX0XXXXX0
       2    XXXXXXXX0XX00XXXXXXXX0XX0XXXXXX0
       2A   XXXXXXXX0XX00XXXXXXXX0XX0XXXXXXX0
       2B   XXXXXXXX0XX00XXXXXXXX0XX0XXXXXXX0
35     2C   XXXXXXXX0XX00XXXXXXXX0XX0XXXXXXXX0
       3    XXXXXXX00XX0XXXXXXXX0XXXXXXXXXXXX0
       3A   X0XXXXX00XX00XXXXXXX0XX0XXXXXXXXXX0
       3B   XXXXXXX00X00XXXXXXXX00XXX00XX0XXXXX0
       3C   X0XXXXX00XX0XXXXXXXX00XXX0XXXXXXXXXX0
40     4    XXXXXXXX0XXX00XXXXXX0XXX0XXXXXXXXX00000
       4A   XXXXXXXX0XXX00XXXXXX0XXX0XXXXXXXXX0000X0
       4B   XXXXXX0X0XXX00XXXXXX0XXX0XXXXXXXXX0000XX0
       5    XXXXXXXX0XX00XXXXXXX0XX0XXXXXXXXXXXXXXX0
       5A   XXXXXXXX0XX000XXXXXX00XX0XXXXXXXXXXX0XXXX0
45     5B   XXXXXXXX0XX00XXXXXXX0XX0XXXXXXXXXXXXXXXX0
       5C   X0XX0XXX0XX00XXXXXXX0XX0X0XXXXXXXXX0XXXXXX0
       5D   XXXXXXXX0XX000XXXXX00XX0XXXXXXXXXXX0XXXXXX0
       6    X0XX0XX00XX0XXXXXXXXXXXX0XXXXXXXXXXXXXXXXX0
       6A   X0XX0XX00XX00XXXX0XX00X0X0XXXXXXXXXXXXXXXXX0
50     6B   X0000XX00X00XXX0XXXXX0XX000000X0X0XXXX000000X0XX0
       6C   X0000XX00X00XXX0XX0XX00XX000000X000XXXX000X0XX0XXX0
       6D   X0XX0XX00XX00XXXX0XX00XXX000X0XXXXXXX000XXXXXXXX0
       6E   X0XX0XX00XX00XXXX0XX0XX0X000X0XXXXXXXXXXXXXXXXXX0
       6F   X0XX0XX00XX0XXXXX0XX00XXX000X0XXXXXXX000XXXXXXXX0
55     6G   X0XX0XX00XX00XXXXXXX00X0X0XXXXXXXXXXXXX0XXXXXXXX0
       7    XXXXXXXX0XXX00XXXXX0XXXXXXXXXX0XX0000XXXXXXXXX0XXXX0
       7A   XXXXXXXX0XXX00XXXXX0XXXXX00XX000000000XXXX0XX000000000X0
       7B   XXXXXXXX0XX000XXXXX0XXX0XXXXX0XX0000XXXXXXXXX000X00XX0
       7C   X0XX0XXX0XX000XXXXX00XX0X0XXXX0XX0000XXXXXXXXX00XXXXXX0
60     7D   XXXX0XXX0XX000XXXX0X00XX0X000XXX0XX0000XXXXXXXX0XXXXXXX0
       7E   XXXXX0X0XX000XXXXX0XXX0X000XX000000000XXXXXXXXX000X00XXXX0
       7F   0000000000000000000000000000000000000000000000000000000000000
       8    X0XX0XXX0XX00XXXX0X00XXXX000X0X0XXX00XXXXXXXXXXXXXXXXXXXX00
       9    XX00XXXX0X0XXXX0X00XXXXX0000000000X0XX000000000XXXXXXX0000000X0
65     9B   XX000XXX0X0XXXX0X00XXX0XX000000000X0XX000000000XXXXXXX0000000XX0
       9C   XX00X0XX0X0XXX00X000XX0XX000000000000000000000X0XX000000000000XX0
       9D   XX0000XX0X00XXX0X0000XXXX000000000000000000000X0XXX0X000000000XXXX0
       10   XXXXXXXX0XXXXXX0XXXXXXXXXXXXXX0000XXXXXXXX000X0XX00XX000000000XXX00
       10A  0X00XXXX0X0XXXX000XXXX0XX000000000000XXXX000000000X0XX00XX000000000XXX0X0
70     10B  0XX0XXXX0XXXXX0000XXXXX0XXXX00X0000X0XXXX000000X0X0000000000000000000XX0
       10C  0XX0XXXX0XXXXX0000XXXXX0XXXX00X0000X0XXXX000000X0X0000000000000000000XXX0
       10D  XXX0XXXX00XXX00X00X0XXX0XXXX00X000000000XXX000000000000000000000000000XXXX0
       10E  XXXXXXXX00XXX00X0XXXXXX00XXXXXXX000000XXX000000000000000000000000000XXXXX0
       10F  00X0X000000000000X000000X00X000000000000000000000000000000000000000X0XXXX0
75     11   XXX0XXXX0XXXXXX00XXXXXXXXXXXXX0000XXXXXX00000X0XXX0XXX000000XXX0XXXXX00
       11A  0XX0XXXX0X0XXXX000XXXX0XX000000000000XXXX000000000X0XXX0XX000000000XXX0XXXXXX0X0
       11B  XXX0XXXX0XXXXX0X00XXXXX0XXXXX0X0000X0X0XXX00000X0X0000000000000X0X0XXXXXX0XXX0
       11C  XXX0XXXX00XXX00X00X0XXX00XXXXX000000000XXX000000000000000XX000000000X0XXXX0XXX0
       12   XXX0XXXX0XXXXXX00XXXXXXXXXXXXX0000X0XXXXXX00XX0XXX0X0XXX00X0XXXXXXXXXX0XXXX0
80     12A  0X000XXX0X0XXXX000XXXX0XX000000000000X0XX000000000X0XXX0X000000000XXXXXXX000XXX0X0
       12B  XXX0XXXX0X0XXX0000XXXXX0XXX000X0000X0X000000000000XXXXXXXXXX0XXXXXX
       12C  XXX0XXXX0XXXXX0000X0XXX0XXX000X000000000XX000000000000000000000XXX0XXXXXX0XXXXXXX
       12D  XXX0X0XX00XXX00X00X0XXX0XXX000X000000000XXX000000000000000XX000000X0X0XXXXXX0XXXXX0XX0
       12E  XXX0X0XX00XXX00000X0XXX0XXX000X000000000XX000000000000000000000000X0X0XXXXXX0XXXXX0XXX0
85     12F  XXX0X0XX00XXX00000X0XXX0XXX000X000000000XXX000000000000000000000000000X0XXXX0XXXXX0XXXX0
       12G  XXX0X0XX00XXX00X00X00XX00XX000X000000000XXX000000000000000XX000000000X0XXXX0X0XXX0XXXXX0
       12H  XXX0X0XX00XXX00X00X00XX00XX000X000000000XXX000000000000000XX000000000X0XXXX0X0XXX0XXXXXX0
       12I  XXX0X0XX00XXX00X00XXXXX00XXXXX000000000XXX000000000000000XX00X000000X0XXXX0X0XXX0XXXXXXX0
       12J  XXX0X0XX00XXX00000X00XX0XX0000X000000000XX000000000000000000000000X0X0X0XXXX0X0XXX0XXXXXXXX0
90     13   XXX0X0XX00XXXX0XX0X00XX0XXX00XX000000000XXXX000000000000XXX0XX0XXXXXX000XX0XXXXXXXXXXXXXXX0
       13A  XX00X0XX000XXX00X0X00XX0X000000000000000000000000000000000000XXXX000XX0XXXXXXXXXXXXXXXX0
       13B  0X00X0XX000XXX000000XX0X000000000000000000000000000000000000000XXX000000000X000X0XXXXXX0XXX0
       13C  XXX0X0XX00XXX00X00X00XX00X0000X000000000XXX000000000000000XX000000000X000XX0X0XXX0XXXXXXXXXXX0
       13D  XXX0X0XX00XXX00000X00XX00X0000X0X0000000000X000000000000000000000000X000XX0X0XXX0XXXXXXXXXXXX0
95     13E  XX00X0XX00XXX00000X00XX0X000000000000000000000000000000000000000X0X000000000X0XXX0XXXXXXXXXXXX0
       13F  XX00X0XX000X0000X0X00XX0X000000000000000000000000000000000XX00000XX0X000000000000X0XXXXXXXXXXXXXX0
       13G  XX00X0XX00XX000000X00XX0X000000000000000X000000000000000XX000000X0X000000000X0XXX0XXXXXXXXXXXXXX0
       13H  XX00X0XX000X0000X0X00XX0X000000000000000X0X000000000000XX00000X000000000000000X0X0XXXXXXXXXXXXXXX0
       13I  XX00X0XX00XX000000X00XX000000000000000000X0X000000000000XX000X000000000000000000X0X0XXXXXXXXXXXXXXX0
00     13J  XXX0X0XX00XX000000X00XX00X0000X000000000XXX000000000000XX000X000000000000000X0XXX0XXXXXXXXXXXXXXXXX0
       13K  XXX0X00X00XX000X00X00XX00X0000X000000000XXX00000000000XX00X000000X000XX0X0XXX0XXXXXXXXXX0XXXXXXXX0
       13L  XXX0X0XX00XX000XX0X00XX0XXX00XX000000000XXXX000000000000XXX0XX0XX0X0X0000X0X0XXX000XXXXXXXXXXXXXXXXX0
       13M  XXX0X0XX00XXX00000X00XX0XX0000X000000000X0X000000000000XX000000X0X0X000XX0X0XXX0XXXXXXXXXXXXXXXXXXX0
       13N  XX00X00X00XX000000X00XX000000000000000000X0X000000000000XX000000000000000000X0XXX0XXXXXXXXXXXXXXXXXXX0
05     14   X00X0XX00X00XXX0XX0XX00XX000000000000000000X00X0XXXXXXX0000X00XXXX000000000000000000000000000000000000
       14A  X00X00X00X000XX0XX00000XX000000000000000000X00X0XXXXXXX0000X00XXX0X000000000000000000000000000000000X0
       14B  X00X0XX00X000XX0XX0XX00XX000000000000000000X0X0XXXXXXX0000X00XXX0X000000000000000000000000000000000XX0
       14C  X0000XX00X000XX0X00XX00XX000000000000000000000XXXXXXX0000X00XXXX000000000000000000000000000000000XXX0
       14D  X00000X00X000XX0X000000XX000000000000000000000X0XXXXX0000000XXX0X000000000000000000000000000000000XXXX0
10     14E  X0000XX00X000XX0X00XX00XX000000000000000000000X0XXXXX0000000XXXX000000000000000000000000000000000XXXXX0
       14F  X00000X00X000XX0X000000XX000000000000000000000X0XXX0XX0000000XXXX000000000000000000000000000000000XXXXXX0
       14G  X00000X00X00XXX0X000000XX000000000000000000000X0XXX0XX0000000XXXX000000000000000000000000000000000XXXXXXX0

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344445555566666666777777789999111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
                5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
```

```
A                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
5450 - 5480      5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
  (REG. 2)
         VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777789999111111111111111111111111111111111111111111111
         ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
         FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
         IRRDTACMTA

     VAFI 0
     VCAR X0
     VEUR XX0
     VMID XXX0
05   VNAT XXXX0
     VNCA XXXXX0
     VPAC XXXXXX0
     VSAM XXXXXXX0
     VSAT 000000000
10   VSEA X0XX0XX000
     AFI  XXXXXXXX0X0
     CAR  XXX0XXXX00X0
     CEP  0XX0XXXX0X0X0
     CWP  XXXX0XXX0X0XX0
15   EA   X0XX0XX00XX0XX0
     EUR  XXXXXXXX0XXX0XX0
     INO  XXXX0XXX0XX0XXXX0
     MID  XXXXXXXX0XX00XXXX0
     NAT  XXXXXXXX0XXXXXXXX0
20   NCA  XXXXXXXX0XX0XXXXXX0
     NP   XXXXXXXX0X0XXXXXXXX0
     SAM  XXX0X0XX0XXXXX0X00X0X0
     SAT  XXXXXXXX0XXXX0XXXXX0X0
     SEA  X0XX0XX00XX0XXXXX0XX000
25   SP   XX00XXXX0X0XXXX0X0XXXXX0
     1    XXXXXXXX0XXX00XXXXXXXXX00
     1A   XXXXXXXX0XXX000XXXXXXX00X0
     1B   XXXXXXXX0XXX00XXXXXX0XX0XX0
     1C   XXXXXXXX0XXX00XXXXXX0XX0XXX0
30   1D   XXXXXXXX0XX000XXXXX00XX0XXX0
     1E   XXXXXXXX0XXX00XXXXX0XXX0XXXX0
     2    XXXXXXXX0XX00XXXXXXX0XX0X0XXX0
     2A   XXXXXXXX0XX00XXXXXXX0XX0X0XXX0
     2B   XXXXXXXX0XX00XXXXXXX0XX0X000X0XX0
35   2C   XXXXXXXX0XX00XXXXXXX0XX0X0XXXXXX0
     3    XXXXXXX00XX0XXXXXXXX0XX000000XXXX0
     3A   X0XXXXX00XX00XXXXXXX0XX000000XXXX0
     3B   XXXXXX00X00XXXXXXXX00XX000000XXX0XX0
     3C   X0XXXXX00XX0XXXXXXXX00XX000000X0X0XXX0
40   4    XXXXXXXX0XXX00XXXXXX0XXX0XXXXXX00X00000
     4A   XXXXXXXX0XXX00XXXXXX0XXX0XXXXXX00X0000X0
     4B   XXXXXX0X0XXX00XXXXXX0XXX0X0000X00000000XX0
     5    XXXXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000XXX0
     5A   XXXXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000XXXX0
45   5B   XXXXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000000XX0
     5C   X0XXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000000XXX0
     5D   XXXXXXXX0XX000XXXXX00XX0X000X000000000XXXXXX0
     6    X0XXXXX00XX0XXXXX0XXXXX000000X0X0XXXX000XXXX00
     6A   X0XX0XX00XX00XXXXX0XX00X000000X0XX000000XXXX0X0
50   6B   X0000XX00X00XXX0XX0XXX0XX000000000X0XX00000000X00
     6C   X0000XX00X00XXX0XX0XXX0XX000000000000000000000X0X0
     6D   X0XX0XX00XX00XXXXX0XX00XX000000000000000000000XXXX0
     6E   X0XX0XX00XX00XXXXX0XX0XX000000000000000000X0XX0XX00X0
     6F   X0XX0XX00XX0XXXXXX0XX00XX000000000000X0XX00000000XXXXX0
55   6G   X0XX0XX00XX00XXXXXXX00X000000000X0X0XXXX000X0X00XXXXXXX0
     7    XXXXXXX0XXX00XXXXXX0XXXX000000000000000XXXXX0XXX0000X000
     7A   XXXXXXXX0XXX00XXXXXX0XXXX000000000000000X0X000000000000X0
     7B   XXXXXXXX0XX000XXXXXX0XXX000000000000000XXXX000X000000000XX0
     7C   X0XX0XXX0XX000XXXXXX00XX000000000000000XXXXX0XX000000000X0X0
60   7D   XXXX0XXX0XX000XXXX0X00XX000000000000000000X00XX000000000XXXX0
     7E   XXXXXXXX0XX000XXXXXX0XXX000000000000000X0XX000X000000000XXXXX0
     7F   00000000000000000000000000000000000000000000000000000000000000000
     8    X0XX0XXX0XX00XXXXX0XX0XXX000000000000000000X00XXX00XXXX0XX0XX000
     9    XX00XXXX0X0XXXX0X0XXXXXX000000000000000000000X00XX000000000000X0
65   9B   XX00XXXX0X0XXXX0X00XXX0XX000000000000000000000X00XX000000000000X0
     9C   XX00XXXX0X0XXX00X0X0XX0XX000000000000000000000000000000000000XXX0
     9D   XX0000XX0X00XXX0X0000XXXX000000000000000000000000000000000000XXXX0
     10   XXXXXXXX0XXXXXXX0XXXXXXXXXX000000000X0X000000000X0X000000000000000
     10A  0X00XXXX0X0XXXX000XXXX0XX000000000000X0X000000000X0X000000000000000000X0
70   10B  0XX0XXXX0XXXXX0000XXXXX0X000000000000000000000000000000000000000000XX0
     10C  0XX0XXXX0XXXXX0000XXXXX0X000000000000000000000000000000000000000000XXX0
     10D  XXX0XXXX00XXX00X00X0XXX0X000000000000000000000000000000000000000000X0XX0
     10E  XXXXXXXX00XXX00X0XXXXXX00XXX00X000000000000000000000000000000000000X000X0
     10F  00X000000000000000X000000000000000000000000000000000000000000000000X000XX0
75   11   XXX0XXXX0XXXXXX00XXXXXXXX000X0000X0XXXXX00000X0XX000000000000000XXXXXX00
     11A  0XX0XXXX0X0XXXX000XXXX0XX000000000000X0XX000000000X0XX000000000000000000XXXX000X0
     11B  XXX0XXXX0XXXXX0X00XXXXX0X0X000000000000000000000000000000000000000000XXXXXX0XX0
     11C  XXX0XXXX00XXX00X00X0XXX00XX000X000000000XXX000000000000000000000000000X000XX0X0X0
     12   XXX0XXXX0XXXXXX00XXXXXXXX000X000000000XXX00000XX000000000000000XXXX0
80   12A  0X000XXX0X0XXXX000XXXX0XX000000000000000000000000X0XX000000000000XXX000000000XX00X0
     12B  XXX0XXXX0X0XXX0000XXXXX0X000000000000000000000000000000000000000000XXX000000000XXX0XX0
     12C  XXX0XXXX0XXXX0000X0XXX0X000000000000000000000000000000000000000000000000000XXX0X0X0
     12D  XXX0X0XX00XXX00X00X0XXX0X000000000000000000000000000000000000000000000000000X0XXX0XX0
     12E  XXX0X0XX00XXX00000X0XXX0X000000000000000000000000000000000000000000000000000X0X0X0XXX0
85   12F  XXX0X0XX00XXX00000X0XXX0X000000000000000000000000000000000000000000000000000X0XXX00
     12G  XXX0X0XX00XXX00X00X0XXX000000000000000000000000000000000000000000000000000000X000XXX0
     12H  XXX0X0XX00XXX00X00X00XX000000000000000000000000000000000000000000000000000000X000XXXX0
     12I  XXX0XXXX00XXX00X00XXXX00X0000X000000000XXX000000000000000XX000000000000000000X0XXX000X0XXX0
     12J  XXX0X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000000000000000X0X0XXXXX00
90   13   XXX0X0XX00XXXX0XX0X00XX0X000000000000000X000000000000000XX00000XX0XX000000000000X0X0XXXXXXX0
     13A  XX00X0XX000XXX00X0X00XX0X000000000000000000000000000000000000000XX0X000000000000X0X00XX0X0XX0
     13B  0X00X0XX000XXX000000000XX0X000000000000000000000X0X000000000000000000000000000000XX0
     13C  XXX0X0XX00XXX00X00X00XX000000000000000000000000000000000000000000000000000000000X000XXXXXXXX00
     13D  XXX0X0XX00XXX00000X00XX000000000000000000000000000000000000000000000000000000000000X0000XXXX0XXX0X0
95   13E  XX00X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000000000000000000000000XXX0X0
     13F  XX00X0XX000X0000X0X00XX0X000000000000000000000000000000000XX00000X00X000000000000000000000000XX00XX0
     13G  XXX0X0XX00XX000000X00XX0X000000000000000000000000000000000000000000000000000000000000000000000XX0XXXX0
     13H  XX00X0XX00XX0000X0X00XX0X000000000000000000000000000000000000000000000000X000000000000000000000000XX00XXXX0
     13I  XX00X0XX00XX000000X00XX000000000000000000000000000000000000000000000000000000000000000000000000X000XXXXX0
00   13J  XXX0X0XX00XX000000X00XX000000000000000000000000000000000000000000000000000000000000000000000000X00XX00X0X0
     13K  XXX0X0XX00XX000X00X00XX000000000000000000000000000000000000000000000000000000000000000000000000X000000XXX0X00XX00X0XX0
     13L  XXX0X0XX00XX000XX0X00XX0X000000000000000X000000000000000XX000000000000000000000000000000000000000000XXXXXX0
     13M  XXX0X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000000000000000000000X0X0XXXXX0XXX0XXX0X00X000
     13N  XXX0X0XX00XX000000X00XX000000000000000000000000000000000000000000000000000000000000000000000000000000X00XXXXXXXXXX0
05   14   X00X0XX00XX0XXX0XX0XX00XX000000000000000000000000X00XX0X000000000XXX0X000000000000000000000000000000000000000
     14A  X00X00X00XX00XX0XX0000XXX000000000000000000000X00XX0X000000000X000000000000000000000000000000000000000000X0
     14B  X00X0XX00X000XX0XX0XX00XX000000000000000000000000X00XX0X000000000XXX000000000000000000000000000000000000000XX0
     14C  X0000XX00X000XX0X00XX00XX000000000000000000000000X00X000000000000XX000000000000000000000000000000000000000XXX0
     14D  X00000X00X000XX0X000000XX000000000000000000000000X00X000000000000X000000000000000000000000000000000000000000XXXX0
10   14E  X0000XX00X00XXX0X00XX00XX000000000000000000000000X00X000000000000XX0X000000000000000000000000000000000000000XXXXX0
     14F  X00000X00X000XX0X000000XX000000000000000000000000X00X000000000000XX0X000000000000000000000000000000000000000000XXXXXX0
     14G  X00000X00X00XXX0X000000XX000000000000000000000000000000000000000000XXX0X000000000000000000000000000000000000000000XXXXXXX0

         VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777789999111111111111111111111111111111111111111111111
         ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
         FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
         IRRDTACMTA

           0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
           5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
```

```
A                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
5480 - 5680      5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

        VAFI 0
        VCAR X0
        VEUR XX0
        VMID XXX0
05      VNAT XXXX0
        VNCA XXXXX0
        VPAC XXXXXX0
        VSAM XXXXXXX0
        VSAT 000000000
10      VSEA X0XX0XX000
        AFI  XXXXXXXX0X0
        CAR  XXX0XXXX00X0
        CEP  0XX0XXXX0X0X0
        CWP  XXXX0XXX0X0XX0
15      EA   X0XX0XX00XX0XX0
        EUR  XXXXXXXX0XXX0XX0
        INO  XXXX0XXX0XX0XXXX0
        MID  XXXXXXXX0XX00XXXX0
        NAT  XXXXXXXX0XXXXXXXXX0
20      NCA  XXXXXXXX0XX0XXXXXXX0
        NP   XXXXXXXX0X0XXXXXXXXX0
        SAM  XXX0X0XX0XXXXX0X00X0X0
        SAT  XXXXXXXX0XXXX0XXXXX0X0
        SEA  X0XX0XX00XX0XXXXX0XX000
25      SP   XX00XXXX0X0XXXX0X0XXXXXX0
        1    XXXXXXXX0XXX00XXXXXXXXX00
        1A   XXXXXXXX0XXX000XXXXXXXX00X0
        1B   XXXXXXXX0XXX00XXXXXXX0XX0XX0
        1C   XXXXXXXX0XXX00XXXXXXX0XX0XXX0
30      1D   XXXXXXXX0XX000XXXXXX00XX0XXXX0
        1E   XXXXXXXX0XXX00XXXXXX0XXX0XXXXX0
        2    XXXXXXXX0XX00XXXXXXXX0XX0X0XXXX0
        2A   XXXXXXXX0XX00XXXXXXXX0XX0X0XXXXX0
        2B   XXXXXXXX0XX00XXXXXXXX0XX0X000X0XX0
35      2C   XXXXXXXX0XX00XXXXXXXX0XX0X0XXXXXXX0
        3    XXXXXXX00XX0XXXXXXXX0XX000000XXXX0
        3A   X0XXXXX00XX00XXXXXXX0XX0000000XXXXX0
        3B   XXXXXXX00X00XXXXXXXX00XX000000XXX0XX0
        3C   X0XXXXX00XX0XXXXXXXX00XX000000X0X0XXX0
40      4    XXXXXXXX0XXX00XXXXXX0XXX0XXXXXX00X00000
        4A   XXXXXXXX0XXX00XXXXXX0XXX0XXXXXX00X0000X0
        4B   XXXXXX0X0XXX00XXXXXX0XXX0X0000X00000000XX0
        5    XXXXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000XXX0
        5A   XXXXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000XXXX0
45      5B   XXXXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000000XX0
        5C   X0XXXXXX0XX00XXXXXXX0XX0X000X0X0XX0000000XXX0
        5D   XXXXXXXX0XX000XXXXXX00XX0X000X000000000XXXXXX0
        6    X0XXXXX00XX0XXXXXX0XXXXX000000X0X0XXX000XXXX00
        6A   X0XX0XX00XX00XXXX0XX00X0000000X0XX0000000XXXX0X0
50      6B   X0000XX00X00XXX0XX0XXX0XX000000000X0XX00000000X00
        6C   X0000XX00X00XXX0XX0XXX0XX00000000000000000000000X0X0
        6D   X0XX0XX00XX00XXXX0XX00XX000000000000000000000000XXXX0
        6E   X0XX0XX00XX00XXXX0XX0XX000000000000000000000X0XX0XX00X0
        6F   X0XX0XX00XX0XXXXX0XX00XX000000000000X0XX00000000XXXXXX0
55      6G   X0XX0XX00XX00XXXXXXX00X0000000X0X0XXXX000X0X00XXXXXXX0
        7    XXXXXXXX0XXX00XXXXX0XXXX000000000000000XXXXX0XXX0000X000
        7A   XXXXXXXX0XXX00XXXXX0XXXX000000000000000X0X000000000000000X0
        7B   XXXXXXXX0XX000XXXXX0XXX000000000000000XXXX000X000000000XX0
        7C   X0XX0XXX0XX000XXXXX00XX000000000000000XXXXX0XX000000000X0X0
60      7D   XXXX0XXX0XX000XXXX0X00XX000000000000000X00XX000000000XXXX0
        7E   XXXXXXXX0XX000XXXXX0XXX000000000000000X0XX000X000000000XXXXX0
        7F   0000000000000000000000000000000000000000000000000000000000000000
        8    X0XX0XXX0XX00XXXXX0XX0XXX000000000000000000X00XXX00XXXX0XX0XX000
        9    XX00XXXX0X0XXXX0X0XXXXXXX000000000000000000000000X00XX000000000000X0
65      9B   XX00XXXX0X0XXXX0X00XXX0XX000000000000000000000000X00XX000000000000X0
        9C   XX00XXXX0X0XXX00X0X0XX0XX000000000000000000000000000000000000000XXX0
        9D   XX0000XX0X00XX0X0000XXXX000000000000000000000000000000000000000XXXX0
        10   XXXXXXXX0XXXXXX0XXXXXXXXXX0000000X0X000000000X0X000000000000000000
        10A  0X00XXXX0X0XXXX000XXXX0XX000000000000X0X000000000X0X000000000000000000X0
70      10B  0XX0XXXX0XXXXX0000XXXXX0X000000000000000000000000000000000000000000XX0
        10C  0XX0XXXX0XXXXX0000XXXXX0X000000000000000000000000000000000000000000XXX0
        10D  XXX0XXXX00XXX00X00X0XXX0X000000000000000000000000000000000000000000X0XX0
        10E  XXXXXXXX00XXX00X0XXXXX00XXX00X000000000000000000000000000000000000X000X0
        10F  00X000000000000000X000000000000000000000000000000000000000000000000X000XX0
75      11   XXX0XXXX0XXXXXX00XXXXXXXX000X0000X0XXXX00000X0XX000000000000000XXXXXX00
        11A  0XX0XXXX0X0XXXX000XXXX0XX000000000000X0XX000000000X0XX000000000000000XXXX000X0
        11B  XXX0XXXX0XXXXX0X00XXXXX0X0X000000000000000000000000000000000000000XXXXX0XXX0
        11C  XXX0XXXX00XXX00X00X0XXX00XX000X000000000XXX000000000000000000000000X000XX0X0X0
        12   XXX0XXXX0XXXXXX00XXXXXXXX000X000000000XXX00000X0XX0000XX000000XXX000000000XXXX0
80      12A  0X000XXX0X0XXXX000XXXX0XX000000000000000000000000X0XX000000000000XXX000000000XX00X0
        12B  XXX0XXXX0X0XXX0000XXXXX0X000000000000000000000000000000000000000XXX000000000XXX0XX0
        12C  XXX0XXXX0XXXXX0000X0XXX0X000000000000000000000000000000000000000000000000000XXX0X0X0
        12D  XXX0X0XX00XXX00X00X0XXX0X000000000000000000000000000000000000000000000000X0XXXX0XX0
        12E  XXX0X0XX00XXX00000X0XXX0X000000000000000000000000000000000000000000000000X0X0X0XXX0
85      12F  XXX0X0XX00XXX00000X0XXX0X000000000000000000000000000000000000000000000000000X0XXXX00
        12G  XXX0X0XX00XXX00X00X0XXX000000000000000000000000000000000000000000000000000000X000XXX0
        12H  XXX0X0XX00XXX00X00X00XX000000000000000000000000000000000000000000000000000000X000XXXX0
        12I  XXX0XXXX00XXX00X00XXXXX00X0000X000000000XXX000000000000000XX000000000000000000X0XXX000X0XXXX0
        12J  XXX0X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000000000000000X0X0XXXXXX00
90      13   XXX0X0XX00XXXX0XX0X00XX0X000000000000000X000000000000000XX00000XX0XX000000000000X0X0XXXXXXX0
        13A  XX00X0XX000XXX00X0X00XX0X000000000000000000000000000000000000000XX0X000000000000X0X00XX0X0XX0
        13B  0X00X0XX000XXX0000000XX0X000000000000000000000000000000000000000000X0X000000000000000000000XX0
        13C  XXX0X0XX00XXX00X00X00XX000000000000000000000000000000000000000000000000000000000000X000XXXXXXXX00
        13D  XXX0X0XX00XXX00000X00XX000000000000000000000000000000000000000000000000000000000000X0000XXX0XXX0X0
95      13E  XX00X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000000000000000000000000000XX0XX0
        13F  XX00X0XX000X0000X0X00XX0X000000000000000000000000000000000XX00000X00X000000000000000000000000XX00XX0
        13G  XXX0X0XX00XX000000X00XX0X000000000000000000000000000000000000000000000000000000000000000000XX0XXXX0
        13H  XX00X0XX00XX0000X0X00XX0X000000000000000000000000000000000000000000X000000000000000000000000XX00XXXX0
        13I  XX00X0XX00XX000000X00XX000000000000000000000000000000000000000000000000000000000000000000000X000XXXXX0
00      13J  XXX0X0XX00XX000000X00XX000000000000000000000000000000000000000000000000000000000000000000000000X00XX00X0X0
        13K  XXX0X0XX00XX000X00X00XX000000000000000000000000000000000000000000000000000000000000000000000XX0XX00XX00X0XX0
        13L  XXX0X0XX00XX000XX0X00XX0X000000000000000X000000000000000XX000000000000000000000000000000000000000000XXXXXX0
        13M  XXX0X0XX00XXX00000X00XX0X000000000000000000000000000000000000000000000000000000000000000000000X0XXXXX0XXX0XXX0X00X000
        13N  XXX0X0XX00XX000000X00XX000000000000000000000000000000000000000000000000000000000000000000000000000000000X00XXXXXXXXXXX0
05      14   X00X0XX00XX0XXX0XX0XX00XX000000000000000000000000000X00XX0X000000000XXX0X000000000000000000000000000000000000000
        14A  X00X00X00XX00XX0XX0000XXX000000000000000000000000000X00XX0X000000000X000000000000000000000000000000000000000000X0
        14B  X00X0XX00X000XX0XX0XX00XX000000000000000000000000000X00XX0X000000000XXX000000000000000000000000000000000000000XX0
        14C  X0000XX00X000XX0X00XX00XX000000000000000000000000000X00X000000000000XX000000000000000000000000000000000000000XXX0
        14D  X00000X00X000XX0X000000XX000000000000000000000000000X00X000000000000X000000000000000000000000000000000000000XXXX0
10      14E  X0000XX00X00XXX0X00XX00XX000000000000000000000000000X00X000000000000XX0X000000000000000000000000000000000000XXXXX0
        14F  X00000X00X000XX0X000000XX000000000000000000000000000X00X000000000000XX0X000000000000000000000000000000000000XXXXXX0
        14G  X00000X00X00XXX0X000000XX000000000000000000000000000000000000000000XXX0X000000000000000000000000000000000000XXXXXXX0

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
                5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
```

```
A                0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
 6525- 6685      5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344445555566666666777777789999111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                          ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

        VAFI 0
        VCAR X0
        VEUR XX0
        VMID XXX0
05      VNAT XXXX0
        VNCA XXXXX0
        VPAC XXXXXX0
        VSAM XXXXXXX0
        VSAT 000000000
10      VSEA XXXXXXX000
        AFI  XXXXXXXX0X0
        CAR  XXX0XXXX0XX0
        CEP  0XX0XXXX0X0X0
        CWP  XXXX0XXX0X0XX0
15      EA   X0XXXXX00XX0XX0
        EUR  XXXXXXXX0XXX0XX0
        INO  XXXXXXXX0XX0XXXX0
        MID  XXXXXXXX0XX00XXXX0
        NAT  XXXXXXXX0XXXXXXXX0
20      NCA  XXXXXXXX0XX0XXXXXXX0
        NP   XXXXXXXX0X0XXXXXXXX0
        SAM  XXX0XXXX0XXXXX0X00X0X0
        SAT  XXXXXXXX0XXXX0XXXXXX0X0
        SEA  X0XX0XXX0XX0XXXXXXXXX0X0
25      SP   XX00XXXX0X0XXXX0X00XXXXX0
        1    XXX0XX0X0XXX000XXXXX00X00X
        1A   0XX0X00X00XX000X00X000X00XX
        1B   XXXXXX0X00X0000X00XX00X00XXX
        1C   X0X0XX000XX0000X0XXX00X00XXXX
30      1D   X0X00X0X0XX0000XXXX00X00XXXXX
        1E   XXXXXX0X00X0000X00XX00X00XXXXXX
        2    X0XX0XX00XX000XXXXXX000X0X0XXXX0
        2A   X0XX0X000X0000XX0XXX00000X0XXXXXX
        2B   X0XX0XX00XX000XXXX0X000X0X000X0XXX
35      2C   X0XX0X000XX000XXXXXX00000X0XXXXXXX
        3    00XX0XX00X000XXXXXXX0000000000XXXX0
        3A   00XX0XX00X0000XX0XXXX0000000000XXXX0
        3B   00000XX00X000XX0000XX000000000XXX0XX0
        3C   000X0XX00X000XX0XX0XX000000000XXX0XXX
40      4    XXXXXX0X00X0000XXXX0XX00XXXXXX00X00000
        4A   XXXXXX0X00X0000XXXX00X00XXXXXX00X0000X0
        4B   XXX0X00X00X00000X0X00XX00X0000X000000XX0
        5    X0XX0XX00XX000XXXX0X000X0X000X0X0XX0000XXX0
        5A   X0XX0X000XX000XXXX0X000X0X000X0X0XX0000XX0X0
45      5B   X0XX0XX00XX000XXXX0X000X0X000X0X0XX0000XXXX0
        5C   X0XX0XX00XX000X0XX0X000X0X000X0X0XX000000XXX0
        5D   X0XX0X000XX000XXXX0X000X0X000X000000000XXXXXX0
        6    X00X0XX00XX00XX0XX0XX00XX000000X0XXXXX000XXXX00
        6A   X00X0XX00XX000X0XX0X000X0000000X0XX0000000XXXX0X0
50      6B   00000XX00X000XX0000XX00X000000000X0XX00000000X00
        6C   X0000XX00X000XX0X00XX00XX00000000000000000000X0X0
        6D   X00X0XX00X000XX0XX0XX00X000000000000X000000000XXXX0
        6E   X00X0XX00XX00XX0XX0X000X000000000000000000X0XX0XX00X0
        6F   X00X0XX00X000XX0XX0XX00X000000000000X0XX000000000XXXXX0
55      6G   X00X0XX00X000XX0XX0XX00X000000000X0X0XXX000X0XX0XXXXXXX0
        7    XXXXX00X0XX00000XX000XX000000000000000XXXXX0XXX0000X00X
        7A   XX00X00X00X00000X0000XX000000000000000X0X000000000000X0
        7B   X0X0000X00X00000XX0000X000000000000000XXXXX00X000000000XX0
        7C   X0XX00000XX00000XX0000X000000000000000XXXXX0XXX0000X00X0X0
60      7D   X000000000XX00000X00000X000000000000000X00XX000000000XXXX0
        7E   X000000X00X00000X00000X000000000000000X0XX000X000000000XXXXX0
        7F   X0000000000X00000X00000X000000000000000X000000000000000XXXX0XX
        8    X00000X00XX000X0XX00000X000000000000000000X00XXX00XXXX0XXXXXXX0
        9    0X0000XX0X00XXX0X0000X0XX000000000000000000000000X00XX0X0000000000
65      9B   000000X00X00XXX000000000XX000000000000000000000000X00XX0X0000000000X0
        9C   0X0000XX0X00XX0000000X00X000000000000000000000000X00X000000000000XX0
        9D   000000X00X000000X000000XX000000000000000000000000000000000000000XXX0
        10   0XX0XXXX0XXXXX0000XXX0000XXX0XX0000X0XXX0000000X0X0000000000000000
        10A  0X0000X00X00XX0000XXX000000000000000X0XX000000000X0X0000000000000000X0
70      10B  0X00XXXX000XX00000XXX000000000000000000000000000000000000000000000XX0
        10C  0X00X0XX000XX00000X0X000000000000000000000000000000000000000000000XXX0
        10D  0XX0X0XX000XX00000X0X000000000000000000000000000000000000000000000X0XX0
        10E  0XX0X00000XX000000X000000XXX0XX000000000X000000000000000000000000000X000X0
        10F  00X0X00X000000000X000000XXX000000000000000000000000000000000000X00XXX0
75      11   XXX0XXXX0XXXXX0000XXXXX0XXX000X0000X0XXXX00000X0XX00X000000000000XXXXXX00
        11A  0X000XXX0X0XXX0000XXX000X000000000X0XX000000000X0XX00X000000000000XXXX000X0
        11B  0XX0X0XX000XX00000X0XXX000000000000000000000000000000000000000000XXXXXX0XX0
        11C  XXX0X00X00XX000000X00XX00XX000X000000000XXX000000000000000000000000X000XX0X0X0
        12   XXX0XXXX0XXXXX0000X0XXX0XX000000000000000XXX00000X0XX0000XX000000XXX000000000XXXX0
80      12A  00000XX00X00XX000000X000X000000000000000000000X0XX000000000000XXX000000000XX00X0
        12B  0X0000XX000XXX0000X0XX00X000000000000000000000000000000000000XXX0000000XXX0XX0
        12C  0X00X0XX000XX0000000XX00X000000000000000000000000000000000000000000000000XXX0X0X0
        12D  0X00X00X000X000000X00XX000000000000000000000000000000000000000000000000X0XXX0XX0
        12E  0X00X0XX000XX00000X00XX000000000000000000000000000000000000000000000000000X0X0X0XXX0
85      12F  0X00X00X000X000000X00XX000000000000000000000000000000000000000000000000000X0X0X0XXXX0
        12G  0X00X00X000X000000X00XX000000000000000000000000000000000000000000000000000X0XXX000XXX0
        12H  XX00X00X00XX000000X00XX000000000000000000000000000000000000000000000000000000X000XXXX0
        12I  XXX0X00X00XX000000X00XX00X0000X000000000XXX000000000000000X0XXX000X0XXX0
        12J  0X00X00X000X000000000X000000000000000000000000000000000000000000000000000X0X0XXXXX00
90      13   XX00X0XX00XXX00000X00XX0X000000000000000X000000000000000XX000000X0X000000000000X0X0XXXXXXX0
        13A  XX00X0XX000XX000000000XX0X000000000000000000000000000000000000000X0X000000000000X0X00XX0X0XX0
        13B  0X0000XX000000000000000X00X000000000000000000000000000000000000000X0X000000000000000000000000XX0
        13C  XX00X00X00XX000000X00XX000000000000000000000000000000000000000000000000000000000000X000XXXXXXXX00
        13D  XX00X00X000X000000000000XX000000000000000000000000000000000000000000000000000000000000X0000XXXX0XXX0X0
95      13E  0X00000X000000000000000XX000000000000000000000000000000000000000000000000000000000000000000000XX0XX0
        13F  XX0000XX000000000000000XX000000000000000000000000000000000000000000000000000000000000000000000XX00XX0
        136  0X00000X000000000000000XX000000000000000000000000000000000000000000000000000000000000000000000000XX0XXXX0
        13H  XX00000X000000000000000XX000000000000000000000000000000000000000000000000000000000000000000000000XX00XXXX0
        13I  XX00000X000000000000000XX000000000000000000000000000000000000000000000000000000000000000000000000000X000XXXXX0
00      13J  XX00X00X000X000000000000XX000000000000000000000000000000000000000000000000000000000000000000000000000X00XXXXXXX0
        13K  XX00X00X00XX000000X00XX000000000000000X000000000000000000000000000000000000000000000000000X000X00XXX0X00XX00X0XX0
        13L  XX00X00X00X000000000000XX000000000000000000X000000000000000X000000000000000000000000000000000000000000000000000000
        13M  0X00X00X000X000000000000XX000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
        13N  XX00000X000000000000000XX000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
05      14   X00000X00X0000X0X000000XX000000000000000000000000X00XX0X000000000XXX0X000000000000000000000000000000000000000000
        14A  X00000X00X000000X000000X000000000000000000000000X00XX0X000000000X000000000000000000000000000000000000000000000X0
        14B  X00000X00X0000X0X000000X000000000000000000000000X00XX0X000000000XXX000000000000000000000000000000000000000000XX0
        14C  000000X00X0000X0X000000XX000000000000000000000000X00XX000000000000XX000000000000000000000000000000000000000000XXX0
        14D  X00000X00X000000X000000XX000000000000000000000000X00XX000000000000000000000000000000000000000000000000000000000XXX0
10      14E  000000X00X0000X0X000000XX000000000000000000000000X00XX000000000000XX0X000000000000000000000000000000000000000000XXXXX0
        14F  000000X00X000000X000000XX000000000000000000000000X00XX000000000000XX0X000000000000000000000000000000000000000000XXXXXX0
        146  000000X00X000000X000000XX000000000000000000000000000000000000000000XX0X000000000000000000000000000000000000000000XXXXXXX0

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344445555566666666777777789999111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                          ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

                0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
                5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5
```

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A                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
 8815- 8965      5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5

                VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111
                ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
                FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                IRRDTACMTA

        VAFI O
        VCAR XO
        VEUR XXO
        VMID XOXO
05      VNAT XXXXO
        VNCA XOXXXO
        VPAC XXXXXXO
        VSAM XXXXXXXO
        VSAT 000000000
10      VSEA XOXXOXXOOO
        AFI  XXXXXXXXOXO
        CAR  XXXOXOXXOOXO
        CEP  OXOOXXXXOXOXO
        CWP  XOOXOXXOOXOOXO
15      EA   XOXXOXXOOXXOOXO
        EUR  XXXXXXXXOXXOOOXO
        INO  XOXXOXXXOXXOOXXXO
        MID  XOXXXXXXOXXOOXXXXO
        NAT  XXXXXXXXOXXXXOOXOXO
20      NCA  XOXXXXXXOXXOOXXXXXOO
        NP   OXXXXXXXOXOXXXXOXXXXO
        SAM  XXXOXOXXOOXXXOOOOXOOO
        SAT  XXXXXXXXOOXXOOOXXXXXOXO
        SEA  XOXXOXXOOXXOOXXXXXOXXOOO
25      SP   OXOOOXXXOXOXXXXOXOOOXXXXO
        1    XXXXXXOXOXXXOOXXXXXXOOXXOO
        1A   OOOOOOOOOOOOOOOOOOOOOOOOOOO
        1B   XXXXXXOXOXXOOOOXOXXXOOXOOXOO
        1C   XOXXXXOXOXXOOOOXXXXXOOXOOXOXO
30      1D   XXXXXXOXOXXOOOXXXXXXOOXXOXOXXO
        1E   XXXXXXOXOXXXOOOXXXXXOOXOOXOXXXO
        2    XOXXXXXXOXXOOXXXXXXXXOXXOXOXXXXO
        2A   XOXXXXXXOXXOOOXXXXXXXOXXOXOXXXXXO
        2B   XOXXOXXOOXXOOXXXXXXXXOOXOXOXXXOXXO
35      2C   XOXXXXXXOXXOOOXXXXXXOOXXOXOXXXXXXXO
        3    XOXXXXXOOXXOXXXXXXXXOOXOXOXXXOXXXXO
        3A   XOXXXXXOOXXOOXXXXXXXOOXOXOXXXOXXXXXO
        3B   OOOXXXXOOXOOOXXOOXXXXOOXOOOOXOOXXXXXXO
        3C   OOOXOXXOOXXOOXXXXXOXXOOXOXOOXOOXXXXXXXO
40      4    XXXXXXOXOXXXOOOXXXXXOXXOOXOXXXXXXXXOOOOO
        4A   XXXXXXOXOXXXOOOXXXXXOXXOOXOXXXXXXXXOOOOXO
        4B   XXXXXXOXOXXXOOOXXXXXOXXOOXOOOXXOOOOOOOOXXO
        5    XOXXOXXXOXXOOOXXXXXXXOXXOXOXXXXXXXXXXXXXXO
        5A   XOXXOXXXOXXOOOXXXXXXOOXXOXOXXXXXXXXXXOOXXXXO
45      5B   XOXXOXXOOXXOOOXXXXXXXOXXOXOXXXXXXXXXXXXXXXXO
        5C   XOXXOXXOOXXOOOXXXXOXOOOXOXOOOXOXXXXXXOXXXXXXO
        5D   XOXXOXXXOXXOOOXXXXXXOOXXOXOXXXXXXXXOOOOXXXXXXO
        6    XOXXOXXOOXXOXXXXXXOXXOOXXXOOOXOXXXXXXXXXXOXXXXXO
        6A   XOXXOXXOOXXOOXXXXXOXXOOXOXOOOXOXXXXXXXXXXXOXXXXXO
50      6B   XOOOOXXOOXOOXXXOXXOXXOOXXOOOOOOXOXOXXXXOOOOOOOXXO
        6C   XOOOOXXOOXOOXXXOXOOXXOOXXOOOOOOOOOOXOXXOOOOOOOXXXO
        6D   XOOXOXXOOXOOOXXOXXOXXOOXOOOOOOOXOXOXXOXOOOXOXXXXXXO
        6E   XOXXOXXOOXXOOXXOXXOXXOOXOXOOOXOXOXXXXOXOOOXXXXXXXXXO
        6F   XOOXOXXOOXOOOXXOXXOXXOOXOOOOOOOXOXOXXXXOOOXOXXXXXXXXO
55      6G   XOXXOXXOOXXOOXXXXXOXXOOXOXOOOXOXXXXXXXXOOOXXXXOXXXXXXO
        7    XXXXXXXXOXXXOOXXXXXXOXXXXOOOXOOOOOOOOOXXXXXXXXXXOOOXXOO
        7A   XXXOXOOXOXXXOOOOXOXOOXXOXOOOOOOOOOOOOOOXXXXOOOXOOOOOOOXO
        7B   XXXXOXOXOXXOOOOXXXXXOOXOOXOOOXOOOOOOOOOXXXXXXXXXOOOOOOOXXO
        7C   XOXXOXXOOXXOOOXXXXOXOOXXOXOOOXOOOOOOOOOXXXXXXXXXXOOOXXOXXXO
60      7D   XOXXOOOOOXXOOOXOXXOOOOXXOOOOOOOOOOOOOOOXXXXXXXXXOOOOXOXXXXO
        7E   XOXXOOOXOXXOOOOOXXOOOOXOOOOOOOOOOOOOOOOXXXXXOXXOOOOOOOXXXXXO
        7F   OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
        8    XOXXOOXXOXXOOXXOXXOOOOXXXOOOOOOOOOOOOOOXOXXXXXXXXOXXXXXXXXXXOO
        9    XXOOXOXXOXOXXXXOXOOOXXXXXOOOOOOOOOOOOOOOOOOOOOXOXXXOXXOXOOOOOXO
65      9B   OOOOOOXOOXOOXXXOXOOOOXOXXOOOOOOOOOOOOOOOOOOOOXOXXXOXXOOOOOOOXO
        9C   XXOOOOXXOXOXXXOOXOOOOXXOXOOOOOOOOOOOOOOOOOOOOXOXXOOOOOOOOOOXXXO
        9D   XOOOOOXXOXOOOXXOOOOOXXXOOOOOOOOOOOOOOOOOOOOXOOXXXXOOOOOOOOOXXXXO
        10   XXXOXXXXOXXXXXXOOXXXXXOXXOXXXXOOOOXXXXXXXOOOOOXOXXOOXXOOOOOOOOOOO
        10A  OXOOXXXXOXXXXOOOXXXOOOXOOOOOOOOOOXXXXOOOOOOOOXOXOOOXXOOOOOOOOOOXO
70      10B  OXXOXXXXOXXXOOOOOXXXXOOOOOOOOOOOOOXXXOOOOOOOOOOOOOOOOOOOOOOOOOXXO
        10C  OXXOXXXXOOOXXOOOOOXOXXOOOXOOOOOOOOOXOXOOOOOOOOOOOOOOOOOOOOOOOOOXXXO
        10D  OXXOXOXXOOOXXOOXOOXOXXOOOXOOOOOOOOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOOXXXXO
        10E  XXXOXOXXOOXXOOOXOOXOXXXOOXOXXXOOOOOOOOXOOOOOOOOOOOOOOOOOOOOOOOOXOXXXO
        10F  OOXOXOOOOOOOOOOOOXOOOOOOXOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXXO
75      11   XXXOXXXXOXXXXXXXOOXXXXXOXXOOOOXOOOOXXXXXXXOOOOOXOXXOOXOXOOOOOOOXXOOXXXXXOO
        11A  OXOOOXXXOXOXXXXOOOXXXXOOXOOOOOOOOOOXOXXOOOOOOOOXOXXOOXOOOOOOOOOXXOOXXXXXOOXO
        11B  XXXOXXXXOOXXXXOOOOXOXXXOXXOOOOOOOOOXOOOXXXOOOOOOOOOOOOOOOOOOOOXOOOXXXXXXOXXO
        11C  XXXOXOOXOOXXOOOXOOXOOXXOOXOOOOXOOOOOOOOXXXOOOOOOOOOOOOOXOOOOOOOOOOXOXXXXOXXXO
        12   XXXOXXXXOXXXXXXXOOXOXXXOXXOOOOXOOOOXOXXXXXOOOOOXOXXOOXOXXOOOOOXXXOXXXXXXOXXXO
80      12A  OXOOOXXOOXOXXXOOOOOXOOOXOOOOOOOOOOXOOOOOOOOOOXOXXOOXOOOOOOOOXXXOXXOOOOOXXXOXO
        12B  OXOOXOXXOOOXXXOOOOXOXXOOXOOOOOOOOOOOOOOOOOOOOOXOXXOOOOOOOOOOXXXOXXXXOOOXXXOXXO
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        12E  OXOOXOXXOOOXXOOOOXOXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXXXXOXOXXXOXXXO
85      12F  XXOOXOOXOOOXXOOOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOXXOXXXXOXXXXO
        12G  XXXOXOOXOOXXOOOOOXOOXXOOOOOOOOOOOOOOOOXOOOOOOOOOOOOOOOOOOOOOOOXOOOXXOXXXOXXXXXO
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        12J  OXOOXOXXOOOXXOOOOXOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOXOXXXXXXXXXO
90      13   XXXOXXXOXXXXOOOXOXOOXXOXOOOOOOOOOOOOOXXXOOOOOOOOOOOOXXXOOOOXXOXXOOOOOOOXOXXXOXXXXXXXOXO
        13A  XXOOXOXXOXOXXOOOXOOOOXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXOXXOOOOOOOXOOOXOXXXXXXXOXXO
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        13N  XXOOXOOXOOOXOOOOOXOOXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXOOOXXXXXXXXXOXXXXXXXXXXO
05      14   XOOOOOXOOXOOOXXOXOOOOXOXXOOOOOOOOOOOOOOOOOOOOOXOOXXXXXOXOOOOOXXXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
        14A  XOOOOOXOOXOOOXXOXOOOOXOXXOOOOOOOOOOOOOOOOOOOOOXOOXXOXXOOOOOOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXO
        14B  XOOOOOXOOXOOOXXOXOOOOXXOOOOOOOOOOOOOOOOOOOOOOXOOXXXXXOOOOOOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXO
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        14D  XOOOOOXOOXOOOXXOXOOOOOXXOOOOOOOOOOOOOOOOOOOOOXOOXXOXOOOOOOOXXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXO
10      14E  OOOOOOXOOXOOOXXOXOOOOOXXOOOOOOOOOOOOOOOOOOOOOXOOXXOXXOOOOOOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXXO
        14F  OOOOOOXOOXOOOXXOXOOOOOXXOOOOOOOOOOOOOOOOOOOOOXOOXXOXOOOOOOOOXXXXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXXXO
        14G  XOOOOOXOOXOOOXXOXOOOOXOXXOOOOOOOOOOOOOOOOOOOOOXOOXOOXOOOOOOOOXXXOXOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOXXXXXXXO

                VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111
                ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
                FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                IRRDTACMTA

                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
                5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
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A                0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
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            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777789999111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

      VAFI 0
      VCAR X0
      VEUR XX0
      VMID XXX0
05    VNAT XXXX0
      VNCA XXXXX0
      VPAC XXXXXX0
      VSAM XXXXXXX0
      VSAT 000000000
10    VSEA X0XX0XX000
      AFI  XXXXXXXX0X0
      CAR  XXX0XXXX00X0
      CEP  0XX0XXXX0X0X0
      CWP  XX0X0XXX0X0XX0
15    EA   X0XX0XX00XX00X0
      EUR  XXXXXXXX0XXX00X0
      INO  XXXX0XXX0XX0XXXX0
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      NP   XXXXXXXX0X0XXXX0XXXX0
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      SEA  X0XX0XX00XX00XXXX0XX0X0
25    SP   XX00XXXX0X0XXXX0X0XXXXX0
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      1A   00000000000000000000000000
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      1C   XXXXXXXX0XX000XXXXXX0XX0X0X0
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      5D   XXXXXXXX0XX000XXXXX00XX0X0XXXXXXXXX0XXXXXXX0
      6    X0XX0XX00XX0XXXXXXXXXXXXXX0XXXXXXXXXXXXXXXX0
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      6C   X0000XX00X00XXX0XX0XX00XX00000000000XXXX000X0XX0XXX0
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      12J  0000000000000000000000000000000000000000X000000000000000000000X0X0X0XXXX0X0XXX0XXXXXXXX0
90    13   XXX0X0XX00XXXX0XX0X00XX0XX0000X00000000XXXX000X00000000XXX0XX0XXXXXX000XX0XXXXXXXXXXXXXX0
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            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777789999111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

                0    1    1    2    2    3    3    4    4    5    5    6    6    7    7    8    8    9    9    0    0    1    1
                5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5    0    5
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A                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
11275-11400      5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5

                 VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111
                 ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
                 FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                 IRRDTACMTA

          VAFI   0
          VCAR   X0
          VEUR   XX0
          VMID   XXX0
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          VSAT   000000000
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          AFI    XXXXXXXX0X0
          CAR    XXX0XXXX00X0
          CEP    0XX0XXXX0X0X0
          CWP    XX0X0XXX0X0XX0
15        EA     X0XX0XX00XX00X0
          EUR    XXXXXXXX0XXX00X0
          INO    XXXX0XXX0XX0XXXX0
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          NAT    XXXXXXXX0XXXXXXXX0
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          SAM    XXX0X0XX0XXXXX0X00X0X0
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          7B     XXXXXXXX0XX000XXXXX0XXX0X0XXXXX0XX0000XXXXXXXXXX000X00XX0
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          12D    XXX0X0XX00XXX00X00X0XXX0XXXX00X000000000XXX000000000000000XX000000X0X0XXXXX0XXXXXXXX0
          12E    XXX0X0XX00XXX00000X0XXX0XXX000X000000000XX000000000000000000000000X0X0XXXXX0XXXXXXXX0
85        12F    XXX0X0XX00XXX00000X0XXX0XXX000X000000000XXX000000000000000000000X0X0X0XXXX0XXXXXXXXXX0
          12G    XXX0X0XX00XXX00X00X00X00X00X000X000000000XXX000000000000XX000000X000X0XXXX0X0XXXXXXXX0
          12H    XXX0X0XX00XXX00X00X00X00X00X000X000000000XXX000000000000XX000000X000X0XXXX0X0XXXXXXXXX0
          12I    XXX0X0XX00XXX00X00XXXX00XXXXX000000000XXXX000X000000000XXX00X000000X0XXXX0X0XXXXXXXXXX0
          12J    XXX0X0XX00XXX00000X0XXX0XXX000X000000000XXX000000000000000000000X0X0X0XXXX0X0XXXXXXXXXX0
90        13     XXX0X0XX00XXXX0XX0X00XX0XXX00XX000000000XXXX000X000000000XXXXXX00XXXXX0XXXX0XXXXXXXXXXXXXX0
          13A    XX00X0XX000XXX00X0X00XX0X000000000000000000000000000000000000XXXX000X0XXXXXXXXXXXXXXXX0
          13B    0X00X0XX000XXX000000000XX0X000000000000000000000000000000000000000XXXX000000X00XX0XXXXXXX0XXX0
          13C    XXX0X0XX00XXX00X00X00X00X00X0000X000000000XXX000000000000000XX000000X0X0XXXXX0X0XXX0XXXXXXXXXXX0
          13D    XX00X0XX00XXX00000X00XX0XXX000X000000000X0X000000000000000XX000000X0X0XXXXX0X0XXX0XXXXXXXXXXX0
95        13E    XXX0X0XX00XXX00000X00XX0X000000000000000000000000000000000000000X0X000000000X0XXX0XXXXXXXXXXXX0
          13F    XX00X0XX000X0000X0X00XX0X000000000000000000000000000000000XX00X000X0X000000000X000X0XXXXXXXXXXXX0
          13G    XXX0X0XX00XX000000X00XX0X000000000000000X000000000000000XX000000X0X000000000X0XXX0XXXXXXXXXXXXXX0
          13H    XX00X0XX000X0000X0X00XX0X000000000000000X0X000000000000XX00XX00X000000000000000X0XXXXXXXXXXXXXXXX0
          13I    XXX0X0XX00XX000000X00XX0X000000000000000X0X000000000000XX000000000000000000000X0X0XXXXXXXXXXXXXXXX0
00        13J    XXX0X0XX00XX000000X00XX00X0000X000000000XXX000000000000000XX000X0X000000000000000X0XXX0XXXXXXXXXXXXXXXX0
          13K    XXX0X00X00XX000X00X00XX00XX000X000000000XXX000000000000XXXX0X000000X000000X000X0XXX0XXXXXXXXXXXXXXXX0
          13L    XXX0X0XX00XX000XX0X00XX0XXX00XX000000000XXXX000X000000000XXX0XX00X000X0000X0X0XXX000XXXXXXXXXXXXXXXX0
          13M    XX00X0XX00XXX00000X00XX0XXX000X000000000X0X000000000000000XX000000X0X0X0XXXX0X0XXX0XXXXXXXXXXXXXXXXX0
          13N    XX00X0XX00XXX00000X00XX0XXX000X000000000X0X000000000000000XX000000X0X0X0XXXX0X0XXX0XXXXXXXXXXXXXXXXX0
05        14     X00XXXX00X00XXX0XX0XX0XXX000000000000000000X00X0XXXXXXXXX000X00XXXXX000000000000X000000000000000000000000
          14A    X00X00X00X000XX0XX0000XX000000000000000000X00X0XXXXXXXXX000X00XXXX0X000000000000000000000000000000000X0
          14B    X00XXXX00X000XX0XX0XX00XX000000000000000000X0X0XXXXXXXXX000X00XXX0X000000000000000000000000000000000000X0
          14C    X000XXX00X000XX0X00XX00XX000000000000000000000XXXXXXX000000XXXX0000000000000000000000000000000000000XX0
          14D    X00000X00X000XX0X00000XXX000000000000000000000X0XXXXX000000XXX0X000000000000000000000000000000000000XXX0
10        14E    X000XXX00X000XX0X00XX00XX000000000000000000000X0XXXXX000000XXXX0000000000000X000000000000000000000000XXXX0
          14F    X00000X00X000XX0X000X00XX000000000000000000000X0XXX0XX000000XXXX0000000000000X000000000000000000000000XXXXX0
          14G    X00000X00X00XXX0X00000XXX000000000000000000000X0XXX0XX000000XXXX0000000000000X000000000000000000000000XXXXXX0

                 VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111
                 ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
                 FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
                 IRRDTACMTA

                   0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
                   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
```

```
A                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
13260-13360      5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

        VAFI 0
        VCAR X0
        VEUR XX0
        VMID XXX0
05      VNAT XXXX0
        VNCA XXXXX0
        VPAC XXXXXX0
        VSAM XXXXXXX0
        VSAT 000000000
10      VSEA XXXXXXXX00
        AFI  XXXXXXXX0X0
        CAR  XXXXXXXX0XX0
        CEP  XXXX0XXX0XXX0
        CWP  XXXXXXXX0XXXX0
15      EA   XXXXXXXX0XXXXX0
        EUR  XXXXXXXX0XXXXXX0
        INO  XXXXXXXX0XXXXXXX0
        MID  XXXXXXXX0XXXXXXXX0
        NAT  XXXXXXXX0XXXXXXXXX0
20      NCA  XXXXXXXX0XXXXXXXXXX0
        NP   XXXXXXXX0XXXXXXXXXXX0
        SAM  XXXXXXXX0XXXXXXXXXXXX0
        SAT  XXXXXXXX0XXXXXXXXXXXXX0
        SEA  XXXXXXXX0XXXXXXXXXXXXXX0
25      SP   XXXXXXXX0XXXXXXXXXXXXXXX0
        1    XXXXXXXX0XXXXXXXXXXXXXXXX0
        1A   XXXXXXXX0XXXXXXXXXXXXXXXXX0
        1B   XXXXXXXX0XXXXXXXXXXXXXXXXXX0
        1C   XXXXXXXX0XXXXXXXXXXXXXXXXXXX0
30      1D   XXXXXXXX0XXX0XXXXXXXXXXXXXXXX0
        1E   XXXXXXXX0XXXXXXXXXXXXXXXXXXXX0
        2    XXXXXXXX0XXXXXXXXXXXXXXXXXXXXX0
        2A   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXX0
        2B   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXX0
35      2C   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXX0
        3    XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXX0
        3A   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXX0
        3B   XXXXXXXX0XXXXXXXXXXXXXXXX0XXXXXXXX0
        3C   XXXX0XX00XXXXXXXXXXXXXXXXXXXXXXXX0
40      4    XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXX0
        4A   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXX0
        4B   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXX0
        5    XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXX0
        5A   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXX0
45      5B   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXX0
        5C   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXX0
        5D   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXX0
        6    XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXX0
        6A   X0XXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXX0
50      6B   XXXXXXXX0XXXXXXXXXXXXXXX00XX0XXXXXXXXXXXXXX0
        6C   XXXXXXXX0XXXXXXXXXXXXXXX0XXX0XXXXXXXXXXXXXXX0
        6D   XXXX0XX00XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        6E   X0XX0XXX0XX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        6F   XXXX0XX00XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
55      6G   X0XX0XXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        7    XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        7A   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        7B   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        7C   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
60      7D   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        7E   XXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXXXXXXX0
        7F   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXX0000000000000000000000
        8    XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX00
        9    XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0X0
65      9B   XXXXXXXX0XXXXXXXXXXXXXXXX00XX0XXXXXXXXXXXXXXXXXXXXXXXXXXX0XX0
        9C   XXXXXXXX0XXXXXXXXXXXXXXXX00XX0X0XXXXXXX0000XXXXXXXXX00000XXX0
        9D   XXXXXXXX0XXXXXXXXXXXXXXX000000XXXXXXX000XXXXXXXXXXXXXX0XX00XXXX0
        10   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXX0
        10A  XX0XXXXX0XXXXXXXXXXXXXXXXXX00XXXXXXXXXXXXXXXXXXXXXXXXXXX0XX00XXXXXX0
70      10B  XXX0XXXX0XXXXXXX0XXXXXXXXXXXXX000XXXXXXX000XX0XXX0XXXXX0XX0XXXXXXX0
        10C  XXX0XXXX0XXXXXXX0XXXXXXXXXXXXX000XXXXXXX000XX0XXX0XXXXX0XX0XXXXXXX0
        10D  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXX0XX0000XXXXX0XXXXXXXXX0
        10E  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0X0XXXXXX0XXXXXXXXX0
        10F  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0X0XXXXXX0XXXXXXXXX0
75      11   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXXX0
        11A  XX0XXXXX0XXXXXXXXXXXXXXXXX00XXXXXXXXXXXXXXXXXXXXXXXXXX0XX00XXXXXXXX0
        11B  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XX0XXX0XXXXXXX00XXXXXXXX0
        11C  XXXXXXXX0XXXXXX0XXXXXXXXXXXXXXXXXXXX0XXXXXXXXXXX0X0XXXXXX0XXXXXXXXXXX0
        12   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXXX0
80      12A  0X0XXXXX0X0XXXX0XXXXXXXXX000XX0X0XXXXXXX0XX0XXXXXXX0000000XXXXXXXXXX0
        12B  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        12C  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXX0XX0XXXXXXX00XX0XXX0XXXXX0X00XXXXXXXXXX0
        12D  XXXXXXXX0XXXXX0XXXXXXXXXXXXXXXXXXXX0X0XXXXXXXX0XX00X0XXXXX00XXXXXXXXXXXXXX0
        12E  XXXXXXXX0XXXXX0XXXXXXXXXXXXXXXXXXX0XX0X0XXXXXX0XX0XX0000XXXXX00XXXXXXXXXXXXXXX0
85      12F  XXXXXXXX00XXXX0XXXXXXXXXXXXXXXXXXXX0X0XXXXXX0XX0XX0000XXXXX00XXXXXXXXXXXXXXXXX0
        12G  XXXXXXXX00XXXX0X0XXXXX0XXXXXXXXXXXX0X0XXXXXXXX0XX0000XXXXX00XXXXXXXXXXXXXXXXXX0
        12H  XXXXXXXX0XXXXXXX0XXXXXXXXXXXXXXXXXXX0XXXXXXXX0XX0000XXXXX0XXXXXXXXXXXXXXXXXXXX0
        12I  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        12J  XXXXXXXX0XXXXX0XXXXXXXXXXXXXXXXXX0XX0X0XXXXXX0XX0XX00X0XXXXX00XXXXXXXXXXXXXXXXX0
90      13   XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXXXXXXXXXXXXXXXX0
        13A  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXX0XX0XXXXXX00XX0XXX0XXXXXX00XXXXXXXXXXXXXXXXXXXXXX0
        13B  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXX0XX0XXXXXX00XX0XXX0XXXXXX00XXXXXXXXXXXXXXXXXXXXXXX0
        13C  XXXXXXXX0XXXXXX0XXXXXXXXXXXXXXXXXXXXX0XXXXXXXX0XX0000XXXXX0XXXXXXXXXXXXXXXXXXXXXXX0
        13D  XXXXXXX00XXXX0X0XXXXXX0XXXXXXXXXXXXX0XX0XXXXXX0XX0000XXXXX00XXXXXXXXXXXXXXXXXXXXX0
95      13E  XXXXXXX00XXXX0XXXXXXXXXXXXXXXXXXXX0XX0X0XXXXX0XX0XX0000XXXXX00XXXXXXXXXXXXXXXXXXXXX0
        13F  XXXXXXX00XXXX0XXXXXXXXXXXXXXXXXXXX0XX0X0XXXXX0XX0XX0000XXXXX00XXXXXXXXXXXXXXXXXXXXX0
        13G  XXXXXXX00XXXXX0XXXXXXXXXXXXXXXXXXXX0XXXXXXXXXXX0000XXXXX0XXXXXXXXXXXXXXXXXXXXXXXXX0
        13H  XXXXXXX00XXXXX0XXXXX0XXXXXXXXXXXXXX0XXXXXXXX0XX0000XXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXX0
        13I  XXXXXXXX0XXXXXX0XXXXXXXXXXXXXXXXXXXX0XXXXXXXX0XX0000XXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXX0
00      13J  XXXXXXXX0XXXXXX0XXXXXXXXXXXXXXXXXXXX0XXXXXXXXXXX0X0XXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        13K  XXXXXXXX0XXXXXX0XXXXXXXXXXXXXXXXXXX00XXXXXXXXX000X0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
        13L  XXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXX0
        13M  XXXXXXXX00XXXX0XXXXXXXXXXXXXXXXXX0XX0X0XXXXXX0XX0XX0000XXXXX00XXXXXXXXXXXXXXXXXXXXXXXXXXX0
        13N  XXXXXXXX00XXXXX0XXXXXXXXXXXXXXXXXXXX0XXXXXXXX0XX0000XXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0
05      14   XXXX0XXX0XXXXXXXXXXXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXXX00XXX0XXXXX0000XXX0000000000000
        14A  X0XX0X0X0XXXXXXXXXXXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXX000XXX0XXX0000000XX00000000000000X0
        14B  X0XX0X0X0XXXXXXXXXXXXXXXXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXX000XXX0XXX0000000XX00000000000000XX0
        14C  XXXX0X0X0XXXXXXXXXXXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXX000XXX0XXX0000000XXX00000000000XXX0
        14D  XXXX0X0X0XXXXXXXXXXXXXXXXX0XXX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXX000XXX0XXX0000000XXX000000000000XXXX0
10      14E  XXXX0X0X0XXXXXXXXXXXXXXXXX00XX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXX000XXX0XXX0X0000XXX0000000000000XXXXX0
        14F  XXXX0X0X0XXXXXXXXXXXXXXXXX00XX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXX00XXX0XXXXX0000XXX00000000000000XXXXXX0
        14G  XXXX0XXX0XXXXXXXXXXXXXXXXX00XX0XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX0XXXXXXXX00XXX0XXXXX0000XXX00000000000000XXXXXXX0

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111
            ACEMNNPSSSFAEWAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222222333333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
                5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
```

```
A                0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
17900-17970      5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEHAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222223333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

      VAFI 0
      VCAR XO
      VEUR XXO
      VMID XXXO
05    VNAT XXXXO
      VNCA XXXXXO
      VPAC XXXXXXO
      VSAM XXXXXXXO
      VSAT 000000000
10    VSEA XXXXOXXXOO
      AFI  XXXXXXXXOXO
      CAR  XXXXXXXXOOXO
      CEP  XXOOXXXXOXXXO
      CHP  XXXXXXXXOXXXXO
15    EA   XOXXXXXOOXXOXXO
      EUR  XXXXXXXXOXXXOXXO
      INO  XXXXXXXXOXXXXXXXO
      MID  XXXXXXXXOXXXOXXXXO
      NAT  XXXXXXXXOXXXXXXXXXO
20    NCA  XXXXXXXXOXXXXXXXXXXO
      NP   XXXXXXXXOXXXXXXXXXXXO
      SAM  XXXXXXXXOOXXXXOXXXXXXO
      SAT  XXXXXXXXOXXXXXXXXXXXXXO
      SEA  XOXXXXXOOXXXXXXXXXXXXXXO
25    SP   XXOXXXXXOXXXXXOXXXXXXXXO
      1    XXXXXXXXOXXXXXXXXXXXXXXXXO
      1A   XXXXXXXXOXXXXOXXXXXXXXXXOXO
      1B   XXXXXXXXOXXXXOXXXXXXXXXXOXXO
      1C   XXXXXXXXOXXXOXXXXXXXXXXXOXXXO
30    1D   XXXXXXXXOXXXOXXXXXXXXXXXOXXXXO
      1E   XXXXXXXXOXXXXXXXXXXXXXXXXXXXXO
      2    XXXXXXXXOXXXOXXXXXXXXXXXXXXXXXO
      2A   XXXXXXXXOXXXOXXXXXXXXXXXOXXXXXXO
      2B   XXXXXXXXOXXOOXXXXXXXXOXXXXXXXXXO
35    2C   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXO
      3    XXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXO
      3A   XOXXXXXXOXXOOXXXXXXXXOXXXXXXXXXXXXO
      3B   XXXXXXXXOXXXXXXXXXXXXXXXXXXXXOXXXXXO
      3C   XXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXO
40    4    XXXXXXXXOXXXOOXXXXXXOXXXOXXXXXXXXXXXXXO
      4A   XXXXXXXXOXXXOOXXXXXXOXXXOXXXXXXXXXXXXXO
      4B   XXXXXXXXOXXXOOXXXXXXOXXXOXXXXXXXXXXXXXXO
      5    XXXXXXXXOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      5A   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXXXXXXXXXXO
45    5B   XOXXXXXXOXXXOXXXXXXXXOXXXXXXXXXXXXXXXXXXXXO
      5C   XOXXXXXXOXXXOXXXXXXXXOXXXXXXXXXXXXXXXXXXXXO
      5D   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXO
      6    XXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      6A   XOXXOXXOOXXOOXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXO
50    6B   XXOXXXXOOXXXXXXXXXXXXOXXOOOOOOXXXXXXXXOOOXXXXXXO
      6C   XXOXXXXXOXXXXXXXXXXXXOXXOOOOOOXXXXXXXXXOOXXXXXXXO
      6D   XOXXOXXOOXXOXXXXXXXXOXXXXOXXXXXXXXXXXXXXXXXXXXXXO
      6E   XOXXOXXOOXXOOXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      6F   XOXXOXXOOXXOXXXXXXXXOXXXXOXXXXXXXXXXXXXXXXXXXXXXXO
55    6G   XOXXOXXOOXXXXXXXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXO
      7    XXXXXXXXOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      7A   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      7B   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      7C   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
60    7D   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      7E   XXXXXXXXOXXXOXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      7F   0000000000000000000000000000000000000000000000000000000000
      8    XOXXOXXXOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOO
      9    XOXXXXXOXXXXXXXXXXXXXXXXXXOOOXXOXOXXXXXXXXXXXXXXXXXXXXXXOXXOOXO
65    9B   XXOXXXXXOXXXXXXXXXXXXXXXXOOOOOOXXXXXXXOOOXXXXXXXXXXXXXXXXXXOXXO
      9C   OXXOXXXXOXXOXXXOXXXXXXXXXOOOXOOOOXXXXXXOOOOOXXXXXXOOOOOXXXXO
      9D   OXOXXXXXOXOXXXXOXXXXXXXXOOOOOOOXOXOXXXXOOOXOOXXXXXXXXXXXOOOOOXXXXO
      10   XXXXXXXXOXXXXXXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      10A  OXXOXXXXOXOXXXXOXXXXXXXXXXXXXOOXXXOXXXXOOOOOOOOXXXXXXXOOOOOOOXXXXXXO
70    10B  XXXOXXXXOXXXXXOXXOXXXXXXXXXXXOXXXOOXXXXXXXOOOOOXOXXOOXOXXOOOOOOXXXXXXO
      10C  XXXOXXXXOXXXXXOXXOXXXXXXXXXXOOXOOOOXOXXXXXOOOOOXOXXXOXOXXOOOOOOXXXXXXO
      10D  XXXXXXXXOOXXXXOXXXXXXXOXXXXXXXXXXXXXXOXXXXXOOXXOXXOOOOXXXXXXOOXXXXXXXO
      10E  XXXXXXXXOXXXXOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      10F  XXXXXXXXOXXXXOOXXXXXXXOXXXXXXXXXXXXXXOXXXXXXXXXXXOOOOOXXXXXXOXXOXXXXXXXO
75    11   XXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      11A  OXXOXXXXOXOXXXXOXXXXXXXXXXOOOXXOXOXXXXOOOOOOOOXXXXXXXOOOOOOOXXXXXXXXXXXXXO
      11B  XXXOXXXXOXXXXXOXXOXXXXXXXXXXXXXXXOXXOXXXXXXXOOXXOXXOOXOXXXOOXOOXXXXXXXXXXXXO
      11C  XXXXXXXXOXXXXOOXXXXXXXXOXXXXXXXXXOXXOOXXXXXXXOXOOOOOOOOXXXXXXOOXXXXXXXXXXXXXXO
      12   XXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
80    12A  OXOOXXXXOXOXXXXOXXXXXXXXXXOOOOOOOOXXXXOOOOOOOOXXXXXXXOOOOOOOXXXXXXXXXXXXXXXXO
      12B  XXXOXXXXOXXXXXXXXOXXXXXXXXOXXOOOOXOXXXXXOOOOOXXXXXXXOOOOOOOXXXXXXXXXXXXXXXXXO
      12C  XXXOXXXXOXXXXXOXXOXXXXXOXXXXXOOOOXOXOXXXOOOOOXOXXXOXOXXOOOOOOXXXXXXXXXXXXXXXO
      12D  XXXXXXXXOOXXXXOXOXXXXXXOXXXXXXXXXXXXXXOXXXXXOOXXOXXOOOOXXXXXXOOXXXXXXXXXXXXXXXO
      12E  XXXOXXXXOOXXXXXXXOXXXXXOXXXXXXXOOOOXOXOXXXOOOOOXOXXOOOOXXOOOOOOXXXXXXXXXXXXXXXXXO
85    12F  XXXOXXXXOOXXXXXXXOXXXXXOXXXXXXXOOOOOOOOXXXOOOOOOOOOOOOXXOOOOOOXXXXXXXXXXXXXXXXXXXO
      12G  XXXXXXXXOOXXXXXXXOXXXXXOXXXXXXXXXOXOOOOXXXXXOOXOOOOOOOOXXXXXOOXOXXXXXXXXXXXXXXXXXXXO
      12H  XXXXXXXXOOXXXOOXXXXXXXXOXXXXXXXXXOXOOOOXXXXXOOXOOOOOOOOXXXXXXOOXXXXXXXXXXXXXXXXXXXXO
      12I  XXXXXXXXOXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      12J  XXXOXXXXOXXXXXOXOOXXXXXOXXXXXXOOOOXOXOXXXOOOOOXOXXOOOOXXOOXOOXXXXXXXXXXXXXXXXXXXXXXXO
90    13   XXXXXXXXOXXXXXXXXXXXXXXOXXXXXXXXXXXXXXOXXXXXXXXXXXOOOOXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXO
      13A  XXXOXXXXOXXXXXOXXOXXXXXOXXXXXOXOOOOXOXOXXXOOOOOXOXXOOOOXXOOOOXXXXXXXXXXXXXXXXXXXXXXXXXO
      13B  XXXOXXXXOOXXXXOOOOXXXXXOXXXXOOXOOOOXOXOXXXOOOOOXOXXOOOOOOOOOOOXXXXXXXXXXXXXXXXXXXXXXXXXO
      13C  XXXXXXXXOXXXXXOXXXXXXXXOXXXXXXXXOXOOOXXXXXOXXOOOOOOOXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13D  XXXXXXXXOOXXXXOXXXXXXXXOXXXXXXXXXOXOOOOXXXXXOOXOOOOOOOOXXXXXOOXXXXXXXXXXXXXXXXXXXXXXXXXXO
95    13E  XXXOXXXXOOXXXXOXOXXXXXXOXXXXXXXOOOOXOXOXXXOOOOOXOOXOOOOXXXOOXOOXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13F  XXXOXXXXOOXXXXOXXOXXXXXOXXXXXXXXXOXXOXOXXXXXXOXXOOXOOOOXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13G  XXXXXXXXOOXXXOOXOXXXXXXOXXXXXXXXXOXOOOOXXXXXOOXOOOOOOOOXXXOOXOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13H  XXXXXXXXOOXXXXOXXXXXXXXOXXXXXXXXXOXOOOOXXXXXXOXXOOXOOOOXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13I  XXXXXXXXOOXXXOOXXXXXXXXOXXXXXXXXXOXOOOOXXXXXXOXOOOOOOOOXXXXXXOOXOXXXXXXXXXXXXXXXXXXXXXXXXXXXO
00    13J  XXXXXXXXOOXXXOOXXXXXXXXOXXXXXXXXXOXOOOOXXXXXXOXOOOOOOOOXXXXXXOOXOXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13K  XXXXXXXXOXXXXOOXXXXXXXXOXXXXXXXXXOXOOOOXXXXXXOXOOOOOOOOXXXXXXOOXOXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13L  XXXXXXXXOXXXXOXXXXXXXXXOXXXXXXXXXXXXXOOXXXXXXXXXXXOOOOOXXXXXXOXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13M  XXXOXOXXOOXXXXOXOOXXXXXOXXXXXXXOOOOOOOOXXXOOOOOOOOOOOOXXXOOXOOXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
      13N  XXXXXXXXOOXXXOOXXXXXXXXOXXXXXXXXXOXOOOOXXXXXOOXOOOOOOOOXXXXOXOOXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXO
05    14   XOXXOXXXOXXOXXXXXXXXXXXXXXOOXXOXXXXXXXXOOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOXXXOXXXXOOOOOOXXOOOOXOXOOOXOOO
      14A  XOXXOXXXOXXOXXXXXXOXXXXXXXOOXXOXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOOXXXOXXXOOOOOOOXXOOOOXOXOOOXOOXO
      14B  XOXXOXXOOXXOXXXXXXOXXOXXXXOOXXOXXXXXXXXOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOOXXXOXXXOOOOOOOXXOOOOXOXOOOXOOXO
      14C  XOOXOXXOOXXOXXXXXXXXXOOXXOOOOOOXXXXXXXXOOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXO
      14D  XOOXOXXXOXXOXXXXXXXXXXOXXOOOOOOXXXXXXXXOOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXO
10    14E  OOOXOXXOOXXOXXXOXXXXXXOXXOOOOOOXXXXXXXXOOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXO
      14F  OOOXOXXXOXXOXXXOXXXXXXOXXOOOOOOXXXXXXXXOOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXO
      14G  OOOXOXXXOXXOXXXOXXXXXXOXXOOOOOOXXXXXXXXOOOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXOOOXXXOXXXXXXXXXXXXXXXXXXXXXXXXXO

            VVVVVVVVVVACCCEEIMNNNSSSS1111112222333344455555666666667777777899991111111111111111111111111111111111111111111111
            ACEMNNPSSSFAEHAUNIACPAAEP ABCDE ABC ABC AB ABCD ABCDEFG ABCDEF  BCD0000000111122222222223333333333333344444444
            FAUIACAAAEIRPP RODTA MTA                                        ABCDEF ABC ABCDEFGHIJ ABCDEFGHIJKLMN ABCDEFG
            IRRDTACMTA

               0   1   1   2   2   3   3   4   4   5   5   6   6   7   7   8   8   9   9   0   0   1   1
               5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5
```

ANNEXE 4 - ANNEX 4 - ANEXO 4

Demandes de fréquences utilisées — Frequency requirements used — Solicitudes de frecuencias utilizadas

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
001	VAFI	1	1	1	-	1	1	1	1	1	2	-		
002	VCAR	1	-	-	-	1	-	-	-	1	1	-		
003	VEUR	2	1	1	-	1	1	1	1	1	2	-		
004	VMID	2	1	1	-	1	1	1	1	1	1	-		
005	VNAT	1	1	-	-	1	1	1	-	1	2	-		
006	VNCA	1	-	1	-	1	2	-	1	1	1	-		
007	VPAC	1	1	1	-	1	1	-	1	1	2	-		
008	VSAM	1	-	-	-	1	-	-	1	-	1	-		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
009	VSAT	-	-	-	-	-	-	-	-	-	-	-		
010	VSEA	2	1	1	-	1	1	1	1	1	1	1		
011	AFI	3	3	2	-	2	3	3	2	2	5	2		
012	CAR	1	1	1	-	2	2	2	1	2	1	1		
013	CEP	1	1	1	-	2	1	1	1	1	2	1		
014	CWP	1	1	1	-	2	2	1	1	1	1	1		
015	EA	2	1	1	-	1	1	1	1	1	2	1		
016	EUR	1	1	1	-	2	1	1	1	1	-	1		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
017	INO	1	-	-	-	1	-	-	1	-	1	1		
018	MID	2	2	2	-	2	2	2	1	2	2	1		
019	NAT	4	3	3	-	2	2	7	-	3	2	1		
020	NCA	2	1	1	-	2	1	1	2	1	1	1		
021	NP	1	-	1	-	1	2	-	1	1	1	1		
022	SAM	1	1	1	-	1	1	1	2	1	1	1		
023	SAT	2	2	1	-	1	1	1	1	1	2	1		
024	SEA	2	1	1	-	1	1	1	1	1	2	1		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
025	SP	1	-	1	-	1	-	1	1	-	2	1		
026	1	-	-	-	-	-	1	-	1	1	1	-		
027	1A	-	-	-	-	-	-	-	-	-	-	-		
028	1B	1	-	1	-	2	1	-	1	-	-	-		
029	1C	2	2	1	-	2	1	1	1	1	-	-		
030	1D	3	3	2	-	2	2	2	1	1	1	-		
031	1E	1	- 1*	-	-	1	1	-	1	-	-	-		1E 4A
032	2	- -	- -	- -	- -	- 1*	- -	2 1*	4 1*	4 1*	3 -	1 -		2 3

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
033	2A	13 1*	9 1*	7 1*	-	9 -	9 1*	2 1*	2 -	1 1*	- -	- -		2A 2C
034	2B	9 2*	6 2*	8 2*	- -	8 2*	8 2*	- 2*	1 1*	1 1*	- -	- -		2B 2C
035	2C	13 1* 2*	11 1* 2*	7 1* 2*	- - -	7 - 2*	7 1* 2*	2 1* 2*	2 - 1*	2 1* 1*	- - -	- - -		2A 2C 2B 2C
036	3	- -	- -	- -	- -	- 1*	- -	3 1*	2 1*	2 1*	2 -	2 -		2 3
037	3A	9 2*	6 1*	7 1*	- -	5 1*	5 2*	2 1*	1 1*	1 1*	- -	- -		3A 3C
038	3B	12 1*	7 1*	4 1*	- -	10 1*	8 1*	4 1*	3 1*	3 1*	- -	- -		3B 3C
039	3C	10 2* 1*	5 1* 1*	4 1* 1*	- - -	7 1* 1*	6 2* 1*	- 1* 1*	- 1* 1*	- 1* 1*	- - -	- - -		3A 3C 3B 3C

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
040	4	-	-	-	-	-	-	-	-	-	2	1	-	
041	4A	3 - -	2 1* -	3 - 2*	- - -	2 - -	2 - -	3 - 2*	2 - -	2 - -	3 - -	- - -		1E, 4A 4A, 4B
042	4B	1 -	2 -	2 2*	- -	2 -	2 -	- 2*	1 -	1 -	1 -	- -		4A, 4B
043	5	-	-	-	-	-	-	2	2	2	2	2		
044	5A	1	- 1*	-	-	1 1*	1 1*	1 1*	1 -	- -	1 -	- -		5A, 5C
045	5B	2	2	2	-	2	2	-	2	2	-	-		
046	5C	1 -	- 1*	- -	- -	- 1*	- 1*	- 1*	- -	- -	- -	- -		5A, 5C
047	5D	1	1	2	-	2	2	-	1	1	-	-		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
048	6	-	-	-	-	-	-	1	-	1	1	1		
049	6A	2 1*	1 1*	2 -	- -	4 1*	4 1*	3 1*	2 -	2 1*	- 1*	- -		6A, 6E
050	6B	2 -	2 -	2 -	- -	2 -	2 -	2 -	2 1*	- 1*	1 -	1 -		6B, 6F
051	6C	1 -	1 -	2 -	- -	3 -	3 -	2 -	1 -	1 -	- 1*	- -		6C, 6F
052	6D	2	1	3	-	3	3	2	1	1	1	-		
053	6E	3 1*	2 1*	2 -	- -	3 1*	3 1*	3 1*	3 -	2 1*	- 1*	- -		6A, 6E
054	6F	2 - -	2 - -	1 - -	- - -	1 - -	1 - -	1 - -	1 1* -	- 1* -	- - 1*	- - -		6B, 6F 6C, 6F
055	6G	22	15	10	-	31	20	16	10	9	5	1		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
056	7	-	-	-	-	1	1	-	1	1	1	-	-	
057	7A	-	-	-	-	-	-	-	-	-	-	-	-	
058	7B	2	3	2	-	2	2	2	1	1	-	-	-	
059	7C	1	1	1	-	1	1	1	1	1	-	-	-	
060	7D	1	-	-	-	1	-	-	1	-	-	-	-	
061	7E	1	1	1	-	1	1	-	1	1	-	-	-	
062	7F	-	-	-	-	-	-	-	-	-	-	-	-	
063	8	-	-	-	-	-	-	-	-	-	-	-	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
064	9	-	-	1	-	1	1	2	1	1	1	-		
065	9B	2 2*	2 2*	1 1*	- -	3 1*	2 2*	2 2*	2 1*	2 1*	- -	- -		9B 9C
066	9C	- 2* -	- 2* 1*	- 1* -	- - -	- 1* -	- 2* -	- 2* 1*	- 1* 1*	- 1* -	- - -	- - -		9B 9C 9C 9D
067	9D	1 -	- 1*	- -	- -	1 -	1 -	- 1*	- 1*	- -	- -	- -		9C 9D
068	10	-	-	1	1	1	1	2	2	2	1	1		
069	10A	6	3	3	3	4	4	3	3	3	-	-		
070	10B	2	3	5	2	3	3	3	-	-	-	-		
071	10C	2	1	2	1	5	3	2	-	-	-	-		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
072	10D	2	3	3	2	5	3	2	-	-	-	-	-	
073	10E	3	2	4	1	3	2	3	-	1	-	-	-	
074	10F	1	-	1	1	1	1	1	1	-	-	-	-	
075	11	-	-	-	-	-	-	-	-	-	-	-	-	
076	11A	-	-	-	-	-	-	-	-	-	-	-	-	
077	11B	5	6	5	3	5	5	3	3	2	1	1	-	
078	11C	-	-	-	-	-	-	-	-	-	-	-	-	
079	12	1	-	-	-	1	-	3	2	1	1	1	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
080	12A	1	1	1	-	1	-	-	-	-	-	-	-	
081	12B	-	-	-	-	-	-	-	-	-	-	-	-	
082	12C	3	2	4	1	5	4	3	2	1	-	-	-	
083	12D	1	1	1	1	1	1	1	1	-	-	-	-	
084	12E	-	-	1	1	2	1	1	1	1	-	-	-	
		1*	-	-	-	1*	1*	-	-	1*	-	-	-	12E 12J
		-	-	-	1*	1*	1*	1*	1*	-	-	-	-	12E 12F
		-	-	-	-	1*	-	-	-	-	-	-	-	12E 12F 12H
		2*	2*	-	-	-	-	-	-	-	-	-	-	12E 12F 12G 12H
085	12F	1	-	1	-	1	1	1	-	1	-	-	-	
		-	-	-	1*	1*	1*	1*	1*	-	-	-	-	12E 12F
		-	-	-	-	1*	-	-	-	-	-	-	-	12E 12F 12H
		-	-	-	1*	-	-	-	-	-	-	-	-	12F 12H
		1*	-	-	-	-	-	-	-	-	-	-	-	12F 12J
		2*	2*	-	-	-	-	-	-	-	-	-	-	12E 12F 12G 12H
086	12G	1	-	1	-	3	2	-	-	-	-	-	-	
		2*	2*	-	-	-	-	-	-	-	-	-	-	12E 12F 12G 12H
087	12H	-	-	-	-	-	-	-	-	-	-	-	-	
		-	-	-	1*	-	-	-	-	-	-	-	-	12F 12H
		-	-	-	-	1*	-	-	-	-	-	-	-	12E 12F 12H
		2*	2*	-	-	-	-	-	-	-	-	-	-	12E 12F 12G 12H

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
088	12I	-	-	-	-	-	-	-	-	-	-	-	-	
089	12J	2	1	1	1	1	1	1	1	1	-	-	-	
		1*	-	-	-	1*	1*	-	-	1*	-	-	-	12F 12J
		1*	-	-	-	-	-	-	-	-	-	-	-	12F 12J
090	13	-	-	-	-	-	-	-	-	-	1	1	-	
091	13A	-	-	-	-	-	-	-	-	-	-	-	-	
		-	-	-	-	-	-	-	1*	-	-	-	-	13A 13B
		-	-	-	-	-	-	-	-	-	-	1*	-	13A 13B 13E 13F
092	13B	-	-	-	-	-	-	-	-	-	-	-	-	
		-	-	-	-	-	-	-	1*	-	-	-	-	13A 13B
		-	-	-	-	-	-	-	-	-	-	1*	-	13A 13B 13E 13F
093	13C	3	3	2	-	4	4	3	2	2	-	-	-	
		-	-	-	-	-	-	-	-	-	2*	-	-	13C 13K
094	13D	2	2	-	1	2	1	1	2	1	-	-	-	
		-	-	1*	-	1*	-	1*	-	-	-	-	-	13D 13M
095	13E	-	1	-	-	-	1	-	-	1	-	-	-	
		-	-	-	-	-	-	-	-	-	-	1*	-	13A 13B 13E 13F
		1*	-	2*	-	3*	1*	1*	-	-	1*	-	-	13E 13F

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
096	13F	2 - 1*	2 - -	- - 2*	1 - -	- - 3*	1 - 1*	2 - 1*	1 - -	2 - -	- - 1*	- 1* -	- - -	13A 13B 13E 13F 13E 13F
097	13G	3	2	1	2	1	2	3	3	1	-	-	-	
098	13H	2	2	1	2	2	1	2	2	2	1	-	-	
099	13I	2 1*	1 -	2 -	1 1*	2 1*	1 -	1 -	1 -	- -	- -	- -	- -	13I 13J
100	13J	4 1* -	2 - -	4 - -	2 1* -	2 1* -	2 - -	2 - -	2 - 1*	1 - -	- - -	- - -	- - -	13I 13J 13J 13K
101	13K	4 - -	3 - -	3 - -	1 - -	3 - -	3 - -	3 - -	3 1* -	2 - -	- - 2*	- - -	- - -	13J 13K 13C 13K
102	13L	-	-	-	-	-	-	-	-	-	-	-	-	
103	13M	2 -	2 -	1 1*	1 -	1 1*	1 -	2 1*	1 -	1 -	- -	- -	- -	13D 13M

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
104	13N	1	1	-	1	1	1	1	1	-	-	-	-	
105	14	2	1	-	-	2	2	4	1	3	2	1	-	
106	14A	1	1	1	-	2	2	3	-	-	-	-	-	
107	14B	1	1	1	-	1	3	3	-	-	-	-	-	
108	14C	1	1	1	-	1	3	3	-	-	-	-	-	
109	14D	1	1	1	-	2	2	3	-	-	-	-	-	
110	14E	1	1	1	-	1	3	3	-	-	-	-	-	
111	14F	-	2	1	-	1	3	3	-	-	-	-	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
112	14G	2	-	1	-	3	1	3	-	-	-	-	-	

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document N° DT/41-E
18 February 1978
Original: English
French
Spanish

WORKING GROUP 5B

The Report prepared by the I.F.R.B. on the subject of "A possible planning approach for long-distance operational control communications" is presented for consideration of Working Group 5B.

K. KING
Chairman of Working Group 5B

ARCHIVES U.I.T. GENÈVE

REPORT BY THE I.F.R.B.

Subject: Technical preparation for the World Administrative Radio Conference for the Aeronautical Mobile (R) Service, Geneva, 1978

Report by the I.F.R.B. on a possible planning approach for long-distance operational control communications

References: I.F.R.B. Circular-letters Nos. 400 of 24 November 1977 and 401 of 1 December 1977 (Conference documents Nos. 48 and 49)

No. 482 of the Radio Regulations

As referred to in I.F.R.B. Circular-letter No. 401, the Board has carried out a study on a possible planning approach for long-distance operational control communications on the assumption that the Conference may wish to provide for the requirements submitted by Administrations for this purpose.

2. The Appendix to the present document refers to the technical criteria for planning including those used for developing the Frequency Allotment Plan for the MWARAs, RDARAs, Sub-RDARAs and VOLMET Areas and outlines of possible planning approach. It further suggests two possible options concerning the use of channels to be provided for the long-distance operational control communications.

3. The Board has used certain information from a number of Conference documents in presenting a possible planning approach, and in so doing the Board does not prejudge decisions in relation to these documents, as well as on any principles which the Conference may wish to take on this subject before it enters into its detailed consideration.

Appendix: 1

APPENDIX

LONG-DISTANCE OPERATIONAL CONTROL COMMUNICATIONS FREQUENCY PLANNING

1. Nature of long-distance operational control communications (LDOCC)

1.1 The Board notes that the nature of LDOCC is different from that of the conventional MWARA, VOLMET, RDARA communications. The main differences are characterized by the following:

1.1.1 LDOCC consist of voice communications between designated authorized aeronautical stations and aircraft stations operating anywhere on a global basis;

1.1.2 with the exception of certain oceanic areas, air/ground communications provided under MWARA, VOLMET, RDARA structure are rarely required over distances greater than 1000 NM (1850 km); on the other hand, LDOCC would be required to operate up to the limit of the service range for any given frequency band;

1.1.3 to cater for the LDOCC needs on a world-wide basis, with a 24 hours a day availability under all propagation conditions, a family of five frequencies is considered necessary;

1.2 Technical considerations

In view of paragraph 1.1 above, the technical approach to planning of the LDOCC has to be somewhat different from that used for MWARA, VOLMET and RDARA planning. A non-exhaustive list of technical considerations is given below:

1.2.1 the nature of LDOCC being different from the MWARA, VOLMET, RDARA communications, it would be undesirable to interleave frequency assignments to stations ensuring LDOCC between the assignments to those which ensure MWARA, VOLMET, RDARA communications. The Board is therefore of the view that it would be desirable to avoid such interleaving by providing a separate block of channels preferably located at one end of each band; such arrangement would avoid mutual harmful interference between LDOCC on the one hand and MWARA, VOLMET, RDARA communications on the other hand and would also ensure effective use of the available spectrum;

1.2.2 the Board assumes that the technical characteristics of LDOCC such as power used by aeronautical and aircraft stations, in-band and out-of-band radiations, classes of emission (only A3J), signal-to-noise ratio, propagation data to be used, maximum service range and the interference range, would be the same as for MWARA, VOLMET and RDARA;

./.

1.2.3 the repetition distance will be determined by the sum of the maximum service range and the interference range for each frequency band; this would permit determination of the geographical sharing factors where possible; bearing in mind the nature of LDOCC, frequency bands above 6.6 MHz can be used during the night and therefore sharing conditions for such frequency bands during night-time will have to be decided upon.

2. POSSIBLE APPROACH

2.1 It will be necessary to determine from the country or the geographical area, in which the aeronautical station is likely to be situated, the limit of the service area of that station (station A) in each frequency band. The necessary propagation data for this purpose is already available;

2.2 the interference range contours can then be utilised from the boundaries of this service area to determine the interference range of the station A. Any LDOCC station B situated beyond that range whose service range in the same band does not overlap the interference range of the station A can be considered to be technically compatible with station A;

2.3 bearing in mind the requirements of LDOCC submitted by Administrations and the limited number of channels that would be available, it would not be possible to provide exclusive channels to satisfy the requirements of each Administration; any approach to planning of the use of channels to be provided for LDOCC would, therefore, have to be based on grouping of countries which could be in a position to conclude among themselves an arrangement for sharing; such a group of countries should not be too large (it would be difficult to conclude time-sharing arrangements) nor too small (number of channels to be provided would be too high);

2.4 once such areas are determined the following options could be considered;

2.4.1 in the first option, the Conference would merely reserve a certain number of channels for LDOCC. A procedure similar to that contained in Resolution No. Mar2 - 7 (copy attached) could enable the assignment of appropriate specific channels to individual aeronautical stations. Such a procedure could provide for time-sharing arrangements to be concluded among Administrations of countries which are grouped in accordance with paragraph 2.3 above and could also provide for examination of geographical sharing possibilities on the bases of paragraphs 2.1 and 2.2 above, with a view to ensuring an effective use of such channels. It may be noted that Resolution No. Mar2 - 7 also provides for review of the procedures by a future competent conference and the possibility of drawing up a plan at that conference;

2.4.2 alternatively, the Conference itself may wish to prepare and adopt a frequency allotment plan in which the technical sharing possibilities are taken into account in the manner described in paragraphs 2.1 and 2.2 above and Administrations can then assign frequencies to the aeronautical stations in conformity with the plan and such additional procedure which the Conference may wish to adopt.

Annex: 1

RESOLUTION No. Mar2 – 7

Relating to the Use and Notification of Paired Frequencies Reserved for Narrow-Band Direct-Printing Telegraph and Data Transmission Systems in the HF Bands allocated to the Maritime Mobile Service

(see Appendix 15A)

The World Maritime Administrative Radio Conference, Geneva, 1974,

considering

a) that certain sections of the HF bands allocated to the maritime mobile service have been reserved for narrow-band direct-printing telegraph and data transmission systems for use on a paired frequency basis only;

b) that the number of paired frequencies in each band is limited;

c) that although several administrations have systems in operation, the general introduction of such systems is still in the early stages;

d) that a future competent conference may provide for wider bands for narrow-band direct-printing than those available at present;

e) that for this reason it is inopportune to draw up a plan at present but that such a plan might later be rendered necessary by the congested state of channels;

f) that, however, interim measures have to be taken by administrations and by the I.F.R.B. to provide for the orderly introduction of these new paired frequencies;

resolves

1. that paired frequencies in the HF bands reserved for narrow-band direct-printing telegraphy between coast stations and ship stations shall be used by these stations, and shall be notified and recorded in the Master International Frequency Register, in the following manner:

1.1 assignments of pairs of frequencies for transmission and reception shall be made solely to coast stations. Ship stations of any nationality shall use by right for their transmissions the receiving frequencies of the coast stations with which they exchange traffic;

1.2 to achieve efficient frequency usage each administration shall choose the pairs of frequencies to be assigned to coast stations according to its requirements, with the assistance of the I.F.R.B.;

1.3 the assignments thus selected and brought into service shall be notified to the I.F.R.B. on notices as shown in Appendix 1 to the Radio Regulations and administrations shall supply the basic characteristics listed in Section A or B of that Appendix, as appropriate. If the assignments conform to the Table of Frequency Allocations, to the related provisions of the Radio Regulations and to the present Resolution, the Board shall enter them for information in Part 1A of its weekly circular and in the Master Register. No date will be entered in Column 2 of the Master Register and no finding resulting from a technical examination of compatibility with an existing assignment will be issued. However, the date of receipt of the notice by the Board will be entered in Part 1A of the weekly circular and in the Remarks Column of the Master Register. A reference to the present Resolution shall also be entered in the Remarks Column;

1.4 any notice not in conformity with the above-mentioned provisions of the Radio Regulations or with the present Resolution shall be returned to the notifying administration by the I.F.R.B., together with any suggestion which the Board may be able to submit in this respect;

1.5 should difficulties arise between countries using the same channel, the matter shall be settled by mutual arrangements between the administrations concerned;

2. that a future competent conference be invited to examine any difficulties which may have arisen in the application of this Resolution and to take a decision, if necessary, on the status to be given to the above-mentioned assignments or on the conditions for drawing up a plan for the bands and systems in question. The entries in the Master Register under this Resolution shall in no way prejudge any decisions which may be taken by the aforementioned conference;

3. that the present Resolution shall apply to assignments of paired frequencies for narrow-band direct-printing telegraphy as shown in 1.1 above, notwithstanding any other provisions of the Radio Regulations and existing Resolutions of Administrative Radio Conferences that may conflict with this Resolution.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/42-E
20 February 1978
Original: English

COMMITTEE 5

SOME PRELIMINARY VIEWS ON THE FIRST DRAFT PLAN

(Document No. DT/40)

1. The first draft plan contained in Document No. DT/40 uses the sharing matrices prepared by Working Group 5C and the frequency requirements established by Working Group 5B. Table 1 below summarises the results. It is complementary to the data appearing in Document No. DT/40.

TABLE 1

Frequency band (MHz)	Frequency requirements included in Doc. DT/40				No. of channels required	Sharing+ factor
	VOLMET	MWARA	RDARA	TOTAL		
3	12	25	192 + 34*	263	90	2.89
3.5	6	18	141 + 30*	195	75	2.57
4.7	6	18	133 + 22*	179	76	2.36
5.4 (Reg.2)	–	–	30 + 6 *	36	10	3.60
5.6	9	23	183 + 33*	248	85	2.92
6.6	8	20	171 + 26*	225	58	3.88
9	5	23	135 + 32*	195	56	3.48
10	7	17	92 + 20*	136	55	2.47
11.3	8	18	77 + 18*	121	53	2.28
13.3	13	25	33 + 10*	81	65	1.25
18	1	16	14 + 4 *	35	23	1.52
TOTAL	75	203	1201 + 235*	1714	646	2.65 (Average)

* frequency requirement common to more than one aeronautical area.

\+ sharing factor is the average number of frequency requirements which share the same channel.

2. A study of the results contained in Annex 2 to Document No. DT/40 would show that if the numbers of frequency requirements contained in the first part of each band (namely the part restricted to the number of channels available in each band, as shown in Table 1 of Appendix D to Document No. 48) were considered, the conclusions in Table 2 are obtained.

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Table 2

Frequency band (MHz)	Number of available channels	Number and percentage of total frequency requirements contained in the available channels		Sharing factor (in the available channels)
		Number	Percentage	
3	57	225	85.5 %	3.94
3.5	33	145	74 %	4.39
4.7	16	72	40 %	4.5
5.4 (Reg.2)	9	35	97 %	3.89
5.6	66	238	96 %	3.59
6.6	53	221	98 %	4.17
9	49	187	96 %	3.81
10	31	103	75 %	3.32
11.3	41	106	88 %	2.59
13.3	33	46	57 %	1.39
18	23	35	100 %	1.52
Total	411	1407	82 %	3.42 (average)

It may be noted, in comparison, that present Appendix 27 contains 821 allotments in 166 channels with an average sharing factor of 4.95.

3. Discussion

3.1 The maximum sharing factor in each frequency band is no doubt reduced, as compared to that in the present Appendix 27, with increase in the size of certain aeronautical areas such as VOLMET Areas and MWARAs. This was to be expected. However, uneven distribution of frequency requirements in different parts of the world accentuates the reduction in the sharing factors that can be obtained in a planning exercise.

3.2 The first draft plan does not cover the requirements presented by Administrations for Long Distance Operational Control Communications (LDOCC) (as collated in Document No. DT/24 and further supplemented by additional requirements which have been presented by Administrations subsequent to the publication of Document No. DT/24). Requirements of LDOCC and the possible ways to accommodate them are being discussed by Working Group 5B since Monday, 20 February 1978. It is, nevertheless, evident that the channels which would have to be set aside to meet LDOCC requirements will not be available for VOLMET, MWARA and RDARA requirements.

3.3 It is, therefore, necessary that delegations make all possible efforts to reduce the frequency requirements for VOLMET, MWARA and RDARA communications. It is also necessary to reduce the wide divergences in frequency requirements from different geographical areas so that maximum advantage could be derived from the available sharing possibilities to accommodate the frequency requirements within the minimum amount of the spectrum, in accordance with the objectives of the Conference.

4. Preliminary examination of the draft plan, the sharing matrices and the frequency requirements has revealed that in spite of careful preparations, errors still remain. Delegates are requested to examine Document No. DT/40 and communicate in writing, as soon as possible and preferably by 1300 hours, Tuesday, 21 February 1978, all corrections

- in respect of csharing matrices (Annex 3 to Document No. DT/40) to the Chairman of Working Group 5C, Mr. W.T. Young (Box No. 106),
- in respect of frequency requirements (Annex 4 to Document No. DT/40) to the Chairman of Working Group 5B, Mr. K. King (Box No. 123),
- in respect of the draft plan (Annex 2 to Document No. DT/40) to the Secretary of Committee 5, Mr. M. Sant (Box No. 839).

M. CHEF
Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/43-E
20 February 1978
Original : English

WORKING GROUP 6B

Proposed text for Resolutions concerning the treatment of notices and of assignments during the transition period and at the entry into force of the Plan taking into account the consequential changes resulting from proposals contained in the Report of Drafting Group 6B-1 (Document No. 199).

F. URBANY
Chairman of Working Group 6B

Annex : 1

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A N N E X

ADD

RESOLUTION No. Aer 2 - (F)

Relating to the treatment 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

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the Final Acts of this Conference will enter into force on 1 September 1979;

b) that the new Frequency Allotment Plan contained in Appendix 27(Rev.) will enter into force at 0001 hours GMT on 1 February 1983;

c) that some Administrations may wish to implement certain provisions of the revised Frequency Allotment Plan in advance of the latter date when this may be done without causing harmful interference to stations working in accordance with the present Frequency Allotment Plan;

d) that it will therefore be necessary to provide an interim procedure to facilitate transition from the present Frequency Allotment Plan to the new Frequency Allotment Plan;

resolves

1. that during the interim period between the date of entry into force of the Final Acts and the date of entry into force of the new Frequency Allotment Plan :

1.1 the provisions of Nos. 553 to 558 of the Radio Regulations, shall continue to be applied in the examination of notices concerning frequency assignments to aeronautical stations in the Aeronautical Mobile (R) Service in the allotments of the existing Plan;

1.2 all such assignments shall be recorded in the Master International Frequency Register according to the findings reached by the IFRB;

1.3 frequency assignments in a channel of the new Plan shall be examined by the IFRB in order to determine whether the protection specified in Appendix 27 (Part I, Section IIA, paragraph 5) is afforded to the allotments in the existing 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 IIB, paragraph 4;

1.4 all such assignments mentioned in paragraph 1.3 having received a favourable finding shall be recorded in the Master International Frequency Register;

1.5 the date to be entered in Column 2a or 2b of the Master International Frequency Register shall be as follows :

a) if the finding is favourable with respect to Nos. 554 to 557, the date of 29 April 1966 shall be entered in Column 2a;

b) if the finding is favourable with respect to No. 558, the date of 29 April 1966 shall be entered in Column 2b;

c) for all other assignments (including those which may be in conformity with the revised Frequency Allotment Plan but not in conformity with the present Frequency Allotment Plan) the date of receipt of the notice by the IFRB shall be entered in Column 2b;

1.6 any assignment which is in accordance with the revised Frequency Allotment Plan shall be so indicated by the insertion by the IFRB of an appropriate symbol in the Remarks Column of the Master International Frequency Register;

2. that on the date of coming into force of the new Frequency Allotment Plan, the IFRB shall examine those frequency assignments to aeronautical stations in the Aeronautical Mobile (R) Service in the bands allocated exclusively to that service between 2 850 and 17 970 kHz, which are contained in the Master International Frequency Register from the point of view of their conformity with the new Frequency Allotment Plan following the relevant parts of the procedure described in Nos. 553 to 558 of the Radio Regulations, and shall record against them in the Master International Frequency Register a date in Column 2a or 2b as follows :

2.1 assignments with double sideband emission (A3), mentioned in paragraph 3.3 of Resolution / Document No. 199 / and already appearing in the Master Register on the date of coming into force of the new Frequency Allotment Plan, shall retain the date recorded in Column 2a or 2b as appropriate until 1 February 1983. A date in Column 2a for a frequency assignment using double sideband (A3) as mentioned in paragraph 4.4 of proposed Resolution Aer 7, shall be transferred to Column 2b on 2 February 1983. On 1 January 1987 the IFRB shall review the entries and, in consultation with Administrations concerned, cancel those entries which are no longer in use, retaining the others for information only, without a date in Column 2b ;

2.2 assignments found favourable with respect to Nos. 554 to 557 shall have (the date of signing of the AWARC Agreement, Geneva, 1978) entered in Column 2a;

2.3 assignments found favourable with respect to No. 558 shall have (the date of signing of the AWARC Agreement, Geneva, 1978) entered in Column 2b;

2.4 all other assignments shall have (the day AFTER the date of signing the AWARC Agreement, Geneva, 1978) entered in Column 2b;

3. that, on the date of entry into force of the new Frequency Allotment Plan, the allotments therein shall replace in the Master International Frequency Register those allotments in the present Frequency Allotment Plan;

invites

Administrations to notify to the IFRB as soon as possible the cancellation of frequency assignments released as a consequence of bringing into use the allotments in the new Frequency Allotment Plan.

ADD

RESOLUTION No. Aer 2 - (G)

Relating to the implementation of the Frequency Allotment Plan in the high frequency bands allocated exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz

The Aeronautical World Administrative Radio Conference, Geneva, 1978,

considering

a) that the bands allocated exclusively (between 2 850 and 17 970 kHz) to the Aeronautical Mobile (R) Service by the Administrative Radio Conference, Geneva, 1959, were modified by the Extraordinary Administrative Radio Conference, Geneva, 1966;

b) that the 1966 Conference set up procedures to be followed by Administrations relating to the implementation of the modifications;

c) that the necessary provisions were made for the IFRB to carry out these procedures;

recognizing

d) that the Aeronautical Mobile (R) Service is a safety service;

e) that the present Conference has further modified the said bands to provide for SSB techniques;

f) that there is a need for all Administrations to implement the modifications made by the present Conference, with a view to avoiding any harmful interference to the services rendered by stations operating in accordance with the Radio Regulations;

resolves

1. that the assignments existing in the Master Register on 1 February 1983 which are not in conformity with the decisions of the present Conference on that date shall be treated as follows :

1.1 the IFRB will send relevant extracts from the Master Register to the Administrations concerned, within 30 days from 1 February 1983, advising that, in accordance with the terms of the present Resolution, the assignments concerned are to be transferred to the appropriate frequencies within a period of 180 days after the dispatch of the extracts;

1.2 if an Administration does not notify the IFRB of the transfer within the prescribed period, the original entry shall be retained in the Master Register without a date in Column 2 and with a suitable remark in the Remarks Column. The Administrations shall be advised of this action;

2. that, if an Administration so desires, the IFRB shall give it all necessary assistance. In so doing, the IFRB shall apply the provisions of Nos. 629 to 633 of the Radio Regulations.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/44-E(Rev.)
21 February 1978
Original · English

COMMITTEE 6

(Concerns the French text only.)

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/44-E
20 February 1978
Original: English

COMMITTEE 6

The group consisting of Chairman and Vice-Chairman of Committee 6 and representatives of ICAO and I.T.U. (General Secretariat and I.F.R.B.) met and considered in detail the Indian compromise proposal for No. MOD 27/20 and documents 160 and 180 and presents the modified No. 27/20 to Committee 6 for its consideration.

MOD 27/20 The International Civil Aviation Organization (ICAO) co-ordinates radiocommunications of the Aeronautical Mobile (R) Service with international aeronautical operations and this Organization should be consulted in all appropriate cases in the operational use of the frequencies in the Plan.

R.J. BUNDLE
Chairman of Committee 6

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/45(Rev.1)-E
23 February 1978
Original : English

WORKING GROUP 5B

REPORT BY THE CHAIRMAN OF SUB-WORKING GROUP 5B1

A. Introduction

Following Recommendation 3/6 (Document No. 21) of the ICAO COM DIV Meeting in preparation for the present ITU Conference, the USA had submitted a study (Document No. 26) in order to serve as a basis for an estimate of the number of channels for world-wide operational control purposes.

B. Assumptions and calculations

The Sub-Working Group 5B1 has studied this estimation. The basic characteristics were discussed in detail, and it was agreed to make an estimation, which could be used as a first approximation, based on the following assumptions :

1. Present number of contacts/aircraft per day : 2

The number of aircraft to be used is the total number HF-equipped aircraft.

2. Present average transmission time per contact : 3 minutes

3. It was recognized that in some cases the number of contacts/aircraft may exceed 2. However, in these cases the average transmission time per contact could be estimated to be less than 3 minutes. It was therefore agreed to assume that the average transmission time per HF-equipped aircraft is 6 minutes/day.

4. Number, as of 1975, of HF-equipped aircraft split up in appropriate regions according to their home base :

EUR	741
NAM	626
SEA	159
SAM	129
MID	121
AFI	153
CAR	54
PAC	108
Total	2,091

5. Annual growth in average transmission time/aircraft per day in the regions mainly consisting of developed countries : 2.5 %

6. Annual growth in aircraft fleet in these regions : 2.25 %.

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These assumptions result in a net effect of 4.75 % growth per year. Over 15 years the resulting growth would then be 200 %. It was agreed to apply this growth for the aircraft fleets in the regions EUR, NAM and PAC.

For those regions mainly consisting of developing countries it was assumed that the resulting growth over 15 years would be 300 %.

7. Total average transmission time per day for aircraft with corresponding aeronautical stations :

Region	1975	1990
EUR	4,446	8,892
NAM	3,756	7,512
SEA	954	2,862
SAM	774	2,322
MID	726	2,178
AFI	918	2,754
CAR	324	972
PAC	648	1,296

8. Percentage of total traffic by sub-band :

Frequency group	I	II	III	IV	V	VI
Bands (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	21
EUR	1	24	32	23	3	17
NAM	14	28	32	12	10	4
SEA	1	9	35	31	23	1
SAM	3	20	33	20	12	12
MID	3	20	33	20	12	12
AFI	3	20	33	20	12	12
CAR	3	20	33	20	12	12
PAC	1	9	35	31	23	1

9. The distribution of transmission time (minutes/day) by sub-band, year 1990 projection :

Frequency group	I	II	III	IV	V	VI
EUR	89	2,134	2,845	2,045	267	1,512
NAM	1,052	2,103	2,404	901	751	300
SEA	29	258	1,002	887	658	29
SAM	70	464	766	464	279	279
MID	65	436	719	436	261	261
AFI	83	551	909	551	330	330
CAR	29	194	321	194	117	117
PAC	13	117	454	402	298	13

10. Average usable time per day by sub-band can, for planning purposes, be supposed to be 10 hours. This value is based on the Appendix E to Document No. 26, which is an extract from a document to the IFRB Seminar, 1976.

11. During the usable time an occupancy of 40 % on a channel is anticipated for planning purposes. This implies a transmission time per day on a channel of 240 minutes.

C. Number of traffic channels

The calculated number of channels for long-distance operational control purposes, based on the agreed assumptions as stated in Section B, year 1990 projection, are given below :

Frequency group	I	II	III	IV	V	VI
EUR	1	9	12	9	2	7
NAM	4*)	9	10	4	4	2
SEA	1	2	5	4	3	1
SAM	1	2	4	2	2	2
MID	1	2	3	2	2	2
AFI	1	3	4	3	2	2
CAR	1	1	2	1	1	1
PAC	1	1	2	2	2	1

*) Although the assumptions would result in 5 channels in this case, it was agreed to accept only 4 channels. With other factors unchanged the channel occupancy will increase from 35 % to 44 %.

D. Number of frequencies

The necessary number of frequencies to be allotted world-wide in order to accommodate the calculated numbers of traffic channels were estimated as follows :

1. Frequency Group I (3 and 3.5 MHz)

Frequencies used in NAM were considered not to be possible to share with frequencies used in CAR and SAM. Also, sharing with EUR would not be possible since the flight traffic over the North Atlantic during night-time is essential, and these frequency bands are suitable for communication with the aircrafts involved.
For the remaining regions it was considered possible to share frequencies with either of NAM, CAR, SAM or EUR.

Resulting number of frequencies : 4+1+1+1 = 7.

2. Frequency Group II (4.7, 5.6 and 6.6 MHz)

The greatest difficulty in this group was considered to be found in EUR/MID/AFI, where sharing would in general not be possible. However, it was agreed that stations on one frequency in northern Europe would be able to share the frequency if it was to be used also in southern Africa.

Resulting number of frequencies : 9+2+3-1 = 13.

3. Frequency Group III (9, 10 and 11.3 MHz)

Also here the greatest difficulty was found in EUR/MID/AFI. Sharing between northern EUR and southern AFI was not considered possible. Furthermore, stations in the western part of SEA should not share with aeronautical stations in these regions. One of the SEA channels should therefore be on separate frequencies from those of EUR/MID/AFI.

Resulting number of frequencies : 12+3+4+1 = 20.

4. Frequency Group IV (13.3 MHz)

Again, the most congested area is EUR/MID/AFI. However, taking into account the limited number of frequencies in this band (33), it was agreed to accept a somewhat higher channel occupancy by reducing the frequencies by 1.

Resulting number of frequencies : 9+2+3-1 = 13.

5. Frequency Group V (18 MHz)

Frequencies in this band should not be reused taking into account the interference range, which may be world-wide. However, considering that the number of frequencies in this band is even less (23) than in 13 MHz, it was agreed that stations for a great part of the traffic projected to use this band might be able to use the 21 MHz band instead.

Resulting number of frequencies : 10.

6. Frequency Group VI (21 MHz)

In this band it was agreed that the frequencies should not be reused, due to world-wide interference ranges.

Resulting number of frequencies : 18.

7. Summary table

Frequency group	I	II	III	IV	V	VI
Number of frequencies	7	13	20	13	10	18

These numbers, as explained above, result from direct coordination of the numbers of channels that were based on statistically valid information.

E. Non-scheduled air carriers

Due to different practices in different countries it was not possible to find a generally applicable method for the long-distance operational control for non-scheduled air carriers.

However, for the air carriers in the NAM region, other than international scheduled air carriers the number of channels as estimated on similar assumptions, as in Section B above, had been given by the USA[1)] in Document No. 26. It was agreed to reduce these numbers to the following, on the basis of higher channel loading :

Frequency group	I	II	III	IV	V	VI
NAM	-	2	2	-	2	1

1) Requirements have been submitted accordingly by the USA to IFRB as a reply to Circular-letter No. 384 and in a conference document.

F. Summary of requirements

A summary of the requirements for long-range operational control communications, as stated in Document No. DT/24(Rev.1), is given below. It does not include stated RDARA channels.

Frequency group	I	II	III	IV	V	VI
EUR	28	61	58	27	2	19
NAM	11	23	24	8	10	5
SEA	9	15	27	11	8	9
SAM	12	20	25	11	11	7
MID	12	18	28	12	12	10
AFI	19	40	55	22	19	19
CAR	2	6	6	2	3	2
PAC	3	16	11	7	7	3

K. BJÖRNSJÖ
Chairman, Sub-Working Group 5B1

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/45-E
21 February 1978
Original : English

WORKING GROUP 5B

REPORT BY THE CHAIRMAN OF SUB-WORKING GROUP 5B1

A. Introduction

Following Recommendation 3/6 (Document No. 21) of the ICAO COM DIV Meeting in preparation for the present ITU Conference, the USA had submitted a study (Document No. 26) in order to serve as a basis for an estimate of the number of channels for world-wide operational control purposes.

B. Assumptions and calculations

The Sub-Working Group 5B1 has studied this estimation. The basic characteristics were discussed in detail, and it was agreed to make an estimation, which could be used as a first approximation, based on the following assumptions :

1. Present number of contacts/aircraft per day : 2

The number of aircraft to be used is the total number HF-equipped aircraft.

2. Present average transmission time per contact : 3 minutes

3. It was recognized that in some cases the number of contacts/aircraft may exceed 2. However, in these cases the average transmission time per contact could be estimated to be less than 3 minutes. It was therefore agreed to assume that the average transmission time per HF-equipped aircraft is 6 minutes/day.

4. Number, as of 1975, of HF-equipped aircraft split up in appropriate regions according to their home base :

EUR	741
NAM	626
SEA	159
SAM	129
MID	121
AFI	153
CAR	54
PAC	108
Total	2,091

5. Annual growth in average transmission time/aircraft per day in the regions mainly consisting of developed countries : 2.5 %

6. Annual growth in aircraft fleet in these regions : 2.25 %.

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These assumptions result in a net effect of 4.75 % growth per year. Over 25 years the resulting growth would then be 319 %. It was agreed to apply this growth for the aircraft fleets in the regions EUR, NAM and PAC.

For those regions mainly consisting of developing countries it was assumed that the resulting growth over 25 years would be 500 %.

7. Total average transmission time per day for aircraft with corresponding aeronautical stations :

Region	1975	2000
EUR	4,446	14,183
NAM	3,756	11,982
SEA	954	4,770
SAM	774	3,870
MID	726	3,630
AFI	918	4,590
CAR	324	1,620
PAC	648	2,067

8. Percentage of total traffic by sub-band :

Frequency group	I	II	III	IV	V	VI
Bands (MHz)	3, 3.5	4.7, 5.6, 6.6	9, 10, 11.3	13.3	18	21
EUR	1	24	32	23	3	17
NAM	14	28	32	12	10	4
SEA	1	9	35	31	23	1
SAM	3	20	33	20	12	12
MID	3	20	33	20	12	12
AFI	3	20	33	20	12	12
CAR	3	20	33	20	12	12
PAC	1	9	35	31	23	1

9. The distribution of transmission time (minutes/day) by sub-band, year 2000 projection :

Frequency group	I	II	III	IV	V	VI
EUR	142	3,404	4,539	3,262	425	2,411
NAM	1,677	3,355	3,834	1,438	1,198	479
SEA	48	429	1,670	1,479	1,097	48
SAM	116	774	1,277	774	464	464
MID	109	726	1,198	726	436	436
AFI	138	918	1,515	918	551	551
CAR	49	324	535	324	194	194
PAC	21	186	723	641	475	21

10. Average usable time per day by sub-band can, for planning purposes, be supposed to be 10 hours. This value is based on the Appendix E to Document No. 26, which is an extract from a document to the IFRB Seminar, 1976.

11. During the usable time an occupancy of 40 % on a channel is anticipated for planning purposes. This implies a transmission time per day on a channel of 240 minutes.

C. Conclusion

The number of channels based on the agreed assumptions by sub-band at up to 40 % occupancy, year 2000 projection :

Frequency group	I	II	III	IV	V	VI
EUR	1	15	19	14	2	10
NAM	7	14	16	6	5	2
SEA	1	2	7	7	5	1
SAM	1	4	6	4	2	2
MID	1	3	5	3	2	2
AFI	1	4	7	4	3	3
CAR	1	2	3	2	1	1
PAC	1	1	3	3	2	1

D. Non-scheduled air carriers

Due to different practices in different countries it was not possible to find a generally applicable method.

However, for the air carriers in the NAM region, other than international scheduled air carriers the following number of channels as estimated on similar assumptions, as in Section B above, were given :

Frequency group	I	II	III	IV	V	VI
NAM	4	5	4	2	2	1

E. Summary of requirements

A summary of the requirements for long-range operational control communications, as stated in Document No. DT/24(Rev.1), is given below. It does not include stated RDARA channels.

Frequency group	I	II	III	IV	V	VI
EUR	28	61	58	27	2	19
NAM	11	23	24	8	10	5
SEA	9	15	27	11	8	9
SAM	12	20	25	11	11	7
MID	12	18	28	12	12	10
AFI	19	40	55	22	19	19
CAR	2	6	6	2	3	2
PAC	3	16	11	7	7	3

K. BJÖRNSJÖ
Chairman, Sub-Working Group 5B1

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/46-E
22 February 1978
Original: English

COMMITTEE 6

In response to the decision taken at Committee's second meeting concerning the indication of assigned frequencies in relation to the carrier (reference) frequencies given in the Table in No. 27/16, the following text is presented for the consideration of Committee 6.

ADD 27/16.1 For the calculation of the assigned frequency for a carrier (reference) frequency given in the table, refer to No. 27/72 and No. 27/73.

R.J. BUNDLE
Chairman of Committee 6

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/47-E
22 February 1978
Original : French, English, Spanish

LIST OF DOCUMENTS
(Documents 101 to 200)

C = Committee
PL = Plenary
WG = Working Group

Number	Origin	Title	Destination
101	Norway	Frequency requirements for MWARA, Sub-RDARA and the World-Wide Long Distance Operational Control Service	C.5
102	Japan	Proposals	C.5
103	Argentina	Frequency requirements	C.5
104	Tunisia	Frequency requirements	C.5
105	Saudi Arabia	Proposal for amendments to boundaries of MWARA (MID)	C.5
106	Fiji	Frequency requirements	C.5
107	Cameroon	Frequency requirements	C.5
108	Rep.of Guinea	Frequency requirements	C.5
109	Uruguay	Frequency requirements additional to those requested in reply to IFRB Circular Letter No. 386	C.5
110	Uruguay	Proposals	C.5
111	Mauritius	Revised frequency requirements	C.5
112	Italy	Frequency requirements	C.5
113	Angola	Amendments to Document No. 87 (RDARA boundary descriptions and allotment requirements)	C.5
114	Senegal	Frequency requirements	C.5
115	Sao Tome and Principe	Frequency requirements	C.5
116	Colombia	Proposal	C.5
117	Colombia	Proposal	C.5

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Number	Origin	Title	Destination
118	Roumania	Frequency requirements for MWARA NCA	C.5
119	Algeria	Change in the boundaries of MWARA-AFI	C.5
120 + Rev.	Upper Volta	Frequency requirements	C.5
121	Spain	Information on frequency requirements	C.5
122	Ecuador	Frequency requirements	C.5
123	Panama (Rep. of)	Proposals	C.5
124	Brazil	Frequency requirements	C.5
125	C.6	Note from the Chairman of Committee 6 to Chairmen of Committee 4 and Committee 5	C.4, 5
126	WG 4A	Report of the Working Group 4A to Committee 4	C.4
127	C.2	Summary record of the first meeting of Committee 2 (Credentials)	C.2
128	C.4	Summary record of the first meeting of Committee 4 (Technical)	C.4
129	Niger	Proposal	C.4
130	Algeria, Cameroon, (Guinea (Rep. of), Ivory Coast, Kenya, Niger, Nigeria Mauritania, Senegal	Requirements for families of frequencies for MWARA-AFI	C.5
131	Brazil	Boundaries of the MWARA-SAT	C.5
132	WG 4B	First report of Working Group 4B to Committee 4	C.4
133	Norway	Maps of the Polar Regions	C.4
134	WG 4B	Second report of Working Group 4B to Committee 4	C.4
135	Uruguay and Brazil	Proposals	C.4, 5

Number	Origin	Title	Destination
136	United Kingdom	Frequency Band 21 870-22 000 kHz	C.4, 5
137	WG 4A	Second Report of Working Group 4A to Committee 4	C.4
138	United Kingdom	Resolution relating to the use of higher frequency bands in the Aeronautical Mobile (R) Service for communication and meteorological broadcasts	C.6
139	United States	Principles for the transition to Appendix 27 (Rev.)	C.4, 5, 6
140	United States	Resolution relating to the transition to the Frequency Allotment Plan in the high frequency bands allocated exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz in Appendix 27(Rev.)	C.4, 5, 6
141	C.3	Summary record of the first meeting of Committee 3 (Budget control)	C.3
142	Yemen (P.D.R.)	Extension of Mid-MWARA Southern boundary	C.5
143	Yemen (P.D.R.)	Extension of RDARA 5A boundary	C.5
144	WG 6A	First Report of Working Group 6A	C.6
145	WG 6A	Second Report of Working Group 6A - Public correspondence	C.6
146	C.5	Summary record of the first meeting of Committee 5 (Planning)	C.5
147	C.5	Summary record of the second meeting of Committee 5 (Planning)	C.5
148	WG 6A	Third report of the Working Group 6A - Resolutions and Recommendations	C.6
149	C.5	Summary record of the third meeting of Committee 5 (Planning)	C.5
150	German Dem.Rep.	Frequency Band 21 870 - 22 000 kHz	C.5
151	Netherlands	Proposals	C.5

Number	Origin	Title	Destination
152	Argentina	Frequency requirement in the 21 870 - 22 000 kHz Band	C.4, 5
153	Peru	Proposals	C.5
154	Egypt	Proposals	C.6
155	WG C.2	First Report of Working Group of Committee 2 (Credentials)	C.2
156	WG 5A	Report of Working Group 5A	C.5
157	India	Frequency band 21 870 - 22 000 kHz	C.5
158	Afghanistan	Frequency band 21 870- 22 000 kHz	C.5
159	WG 4B	Third and final report from Working Group 4B to Committee 4	C.4
160	WG 6A	Fourth Report of Working Group 6A	C.6
161	Paraguay	Frequency requirement in the 21 870-22 000 kHz band	C.4, 5
162	Greece	Frequency requirement in the 21 870-22 000 band	C.5
163	Roumania	Frequency band 21 870-22 000 kHz	C.5
164	WG 5B	Frequency requirements for major world air route areas	C.5
165	C.5	First Report of Committee 5 to the Plenary	PL, C.7
166	PL	Minutes of the first Plenary Meeting	PL
167	Bolivia	Proposed modification to existing RDARA-13	C.5
168	Paraguay	Proposed modification to existing RDARA-13	C.5
169	C.4	Note from the Chairman of Committee 4 to the Chairman of Committee 7	C.7
170	C.4	Note from the Chairman of Committee 4 to the Chairmen of Committees 5 and 6	C.5, 6
171	Australia	Frequency band 21 870-22 000 kHz	C.5
172	Egypt	Frequency band 21 870-22 000	C.5
173	Yugoslavia	Frequency requirements in the 22 000 kHz band	C.5

Number	Origin	Title	Destination
174	Portugal	Frequency band 21 870 - 22 000 kHz	C.5
175	WG 6A	Fifth Report of Working Group 6A : Resolutions and Recommendations	C.6
176	WG 6A	Sixth Report of Working Group 6A	C.6
177	WG 6B	First Report of Working Group 6B to Committee 6	C.6
178	Ethiopia	Frequency band 21 870 - 22 000 kHz	C.5
179	Nigeria	Frequency requirements in the 21 970 - 22 000 kHz band	C.5
180	United Kingdom & United States	Modification to article 9 and to Appendix 27	C.6
181	C.4	Report of Committee 4 to the Plenary Meeting	PL
182	Saudi Arabia	Frequency requirements in the 21 870 - 22 000 kHz band	C.5
183	ICAO	ICAO's role in the transition process	C.6
184	Japan	Frequency requirements in the 22 000 kHz band	C.5
185	WG 5B	Frequency requirements for VOLMET areas	C.5
186	C.6	Report of C.6 Drafting Group to C.6	C.4, 5, 6
187	Cameroon	Frequency allotment in the band 21 870-22 000 kHz	C.5
188	United States	Frequency requirements in the 21 870-22 000 kHz band	C.5
189	Spain and Switzerland	Draft Recommendations relating to public correspondence with aircraft	C.6
190	Yemen A.R.	Frequency requirements	C.5
191	Syrian A.R.	Frequency requirements in the 22 000 kHz band	C.5
192	C.6	Resolution relating to the use of higher frequency bands in the Aeronautical Mobile (R) Service and the Aeronautical Mobile-Satellite (R) Service for communication and for meteorological broadcasts	C.6

Number	Origin	Title	Destination
193	Pakistan	Frequency requirements in the 22 000 kHz band	C.5
194	Bolivia	Frequency requirements in the band 21 870 - 22 000 kHz	C.5
195	C.4	Summary record of the second meeting of C.4 (Technical)	C.4
196	Philippines	Frequency requirements in the 22 000 kHz band	C.5
197	Dem.People's Rep. of Korea	Frequency requirements in the 21 870 - 22 000 kHz band	C.5
198	Angola	Amendments to documents No. 87 and No. 113	C.5
199	WG 6B1	Report on Drafting Group 6B1	WG 6B
200	Paraguay	Amendment to Documents Nos. 165 and 168	C.5, 7

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/48-F/E/S
22 février 1978
Original : français
anglais
español

GROUPE DE TRAVAIL 6B
WORKING GROUP 6B
GRUPO DE TRABAJO 6B

Texte proposé pour un nouveau paragraphe 1 à inclure dans le projet de Résolution N° Aer 2-/G/ (Document N° 233).

"1) que, quatre vingt-dix jours avant la date d'entrée en vigueur du Plan, les administrations notifieront à l'I.F.R.B. les modifications destinées à rendre conformes au nouveau Plan les inscriptions existantes dans le Fichier de référence."

- Renuméroter en conséquence les paragraphes suivants.

Proposed text for a new paragraph 1 to be included in draft Resolution No. Aer 2-/G/ (Document No. 233).

"1) that, ninety days before the entry into force of the new Plan, the Administrations shall notify to the I.F.R.B. the modifications necessary to bring the assignments existing in the Master Register in conformity with the new Plan."

- Renumber the following paragraphs accordingly.

Texto propuesto para un nuevo párrafo 1 que debe incluirse en el proyecto de Resolución N.° Aer 2-/G/ (Documento N.° 233).

"1) que, noventa días antes de la fecha de entrada en vigor del nuevo Plan, las administraciones notificarán a la I.F.R.B. las modificaciones destinadas a ajustar al nuevo Plan las asignaciones existentes en el Registro."

- Numerar en consecuencia los párrafos siguientes.

F. URBANY
Président du Groupe de Travail 6B

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/49-E
23 February 1978
Original : French

COMMITTEE 3

Note by the Secretary-General

SITUATION REGARDING THE ACCOUNTS OF THE AERONAUTICAL CONFERENCE
AT 24 FEBRUARY 1978

A statement regarding the situation of the accounts of the Aeronautical Conference at 24 February 1978 is circulated herewith.

It shows a margin of 122,000 Swiss francs.

M. MILI
Secretary-General

Annex : 1

ARCHIVES U.I.T. GENÈVE

ANNEX

Item	Title	Budget approved by AC	Revised budget 1)	Transfers of credits: Item/Item	Transfers of credits: sub-head/sub-head 2)	Credits available	Expenditure at 24 February 1978: actual	committed	estimated	total	Difference +/-
1	2	3	4	5	6	7	8	9	10	11	12
	Sub-head I - Staff										
11.101	Salaries and related expenses										
	Interpret.	520,000	520,000			520,000	-	472,000	-	472,000	+ 48,000
	Common services	3)	-								
		520,000	520,000	-	-	520,000	-	472,000	-	472,000	+ 48,000
11.102	Travel expenses										
	Travel expenses	86,000	86,000	-	-	86,000	6,196	43,572	19,232	69,000	+ 17,000
11.103	Insurance										
	Sickness	8,000	8,000				-	-	7,000	7,000	+ 1,000
	Accidents	3,000	3,000				-	-	3,000	3,000	-
		11,000	11,000	-	-	11,000	-	-	10,000	10,000	+ 1,000
TOTAL	SUB-HEAD I	617,000	617,000	-	-	617,000	6,196	515,572	29,232	551,000	+ 66,000

Item	Title	Budget approved by AC	Revised budget 1)	Transfers of credits: Item/Item	Transfers of credits: sub-head/sub-head 2)	Credits available	Expenditure at 24 February 1978: actual	committed	estimated	total	Difference +/-
1	2	3	4	5	6	7	8	9	10	11	12
Sub-head II - Premises and equipment											
11.111	Premises, furniture, machines										
	Rental for CICG	268,000	268,000	-	-	268,000	92,500	94,450	28,050	215,000	+ 53,000
	Cleaning	6,000	6,000	-	-	6,000	-	4,800	1,200	6,000	-
	Supervision	4,000	4,000	-	-	4,000	-	-	4,000	4,000	-
	Lease of machines	5,000	5,000	-	-	5,000	1,848	2,090	1,062	5,000	-
		283,000	283,000	-	-	283,000	94,348	101,340	34,312	230,000	+ 53,000
11.112	Computer										
	ITU computer	5,000	5,000	-	-	5,000	-	1,800	3,200	5,000	-
11.113	Document production										
	Doc. prod.	60,000	60,000	-	-	60,000	15,475	7,800	36,725	60,000	-
11.114	Office supplies and overheads										
	Supplies	10,000	10,000	-	-	10,000	1,050	5,500	3,450	10,000	-
	Local transport	5,000	5,000	-	-	5,000	-	5,000	-	5,000	-
		15,000	15,000	-	-	15,000	1,050	10,500	3,450	15,000	-

Item	Title	Budget approved by AC	Revised budget 1)	Transfers of credits: Item/Item	Transfers of credits: sub-head/sub-head	Credits available	Expenditure at 24 February 1978: actual	committed	estimated	total	Difference +/-
1	2	3	4	5	6	7	8	9	10	11	12
11.115	Post, Telegraph and Telephone										
	Post	6,000	6,000	-	-	6,000	3,368	-	6,632	10,000	- 4,000
	Telephone	3,000	3,000	-	-	3,000	-	-	-	-	+ 3,000
	Telegrams	1,000	1,000	-	-	1,000	-	-	-	-	+ 1,000
		10,000	10,000	-	-	10,000	3,368	-	6,632	10,000	-
11.116	Technical material	3,000	3,000	-	-	3,000	-	-	-	-	+ 3,000
11.117	Sundry and unforeseen	5,000	5,000	-	-	5,000	837	-	4,163	5,000	-
TOTAL	SUB-HEAD II	381,000	381,000	-	-	381,000	115,078	121,440	88,482	325,000	+ 56,000
Sub-head III - Other expenses											
11.121	Final Acts of the Conference										
	Final Acts	50,000	50,000	-	-	50,000	-	-	50,000	50,000	-
	Chinese transl.	12,500	12,500	-	-	12,500	-	-	12,500	12,500	-
	Russian transl.	12,500	12,500	-	-	12,500	-	-	12,500	12,500	-
TOTAL	SUB-HEAD III	75,000	75,000	-	-	75,000	-	-	75,000	75,000	-
GRAND TOTAL		1,073,000	1,073,000	-	-	1,073,000	121,274	637,012	192,714	951,000	+ 122,000

Item	Title	Budget approved by AC	Revised budget 1)	Transfers of credits		Credits available	Expenditure at 24 February 1978				Difference +/-
				Item/ Item	sub-head/ sub-head 2)		actual	committed	estimated	total	
1	2	3	4	5	6	7	8	9	10	11	12
Pro mem. :											
Budget 1976											
Preparatory work		350,000	363,800			363,800	26,010	-	-	26,010	+ 337,790

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

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

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

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/50-E
23 February 1978
Original : French

COMMITTEE 3

D R A F T

FINAL REPORT OF THE BUDGET CONTROL COMMITTEE
TO THE PLENARY MEETING

The Budget Control Committee held two meetings during the Conference and examined the various points arising from its terms of reference.

Under Chapter XI, Article 77, Point 5, Nos. 442-445 of the International Telecommunication Convention, the task of Committee 3 is :

a) to determine the organization and the facilities available to the delegates, and

b) to examine and approve the accounts for expenditure incurred throughout the duration of the Conference.

1. Determination of the organization and the facilities available to the delegates

Since no delegation has ventured any criticism on the subject, Committee 3 notes that the organization and the facilities made available to the delegates have given entire satisfaction.

2. Budget of the Conference

Committee 3 noted the budget of the Conference as adopted by the ITU Administrative Council, namely :

a) preparatory work included in the 1976 budget : 350,000 Swiss francs, raised to 363,800 Swiss francs to take account of salary adjustments pursuant to Administrative Council Resolution No. 647. Committee 3 noted that the Union's accounts show, under this head, a total expenditure of 26,010 Swiss francs, or 337,790 Swiss francs less than the revised budget. This large difference is due to the fact that the credit in question was granted by the Administrative Council in 1975, that the Aeronautical Conference was postponed for one year, and that, from 1977, the structure of the budget has been changed;

b) the work of the Conference itself, included in the 1977 budget : 1,073,000 Swiss francs.

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3. Situation of Conference expenditure in 1978

In accordance with Nos. 442-445 of the Convention, the Budget Control Committee shall present a Report to the Plenary Meeting showing, as accurately as possible, the estimated total expenditure of the Conference.

Accordingly, Annex 1 contains a statement showing the budget allocated by the Administrative Council with the planned breakdown according to the various sub-heads and items, any credit transfers, and expenditure incurred up to 24 February 1978. This statement is supplemented by an indication of the commitments to expenditure up to that date and estimates of foreseeable expenditure until the close of the Conference.

It can be seen from this statement that total expenditure is estimated at Swiss francs, which leaves a margin of Swiss francs as compared to the budget.

4. Final Acts of the Conference

Administrative Council Resolution No. 83 (amended) provides that :

"... if a conference or meeting prints, for its own use, documents of which typographical composition can subsequently be used, in full or in part, for the printing of the Final Acts, it must bear a percentage of the composition costs and the whole of the printing costs of the said documents;

... the percentage of the composition cost mentioned in a) above ... shall be decided by the plenary meeting of the conference or meeting.".

The documents constituting the Final Acts of the Conference submitted to delegations for signature will be produced in the Union's printing unit. These documents will be used in the production of the sales edition of the Final Acts. The Plenary Meeting of the Conference, therefore, has to decide the percentage of the composition cost to be borne by the Conference Budget and by the Supplementary Publications Budget respectively.

In the light of the decisions taken by previous conferences, the Budget Control Committee proposes that :

1/3 of the costs shall be charged to the Conference Budget, and

2/3 of the cost shall be charged to the Supplementary Publications Budget.

The estimate of expenditure contained in Annex 1 takes account of this apportionment of the costs.

5. Contributions of recognized private operating agencies and of non-exempted international organizations

Under Article 16 of the ITU Financial Regulations, the Report of the Budget Control Committee to the Plenary Meeting must include a list of the recognized private operating agencies and the international organizations which are required to contribute to the expenses of the Conference. That list should be supplemented by a list of the international organizations exempted from any contribution under No. 548 of the Convention.

The statement in question is contained in Annex 2 to this document.

* * *

Under No. 445 of the Convention, this Report, together with the observations of the Plenary Meeting, shall be transmitted to the Secretary-General for submission to the Administrative Council at its next annual session.

* * *

The Plenary Meeting is invited to approve this Report.

A.M. DIONE
Chairman

Annex

ANNEX 1

PARTICIPATION OF INTERNATIONAL ORGANIZATIONS AND RECOGNIZED PRIVATE OPERATING AGENCIES IN THE WORK OF THE CONFERENCE

	Class of contribution
1. International organizations	
i) United Nations	*)
United Nations Environment Programme	*)
ii) Specialized agencies	
International Civil Aviation Organization (ICAO)	*)
iii) Other organizations	
Agency for the Safety of Air Navigation in Africa and Madagascar (ASECNA)	½
International Air Transport Association (IATA)	*)
International Amateur Radio Union (IARU)	*)
2. Recognized private operating agencies	
None	

*) Exempted from any contribution under ITU Administrative Council Resolution No. 574.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/51-E
25 February 1978
Original : English

COMMITTEE 6

In response to the request from certain delegates, the statement made by Mr. Berrada, Member IFRB, in Committee 6 concerning the existing procedures in the Radio Regulations which may be considered as possible examples for the frequencies designated for worldwide use, is annexed herewith for general information.

Annex : 1

ARCHIVES U.I.T. GENÈVE

A N N E X

The existing procedures in the Radio Regulations which could be used as a guide for a procedure applicable to the frequencies for long-range operation are contained in Articles 9, 9A, 9B and in Resolution Mar2 - 7. Document No. DT/41 refers to Resolution Mar2 - 7. All these procedures are summarized below :

1. Article 9 : In this procedure, the Board examines frequency assignment notices with reference to Nos. 502 or 503 and, depending on the finding, the assignment is recorded; two points should be noted in connection with this procedure :

a) a data 2a is allocated only in the frequency bands below about 4 000 kHz;

b) in view of the limited number of channels which would be intended for worldwide use, only the first few notifications would be given a favourable finding.

2. Article 9A : The procedure in Article 9A is based on coordination before notification for each frequency assignment. Coordination begins with an advanced publication designed to inform all Administrations of the project drawn up by an Administration. In a second stage requests for coordination are again published and subsequently either coordination is successfully effected or, if it is not, the IFRB examines the probabilities of harmful interference with a view to recording the assignment.

3. Article B : The procedure in Article 9B concerns allotments and is intended to update the Plan contained in Appendix 25. It is based on the publication of any project involving a modification (addition or modification of an allotment), coordination with the countries concerned, and publication of the revision of the Plan. When an Administration does not obtain agreement, the IFRB carries out a technical examination. It should be pointed out that, in accordance with Article 9B, an allotment can be deleted from the Plan if it is not used for a period of 12 months (39EV).

4. Resolution Mar2 - 7 : This procedure is based on :

- the communication of requirements to the IFRB;
- the study of sharing possibilities by the IFRB;
- the publication of all planned uses for purposes of information;
- there is no technical examination and the recording in the Register does not involve the entry of a date in column 2.

5. Other procedures are given in the Regional Broadcasting Agreements.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/52-F/E/S
25 February 1978
Original: français
anglais
espagnol

DISTRIBUTION LIMITEE AUX CHEFS DE DELEGATION (suivant décision de la Commission de Direction en date du 16 février 1978)

LIMITED DISTRIBUTION TO THE HEADS OF DELEGATIONS (according to the decision of the Steering Committee on 16 February 1978)

DISTRIBUCIÓN LIMITADA A LOS JEFES DE DELEGACIÓN (según decisión de la Comisión de Dirección de fecha 16 de febrero de 1978)

PROJET DE PLAN - DRAFT PLAN - PROYECTO DE PLAN

Le deuxième projet de Plan a été élaboré en tenant compte des besoins en fréquences acceptés par la Commission 5 le 25 février 1978 ainsi que des limites des zones aéronautiques et des matrices de partage stipulées dans le Document N° 234(Rév.1).

Un résumé des résultats obtenus figure dans l'Annexe 1.

Le détail des résultats correspondant à chaque bande de fréquences figure dans l'Annexe 2. On trouve dans l'Annexe 3 les besoins en fréquences qui ont été utilisés (voir les Documents Nos 164(Rév.3), 185(Rév.1) et 207(Rév.2)).

Taking into account the frequency requirements agreed to in Committee 5 on 25 February 1978 and the boundaries of the aeronautical areas and sharing matrices given in Document No. 234(Rev.1), the second Draft Plan has been prepared.

The summary of the results obtained appears in Annex 1.

Detailed results for each frequency band appear in Annex 2. Annex 3 contains the frequency requirements that were used (cf. Documents Nos. 164 (Rev.3), 185(Rev.1) and 207(Rev.2).

Ha sido preparado el segundo proyecto de Plan, teniendo en cuenta las necesidades de frecuencias adoptadas en Comisión 5 el 25 de febrero de 1978, así como los límites de las zonas aeronáuticas y las matrices de compartición indicados en el Documento N.° 234(Rev.1).

En Anexo 1 figura el resumen de los resultados logrados.

En Anexo 2 se indican los resultados detallados para cada banda de frecuencias. El Anexo 3 hace mención de las necesidades de frecuencias utilizadas (véanse los Documentos N.os 164(Rev.3), 185(Rev.1) y 207(Rev.2).

Annexes: 3

M. CHEF
Président de la Commission 5

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ANNEXE 1 - ANNEX 1 - ANEXO 1

Resumé des résultats obtenus

Summary of results obtained

Resumen de los resultados obtenidos

Bande MHz	Nombre total de voies disponibles dans la bande	Nombre total de voies requises pour satisfaire aux besoins declarés pour ZLAMP, ZLARN et VOLMET
Band MHz	Total number of channels available in the band	Total number of channels required to satisfy the declared requirements for MWARA, RDARA and VOLMET
Banda MHz	Número total de canales disponibles en la banda	Número total de canales requeridos para satisfacer las necesidades declaradas para ZRMP, ZRRN y VOLMET
3	57	75
3.5	33	60
4.7	16	38
5.4 (Reg.2)	9	10
5.6	66	67
6.6	53	51
9	49	54
10	31	50
11.3	41	63
13.3	33	55
18	23	15

ANNEXE 2 - ANNEX 2 - ANEXO 2

Résultats detaillés pour chaque bande de fréquence

Detailed results for each frequency band

Resultados detallados para cada banda de frecuencia

Titre des colonnes

Column headings

Títulos de las columnas

Colonne 1	Numéro de référence, suivi d'un numéro de ligne, dans l'ordre consécutif à chaque bande de fréquence
Column 1	Reference number followed by a line number in consecutive order within each frequency band
Columna 1	Número de reference seguido de un número de línea por orden consecutivo en cada banda de frecuencia
Colonne 2	Zone d'emploi autorisé
Column 2	Authorised area of use
Columna 2	Zona de uso autorizado
Colonne 3	Observations
Column 3	Remarks
Columna 3	Observaciones

Colonne 2
Column 2
Columna 2

M = ZLAMP / MWARA / ZRMP
R = ZLARN / RDARA / ZRRN
V = VOLMET

Colonne 3
Column 3
Columna 3

CC = voie commune à / common channel to / canal común a

1	2		3
01 001 R	3A 3B 12E 12J 9B 10B 13I	CC	3A 3B
002 V	VAFI	CC	12E 12J
02 003 R	2 3C 14A 14D 7C 12A 10F	CC	2 3C
004 V	VCAR	CC	14A 14D
03 005 M	NP	CC	12E 12F 12G 12H
006 R	12E 12F 12G 12H 14B 14F 6B 13F 7D 9C	CC	14B 14F
007 V	VEUR		
04 008 R	12E 12F 12G 12H 6C 10A 13F 7F	CC	12E 12F 12G 12H
009 V	VMID		
05 010 R	3A 3B 5C 12G 9B	CC	3A 3B
011 V	VNAT		
06 012 R	2A 2C 13C 13J 13K 7B 4A**	CC	2A 2C
013 V	VPAC	CC	13C 13J 13K
		**	pendant le jour - day time - durante el día
07 014 A	CHP	CC	2A 2C
015 R	2A 2C		
016 V	VSAM		
08 017 R	12F 12J 1E 13H 10C 7B	CC	12F 12J
018 V	VSEA		
09 019 A	AFI	CC	13E 13F
020 R	13E 13F 1D 6F 11B 9D		
10 021 A	AFI	CC	13I 13J
022 R	13I 13J 1D 6F 11B 14G		
11 023 A	AFI		
024 R	11B 6D 13D 1B 3B		
12 025 A	CAR	CC	2A 2C
026 R	2A 2C 6D 13I 7E		

1	2		3
13 027 M 028 R	CEP 2A 2C 13C 10E 14	CC	2A 2C
14 029 M 030 R	EA NAT 13G		
15 031 M 032 R	MID SAM 6C 10A 10E		
16 033 M 034 R	MID 13C 10A 10E 9B		
17 035 M 036 R	NAT 6A 6E 3B 13G 9B	CC	6A 6E
18 037 M 038 R	NAT 6G 5D 13G		
19 039 M 040 R	NCA 12D 13J 14		
20 041 M 042 R	NCA 11B 13K 14C		
21 043 M 044 R	SAT 3A 3C 10B 1B**	CC **	3A 3C pendant le jour - day time - durante el día
22 045 M 046 R	SAT 3A 3C 10D 1B**	CC **	3A 3C pendant le jour - day time - durante el día
23 047 R	1C 6G 13K 12C 10C		
24 048 R	1C 6G 13K 12C		
25 049 R	2 6B 13D 4B 10D		
26 050 R	2A 2B 3A 13J 10A 4B	CC	2A 2B 3A
27 051 R	2A 2B 3A 13J 10A	CC	2A 2B 3A
28 052 R	2A 2B 3A 10A 13M	CC	2A 2B 3A

-4-

1	2					3		
29 053 R	2A	2B	3A	13M	CC	2A	2B	3A
30 054 R	2A	6E	13N					
31 055 R	2A	6E	12F	13H				
32 056 R	2A	5D	12J					
33 057 R	2B	2C	3B	12J	CC	2B	2C	3B
34 058 R	2B	2C	3B		CC	2B	2C	3B
35 059 R	2B	2C	3B		CC	2B	2C	3B
36 060 R	2B	2C	3B		CC	2B	2C	3B
37 061 R	2B	2C			CC	2B	2C	
38 062 R	2B	2C			CC	2B	2C	
39 063 R	2B							
40 064 R	2B							
41 065 R	2C	3			CC	2C	3	
42 066 R	2C							
43 067 R	2C							
44 068 R	3	4A						
45 069 R	3A							
46 070 R	3A							
47 071 R	3A							

1	2	3
48 072 R	3A	
49 073 R	3B 3C 5A CC	3B 3C
50 074 R	3B 3C CC	3B 3C
51 075 R	3B 5B	
52 076 R	3C	
53 077 R	3C	
54 078 R	3C	
55 079 R	3C	
56 080 R	5B	
57 081 R	6A	
58 082 R	6A	
59 083 R	6G	
60 084 R	6G	
61 085 R	6G	
62 086 R	6G	
63 087 R	6G	
64 088 R	6G	
65 089 R	6G	
66 090 R	6G	

-6-

1	2	3
67 091 R	6G	
68 092 R	6G	
69 093 R	6G	
70 094 R	6G	
71 095 R	6G	
72 096 R	6G	
73 097 R	6G	
74 098 R	6G	
75 099 R	6G	

1	2		3
01 001 R	3A 3B 9C 9D	CC	3A 3B
002 V	VAFI	CC	9C 9D
02 003 R	14A 14E 12D 6B 13F	CC	14A 14E
004 V	VEUR		
03 005 M	CHP		
006 V	VEUR		
04 007 R	12E 12F 12G 12H 6B 10B 14 1B**	CC	12E 12F 12G 12H
008 V	VMID	**	pendant le jour - day time - durante el día
05 009 M	EA SEA	CC	EA SEA
010 R	13H 12A 7E		
011 V	VNAT		
06 012 R	12E 12F 12G 12H 14 7F 9C	CC	12E 12F 12G 12H
013 V	VNCA		
07 014 R	1E 4A 13J	CC	1E 4A
015 V	VPAC		
08 016 R	13C 13J 13K 10E	CC	13C 13J 13K
017 V	VSEA		
09 018 M	AFI MID	CC	AFI MID
019 R	6C 11B 13D		
10 020 M	AFI		
021 R	6D 3B 11B 13D		
11 022 M	AFI		
023 R	11B 13E 9B		
12 024 M	CAR	CC	2A 2C
025 R	2A 2C 6F 7B 13H		

1	2		3
13 026 M 027 R	CEP 2A 2C 6F 4B 13M	CC	2A 2C
14 028 M 029 R	EA NAT SP 13I		
15 030 M 031 R	EUR SAM 6E 10A 9B		
16 032 M 033 R	INO NAT 13F		
17 034 M 035 R	MID 12 14 1B**	** pendant le jour - day time - durante el día	
18 036 M 037 R	NAT 6A 6E 9B	CC	6A 6E
19 038 M 039 R	NCA 11B 13G 14C		
20 040 M 041 R	SAT 3A 3B 6E 9B	CC	3A 3B
21 042 M 043 R	SEA 4A 10A 12J 1B**	** pendant le jour - day time - durante el día	
22 044 R	1C 6G 11B 7C 13G 14G		
23 045 R	1C 6G 10B 13C		
24 046 R	1D 3B 3C 12C 13J 14D	CC	3B 3C
25 047 R	1D 3B 3C 12C 13K	CC	3B 3C
26 048 R	2 10A 10E 13C		
27 049 R	2A 2C 10B 13M	CC	2A 2C
28 050 R	2A 2C 10C 13K	CC	2A 2C

1	2	3
29 051 R	2B 2A 3A 10D 13N CC	2B 2A 3A
30 052 R	2B 2A 3A 10D CC	2B 2A 3A
31 053 R	2B 2A 3A 10D CC	2B 2A 3A
32 054 R	2A 5D 12C	
33 055 R	2B 2C 3B CC	2B 2C 3B
34 056 R	2B 2C 3B CC	2B 2C 3B
35 057 R	2B 2C CC	2B 2C
36 058 R	2B 2C CC	2B 2C
37 059 R	2C	
38 060 R	3 5D	
39 061 R	3A 3C CC	3A 3C
40 062 R	3A 3C CC	3A 3C
41 063 R	3C	
42 064 R	5A 5C CC	5A 5C
43 065 R	5B	
44 066 R	5B	
45 067 R	6A	
46 068 R	6G	
47 069 R	6G	

1	2	3
48 070 R	6G	
49 071 R	6G	
50 072 R	6G	
51 073 R	6G	
52 074 R	6G	
53 075 R	6G	
54 076 R	6G	
55 077 R	6G	
56 078 R	6G	
57 079 R	6G	
58 080 R	6G	
59 081 R	6G	
60 082 R	6G	

1	2		3
01 001 R 002 V	13E 13F 10A VEUR	CO	13E 13F
02 003 R 004 V	13D 13M 10A 10F VMID	CO	13D 13M
03 005 M 006 V	SAM VNCA		
04 007 M 008 R	AFI CWP 13H		
05 009 M 010 R	CFP 2A 2B 3A 13G	CO	2A 2B 3A
06 011 M 012 R	MID 11B 9B 13I		
07 013 M 014 R	MID 11B 9B 13I		
08 015 M 016 R	NAT 6A 6E 9C	CO	6A 6E
09 017 M 018 R	NAT 6A 6E	CO	6A 6E
10 019 M 020 R	NCA 12C		
11 021 M 022 R	SP 2A 2B 3A 10E 13J	CO	2A 2B 3A
12 023 R	1C 12C 6D		
13 024 R	1D 11B 6C		

1	2		3
14 025 R	2 10 13J		
15 026 R	2A 2C 12F	CC	2A 2C
16 027 R	2A 2C 12J	CC	2A 2C
17 028 R	2B 2C 3B 12F 9	CC	2B 2C 3B
18 029 R	2B 2C 3B 12G	CC	2B 2C 3B
19 030 R	2B 2C 10D 13J	CC	2B 2C
20 031 R	2C 10D		
21 032 R	3 10D 4A**	**	pendant le jour - day time - durante el día
22 033 R	3A 3C 10E	CC	3A 3C
23 034 R	3A 3C 10E	CC	3A 3C
24 035 R	6G 10B 13K		
25 036 R	6G 10B 13K		
26 037 R	6G 10B 13M		
27 038 R	6G 10B		
28 039 R	6G 10B		
29 040 R	6G 10C		
30 041 R	6G 10C		
31 042 R	6G		
32 043 R	6G		

1	2	3
33 044 R	6G	
34 045 R	6G	
35 046 R	6G	
36 047 R	6G	
37 048 R	6G	
38 049 R	6G	

1	2	3
01 001 R 002	10 12F 12E 13I 13J CC CC	12F 12E 13I 13J
02 003 R	10A 12F 12H 13G 10D CC	12F 12H
03 004 R	10A 13D 10D 12C	
04 005 R	10B 13G 10E 12E	
05 006 R	10B 13N	
06 007 R	10C 13I 13M	
07 008 R	10F 13H 13K 11B	
08 009 R	11B 13H	
09 010 R	11B 13F 13J	
10 011 R	13J	

1	2		3
01 001 M	CEP		
002 R	10F		
003 V	VAFI		
02 004 M	EA SEA	CC	EA SEA
005 V	VCAR		
03 006 R	13E 13F 14B 14C 6B 9C	CC	13E 13F
007 V	VEUR	CC	14B 14C
04 008 R	12E 12F 12H 13E 13F 14D 14G 6B 10B	CC	12E 12F 12H
009 V	VMID	CC	13E 13F
010		CC	14D 14G
05 011 V	VNAT VSEA		
06 012 R	12E 12F 13E 13F 14A 9D 13K	CC	12E 12F
013 V	VNCA	CC	13E 13F
07 014 R	4B		
015 V	VPAC		
08 016 R	3A 3B 6C 6A 14G	CC	3A 3B
017 V	VSAM		
09 018 M	AFI MID SP	CC	AFI MID
10 019 M	AFI NP		
020 R	14D		
11 021 M	AFI CWP		
12 022 M	CAR	CC	2 3
023 R	2 3 6C 5D 6E		
13 024 M	CAR	CC	2C 2A
025 R	2C 2A 5D 6G 14		

1	2												3		
14 026 M	CEP											CC	2C	2A	
027 R	2C	2A	5D	6G	14B	13K	13H								
15 028 M	CHP											CC	12E	12J	
029 R	12E	12J	4A	7E	13K	10E	13H								
16 030 M	EA											CC	13C	13J	13K
031 R	13C	13J	13K	11B											
17 032 M	EUR											CC	13D	13M	
033 R	13D	13M	6B	9	10B	12C									
18 034 M	INO	SAM													
19 035 M	MID														
036 R	12	10A	13G	10D	14C										
20 037 M	NAT	SEA													
21 038 M	NAT														
039 R	6A	7D	9B												
22 040 M	NCA														
041 R	13C	10D	12C	13I	14F										
23 042 M	NCA														
043 R	13C	10D	12C	13I											
24 044 M	SAT											CC	3B	3C	
045 R	3B	3C	6A	9B											
25 046 R	1B	3A	3B	5A	5C	11B	13C	6D	7B	14E	12A	CC	3A	3B	
047												CC	5A	5C	
26 048 R	1B	3A	3C	5A	11B	13C	6D	7B				CC	3A	3C	
27 049 R	1C	3A	3C	11B	13M	6A	4B	14				CC	3A	3C	
28 050 R	1C	3B	3C	13D	4B	5B	6D	12D	10B	10E		CC	3B	3C	
29 051 R	1D	3B	6D	7	10C	10E	12E	12F	13J						

1	2											3		
30 052 R	1D	3B	6E	10C	12E	7C	14B	13J						
31 053 R	1E	3B	5B	10C	7C	12G	9B	12C	13N					
32 054 R	3A	2A	2B	6F	10	4A	12G	7F	9B	12C	CC	3A	2A	2B
33 055 R	3A	2A	2B	6F	10A	10D	12G	7F	12C		CC	3A	2A	2B
34 056 R	3A	2A	2B	6E	10A	10D	12J				CC	3A	2A	2B
35 057 R	2A	6G	10A											
36 058 R	2A	6G	10C											
37 059 R	2A	6G	10C											
38 060 R	2A	6G												
39 061 R	2A	6G												
40 062 R	2C	2B									CC	2C	2B	
41 063 R	2C	2B									CC	2C	2B	
42 064 R	2C	2B	3B								CC	2C	2B	3B
43 065 R	2C	2B	3B								CC	2C	2B	3B
44 066 R	2C	2B	3B								CC	2C	2B	3B
45 067 R	2B													
46 068 R	2B													
47 069 R	2B													
48 070 R	2C	6G												

1	2	3
49 071 R	2C 6G	
50 072 R	2C 6G	
51 073 R	2C 6G	
52 074 R	3A 5B	
53 075 R	3A	
54 076 R	3A	
55 077 R	3A	
56 078 R	3B	
57 079 R	3B	
58 080 R	3C	
59 081 R	3C	
60 082 R	3C	
61 083 R	6G	
62 084 R	6G	
63 085 R	6G	
64 086 R	6G	
65 087 R	6G	
66 088 R	6G	
67 089 R	6G	

1	2														3	
01 001 R	6G	2A	2C	12E	12F	13E	13F	14A	14G	10	5D	13K	12A	CC	2A	2C
002														CC	12E	12F
003														CC	13E	13F
004														CC	14A	14G
02 005 R	6G	2A	2C	12E	12J	5D	9	13J	14A	10A	10D			CC	2A	2C
006														CC	12E	12J
03 007 R	6G	13C	13K	9B	10A	13F	7E	12C						CC	13C	13K
008 V	VEUR															
04 009 M	NAT													CC	13D	13M
010 R	6G	13D	13M	5A	9B	7E	12C									
05 011 M	NAT															
012 R	6G	9B	13D	12C	7F											
06 013 M	SAT															
014 R	6G	2C	5D	9B	10A	10D	12C	12J								
07 015 R	6G	2C	14	7C	13N	9C										
016 V	VNAT															
08 017 M	AFI	CEP														
018 R	6G	2A	14	13D	12D	10F										
09 019 M	AFI															
020 R	6G	2A	14B	11B	13J	9D										
10 021 M	AFI															
022 R	6G	2A	11B	14C	13M	13I										
11 023 M	EUR															
024 R	6G	11B	7	14D	13C	13H										
12 025 M	NP													CC	2B	2C
026 R	2B	2C	6E	14D	4B	13C	10E									

1	2											3		
13 027 M	SAM													
028 R	6G	1	14E	10B	7B									
14 029 M	CWP										CC	2B	2A	3A
030 R	2B	2A	3A	4	11B	13C								
15 031 M	CAR										CC	3B	3C	
032 R	3B	3C	5A	5C	6D	1C	14G	13G			CC	5A	5C	
16 033 M	CAR													
034 R	6G	2C	14F	4B	13G									
17 035 R	2B	2A	3A	6F	4A	11B	13C				CC	2B	2A	3A
18 036 R	2B	2C	3B	6D	10B	4B	10E	12C	12G	13E	CC	2B	2C	3B
19 037 R	6G	10B	12E	13K										
20 038 R	3A	3B	10C	12F							CC	3A	3B	
039 V	VAFI													
21 040 R	6G	10C	12G											
22 041 R	2B	2C	3B	6D	10C						CC	2B	2C	3B
23 042 M	SEA										CC	3A	3C	
043 R	3A	3C	1D	10D										
24 044 R	6G	2A	4A											
25 045 R	2B	6F	4A											
26 046 M	CWP													
047 R	3A	6A	1B											
27 048 M	MID													
049 R	3B	6C	1B											
28 050 R	6G	1E												

1	2	3
29 051 M 052 R	NP 2B 6E	
30 053 R	3A 6A 6B	
31 054 M 055 R	MID 3B 6C	
32 056 R	3C 6A	
33 057 R	5B 3 6D	
34 058 R	6G	
35 059 R	2 3 6E	CC 2 3
36 060 R	2B 6B	
37 061 R	3A 5B 6B	
38 062 R	3B 5B	
39 063 R	3C 6A	
40 064 R	6G	
41 065 V	VNCA	
42 066 V	VPAC	
43 067 V	VSEA	
44 068 M	EA	
45 069 M	NCA	
46 070 R	2	

-22.

1	2	3
47 071 R	2B	
48 072 R	3A	
49 073 R	3B	
50 074 R	3C	
51 075 R	6G	

1	2									3		
01 001 R	6G	9C	9D	12E	12F	4	13I	10F	CC	9C	9D	
002									CC	12E	12F	
02 003 M	NAT								CC	13A	13B	
004 R	6G	13A	13B	7C	14G							
03 005 M	SP								CC	13C	13J	13K
006 R	6G	13C	13J	13K	5D	10E						
04 007 M	CEP								CC	13D	13M	
008 R	6G	13D	13M	4A								
05 009 R	6G	13E	13F	4A	10B				CC	13E	13F	
06 010 M	NAT											
011 R	6G	7B	13F									
07 012 M	NAT											
013 R	6G	13F	7E									
08 014 R	3B	3C	12E	9B					CC	3B	3C	
015 V	VAFI											
09 016 M	NAT											
017 R	6G	13H	7F									
10 018 M	CAR								CC	2C	2A	
019 R	2C	2A	6B	6F					CC	6B	6F	
11 020 R	2C	2B	10	9	13C				CC	2C	2B	
12 021 M	CAR								CC	2	3	
022 R	2	3	9B									
13 023 M	SAT								CC	3A	3B	
024 R	3A	3B	9B	10D								

1	2	3
14 025 R	3A 3C 4A 9 12F 10B CC	3A 3C
15 026 M 027 R	NAT 6G 13H	
16 028 R	2C 2B 10 6C 13C CC	2C 2B
17 029 M 030 R	SAM 3 14	
18 031 R	3B 5A 5C 12D 9B CC	5A 5C
19 032 M 033 R	NAT 3C 14	
20 034 R 035 V	6A 6E 14A CC VNAT	6A 6E
21 036 R	6G 1C 11B 13K	
22 037 R 038 V	12C 13K VSEA	
23 039 H 040 R	EA 13G 11B	
24 041 H 042 R	AFI 6F 10B 12J	
25 043 H 044 R	HID 6C 10A 13C 10E	
26 045 R	2 10A 14B 13M	
27 046 R	2A 6E 11B 14C 13G	
28 047 R	2B 14E 10C 13G	
29 048 R	3 13M 10D	

1	2	3
30 049 R	3A 13D 12C	
31 050 M 051 R	INO 3B 13D 12C	
32 052 R 053 V	3C 13J VEUR	
33 054 M 055 R	CWP 5 13N	
34 056 R	5B 6B	
35 057 R	6A	
36 058 R	6D 2C	
37 059 R	6G	
38 060 V	VMID	
39 061 R 062 V	1D VPAC	
40 063 M 064 R	AFI 3C	
41 065 M	MID	
42 066 M	NCA	
43 067 M	SEA	
44 068 R	2	
45 069 R	2A 6E	
46 070 R	2B	

1	2	3
47 071 R	3	
48 072 R	3A	
49 073 R	3B 5A 6D	
50 074 R	5	
51 075 R	5B	
52 076 R	6	
53 077 R	6A	
54 078 R	6G	

1	2		3
01 001 M	CEP		
002 R	10F		
003 V	VAFI		
02 004 R	3C 3B 13A 13B 14	CC	3C 3B
005 V	VEUR	CC	13A 13B
03 006 R	6A 6E 14F	CC	6A 6E
007 V	VNAT		
04 008 R	12E 12F 14D	CC	12E 12F
009 V	VNCA		
05 010 R	3C 3A 14	CC	3C 3A
011 V	VSAM		
06 012 M	AFI MID	CC	AFI MID
013 R	9 13H		
07 014 M	AFI NP		
015 R	13F 14G		
08 016 M	AFI CWP		
017 R	13H		
09 018 M	CAR	CC	2B 2A 3A
019 R	2B 2A 3A		
10 020 M	EA	CC	13J 13K
021 R	13J 13K 9C		
11 022 M	EUR		
023 R	6B 12E		
12 024 M	MID		
025 R	12		

1	2					3		
13 026 M	NCA	SAM						
14 027 M 028 R	SAM 2B	2C	3B		CC	2B	2C	3B
15 029 M 030 R	SAT 6G							
16 031 M 032 R	SEA 1E	10A	13G					
17 033 M 034 R	SP 2C	2B	13K		CC	2C	2B	
18 035 R	1	6B	13N					
19 036 R	1B	6E	12D					
20 037 R	1C	6E	13K	10A				
21 038 R	1D	6F	11B	13I				
22 039 R	2	6C	11B					
23 040 R	2	6C	11B					
24 041 R	2	10	13J					
25 042 R	2	10	13G					
26 043 R	2A	7	9B	12J				
27 044 R	2B	9B	13D					
28 045 R	2C	9B	13M					
29 046 R	3	7C	12C					
30 047 R	3	7D	12C					

1	2	3
31 048 R	3A 4A 13G	
32 049 R	3B 5D	
33 050 R	4B 6D	
34 051 R	5	
35 052 R	5	
36 053 R	5B	
37 054 R	5B	
38 055 R	6A	
39 056 R	6A	
40 057 R	6E	
41 058 R	6G 7B	
42 059 R	6G	
43 060 R	6G	
44 061 R	6G	
45 062 R	6G	
46 063 R	6G	
47 064 R	6G	
48 065 R	6G	
49 066 R	6G	
50 067 R	6G	

1	2		3
01 001 M	EA SEA	CC	EA SEA
002 V	VCAR		
02 003 R	3B 3C 9C 9D 13H	CC	3B 3C
004 V	VEUR	CC	9C 9D
03 005 R	12E 12J 9B	CC	12E 12J
006 V	VMID		
04 007 R	13C 13J 13K 14A	CC	13C 13J 13K
008 V	VNCA		
05 009 R	4B		
010 V	VPAC		
06 011 M	CAR		
012 V	VSEA		
07 013 M	AFI NP		
014 R	13F 14D		
08 015 M	AFI		
016 R	9 13H		
09 017 M	CAR	CC	2 3
018 R	2 3 14 7F		
10 019 M	CEP	CC	2A 2C
020 R	2A 2C 13K 14B		
11 021 M	CHP		
022 R	1 13G		
12 023 M	MID SAM		
024 R	14C		
13 025 M	NAT		
026 R	6E 9C		

1	2	3
14 027 M 028 R	NAT 6E 14F	
15 029 M 030 R	NAT 6F	
16 031 M 032 R	NCA 12C	
17 033 M 034 R	SAT 6F 6B CC	6F 6B
18 035 R	1C 6D 13K 10A	
19 036 R	1D 6B 12E	
20 037 R	2 10 13J 14	
21 038 R	2 10 13E 14E	
22 039 R	2 11B 9B 13F	
23 040 R	2 11B 9B	
24 041 R	2A 2B 10A 13C CC	2A 2B
25 042 R	2A 3B 7 10E CC	2A 3B
26 043 R	2A 7C 10A 12F	
27 044 R	2B 2C 12J CC	2B 2C
28 045 R	2B 13C	
29 046 R	2B 13D	
30 047 R	2C 13M	
31 048 R	2C	

-32

1	2	3
32 049 R	2C	
33 050 R	3 4A	
34 051 R	3 4A	
35 052 R	3 7E	
36 053 R	3A 3C CC	3A 3C
37 054 R	3A	
38 055 R	3A	
39 056 R	3A	
40 057 R	3B	
41 058 R	3B	
42 059 R	3B	
43 060 R	3C	
44 061 R	3C	
45 062 R	3C	
46 063 R	5	
47 064 R	5	
48 065 R	5A	
49 066 R	6	
50 067 R	6A	

1	2	3
51 068 R	6A	
52 069 R	6D	
53 070 R	6G	
54 071 R	6G	
55 072 R	6G	
56 073 R	6G	
57 074 R	6G	
58 075 R	6G	
59 076 R	6G	
60 077 R	6G	
61 078 R	6G	
62 079 R	6G	
63 080 R	6G	

1	2		3
01 001 V	VAFI		
02 002 V	VAFI		
03 003 M 004 V	SP VEUR		
04 005 M 006 V	SP VEUR		
05 007 R 008 V	14 VNAT		
06 009 R 010 V	6G VNAT		
07 011 R 012 V	13E 13F VNCA	CC	13E 13F
08 013 V	VPAC		
09 014 V	VPAC		
10 015 V	VSAM		
11 016 V	VSEA		
12 017 H	AFI EUR MID	CC	AFI EUR MID
13 018 M	AFI		
14 019 H	AFI		
15 020 H	AFI		

1	2	3
16 021 M 022 R	CAR 6A 6E	CC 6A 6E
17 023 M 024 R	CEP 2	
18 025 M 026 R	CEP 2	
19 027 M 028 R	CWP 4	
20 029 M	EA NCA	CC EA NCA
21 030 M 031 R	EA SEA 13C 13K	CC EA SEA CC 13C 13K
22 032 M	EA SAM	
23 033 M 034 R	EA 11B	
24 035 M	INO	
25 036 M	MID	
26 037 M	NAT	
27 038 M	NAT	
28 039 M	NCA	
29 040 M 041 R	NP 4	
30 042 M	SAT	
31 043 M	SAT	
32 044 M 045 R	SEA 13	

1	2	3
33 046 R	1	
34 047 R	2	
35 048 R	3 13H	
36 049 R	3	
37 050 R	3A	
38 051 R	3B	
39 052 R	3C	
40 053 R	3C	
41 054 R	4A 6B	
42 055 R	4A	
43 056 R	4B	
44 057 R	5	
45 058 R	5	
46 059 R	5A	
47 060 R	6	
48 061 R	6C 6D 6F CC	6C 6D 6F
49 062 R	6G	
50 063 R	6G	
51 064 R	6G	

1	2	3
52 065 R	6G	
53 066 R	7	
54 067 R	10	
55 068 R	12	

1	2						3			
01 001 R	3									
02 002 R	5	13A	13B	13E	13F	CC	13A	13B	13E	13F
03 003 M	AFI	EUR	INO	MID		CC	AFI	EUR	INO	MID
04 004 M	CAR	SAM	EA	SEA		CC	CAR	SAM		
005						CC	EA	SEA		
05 006 M	CEP	CWP	NP	SP		CC	CEP	CWP	NP	SP
007 R	4									
06 008 M	NAT									
009 R	14									
07 010 M	NCA									
08 011 M	SAT									
012 R	6B									
09 013 R	2	11B								
10 014 R	3									
11 015 R	5									
12 016 R	6									
13 017 R	66	13								
14 018 R	10									
15 019 R	12									

ANNEXE 3 - ANNEX 3 - ANEXO 3

Demandes de fréquences utilisées — Frequency requirements used — Solicitudes de frecuencias utilizadas

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
001	VAFI	1	1	-	-	1	1	1	1	-	2	-	-	
002	VCAR	1	-	-	-	1	-	-	-	1	-	-	-	
003	VEUR	1	2	1	-	1	1	1	1	1	2	-	-	
004	VMID	1	1	1	-	1	-	1	-	1	-	-	-	
005	VNAT	1	1	-	-	1	1	1	1	-	2	-	-	
006	VNCA	-	1	1	-	1	1	-	1	1	1	-	-	
007	VPAC	1	1	-	-	1	1	1	-	1	2	-	-	
008	VSAM	1	-	-	-	1	-	-	1	-	1	-	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
009	VSAT	7 -	7 -	3 -	- -	8 -	5 -	5 -	5 -	5 -	10 -	-		
010	VSEA VOLMET	1 8	1 8	- 3	- -	1 8	1 6	1 6	- 6	1 6	1 11	-		VOLMET
011	AFI	3 - - -	2 1* - -	1 - - -	- - - -	2 1* - -	3 - - -	2 - - -	2 1* - -	2 - - -	3 - 1*	- - 1* -		AFI MID AFI EUR MID INO AFI EUR MID
012	CAR	1 -	1 -	- -	- -	2 -	2 -	2 -	1 -	2 -	1 -	- 1*		CAR SAM
013	CEP	1 -	1 -	1 -	- -	2 -	1 -	1 -	1 -	1 -	2 -	- 1*		CEP CWP NP SP
014	CWP	1 -	1 -	1 -	- -	2 -	2 -	1 -	1 -	1 -	1 -	- 1*		CEP CWP NP SP
015	EA	1 - -	1 1* -	- - -	- - -	1 1* -	1 - -	1 - -	1 - -	- 1* -	2 1* 1*	- 1* -		EA SEA EA NCA
016	EUR	- - -	1 - -	- - -	- - -	1 - -	1 - -	- - -	1 - -	- - -	- 1* -	- - 1*		AFI EUR MID AFI EUR MID INO

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
017	INO	7 - -	8 1 -	3 - -	- - -	12 1 -	10 - -	7 1 -	8 - -	1 - -	11 1 -	5 - 1*		AFI EUR MID INO
018	MID	2 - -	1 1* -	2 - -	- - -	1 1* -	2 - -	2 - -	1 1* -	1 - -	1 - 1*	- - 1* -		AFI MID AFI EUR MID INO AFI MID EUR
019	NAT	3	3	2	-	2	2	6	-	3	2	1		
020	NCA	2 -	1 -	1 -	- -	2 -	1 -	1 -	1 -	1 -	1 1*	1 -		EA NCA
021	NP	1 -	- -	- -	- -	1 -	2 -	- -	1 -	1 -	1 -	- 1*		CEP CWF NP SA
022	SAM	1	1	1	-	1	1	1	2	1	1	- 1*		CAR SAM
023	SAT	2	1	-	-	1	1	1	1	1	2	1		
024	SEA	- -	1 1*	- -	- -	1 1*	1 -	1 -	1 -	- 1*	1 1*	- 1*		EA SEA

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
025	SP	- -	1 -	1 -	- -	1 -	- -	1 -	1 -	- -	2 -	- 1*		CEP CWP NP SP
026	1	-	-	-	-	-	1	-	1	1	1	-		
027	1A	-	-	-	-	-	-	-	-	-	-	-		
028	1B	1 2**	- 3**	-	-	2	2	-	1	-	-	-		C001
029	1C	2	2	1	-	2	1	1	1	1	-	-		
030	1D	2	2	1	-	2	1	1	1	1	-	-		
031	1E	1	- 1*	-	-	1	1	-	1	-	-	-		1E 4A
		8	8	2	-	7	6	2	5	3	1	-		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
032	2	1	1	1	-	-	1	2	4	4	3	1		
	-	-	-	-	-	1*	1*	1*	-	1*	-	-		2 3
	1*	-	-	-	-	-	-	-	-	-	-	-		2 3C
033	2A	3	1	-	-	5	4	2	1	1	-	-		
		4*	4*	2*	-	2*	2*	1*	-	1*	-	-		2A 2C
		4*	3*	2*	-	3*	2*	-	1*	-	-	-		2A 2B 3A
		-	-	-	-	-	-	-	-	1*	-	-		2A 3B
034	2B	2	-	-	-	3	4	2	1	2	-	-		
		4*	2*	2*	-	3*	2*	-	1*	-	-	-		2B 2C 3B
		2*	2*	1*	-	2*	1*	2*	1*	1*	-	-		2B 2C
		4*	3*	2*	-	3*	2*	-	1*	-	-	-		2A 2B 3A
035	2C	2	1	1	-	4	3	1	1	3	-	-		
		4*	4*	2*	-	2*	2*	1*	-	1*	-	-		2A 2C
		4*	2*	2*	-	3*	2*	-	1*	-	-	-		2B 2C 3B
		2*	2*	1*	-	2*	1*	2*	1*	1*	-	-		2B 2C
		1*	-	-	-	-	-	-	-	-	-	-		2C 3
036	3	1	1	1	-	-	1	3	2	3	2	2		
		-	-	-	-	1*	1*	1*	-	1*	-	-		2 3
		1*	-	-	-	-	-	-	-	-	-	-		2C 3
037	3A	4	-	-	-	4	4	2	1	3	1	-		
		2*	2*	2*	-	2*	2*	1*	1*	1*	-	-		3A 3C
		2*	2*	-	-	2*	2*	1*	-	-	-	-		3A 3B
		4*	3*	2*	-	3*	2*	-	1*	-	-	-		2A 2B 3A
038	3B	3	1	-	-	5	4	3	1	3	1	-		
		4*	2*	2*	-	3*	2*	-	1*	-	-	-		2B 2C 3B
		2*	2*	-	-	2*	2*	1*	-	-	-	-		3A 3B
		2*	2*	-	-	2*	1*	1*	1*	1*	-	-		3B 3C
		-	-	-	-	-	-	-	-	1*	-	-		2A 3B
039	3C	4	1	-	-	3	3	3	-	3	2	-		
		2*	2*	2*	-	2*	2*	1*	1*	1*	-	-		3A 3C
		2*	2*	-	-	2*	1*	1*	1*	1*	-	-		3B 3C
		1*	-	-	-	-	-	-	-	-	-	-		2 3C

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
040	4	-	-	-	-	-	1	1	-	-	2	1		
041	4A	1 1** -	1 - 1*	- 1** -	- - -	2 - -	3 - -	3 - -	1 - -	2 - -	2 - -	- - -		C001 1E 4A
042	4B	2	1	-	-	3	3	-	1	1	1	-		T.4
043	5	-	-	-	-	-	-	2	2	2	2	2		
044	5A	1 -	- 1*	- -	- -	1 1*	1 1*	1 1*	- -	1 -	1 -	- -		5A 5C
045	5B	2	2	-	-	3	3	2	2	-	-	-		
046	5C	1 -	- 1*	- -	- -	- 1*	- 1*	- 1*	- -	- -	- -	- -		5A 5C
047	5D	2	2	-	-	3	3	1	1	-	-	-		(T5)

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
048	6	-	-	-	-	-	-	1	-	1	1	1	-	
049	6A	2* 1	1* 1	-* 2	- -	4 -	4 -	2* 1	2* 1	2 -	-* 1	- -		6A 6E
050	6B	2 -	2 -	- -	- -	3 -	3 -	1* 1	2	1* 1	1 -	1 -		6B 6F
051	6C	2 -	1 -	1 -	- -	2 -	2 -	2 -	2 -	-	-* 1	- -		6C 6D 6F
052	6D	2 -	1 -	1 -	- -	4 -	4 -	2 -	1 -	2 -	* 1	-		6C 6D 6F
053	6E	2* 1	2* 1	-* 2	- -	3 -	3 -	2* 1	3* 1	2 -	-* 1	- -		6A 6E
054	6F	2 - -	2 - -	- - -	- - -	2 - -	2 - -	1* 1 -	1 -	1* 1	- -* 1	- - -		6B 6F 6C 6D 6F
055	6G	20	17	15	-	18	20	12	11	11	5	1		(T6)

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
056	7	-	-	-	-	1	1	-	1	1	1	-	-	
057	7A	-	-	-	-	-	-	-	-	-	-	-	-	
058	7B	2	1	-	-	2	1	1	1	-	-	-	-	
059	7C	1	1	-	-	2	1	1	1	1	-	-	-	
060	7D	1	-	-	-	1	-	-	1	-	-	-	-	
061	7E	1	1	-	-	1	2	1	-	1	-	-	-	
062	7F	1	1	-	-	2	1	1	-	1	-	-	-	
063	8	-	-	-	-	-	-	-	-	-	-	-	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
064	9	-	-	1	-	1	1	2	1	1	-	-	-	
065	9B	4	4	2	-	4	4	4	3	3	-	-	-	9B 9C
066	9C	1 -	1 1*	1 -	- -	1 -	1 -	- 1*	1 -	1 1*	- -	- -	- -	9C 9D
067	9D	1 -	- 1*	- -	- -	1 -	1 -	- 1*	- -	- 1*	- -	- -	- -	9C 9D
068	10	-	-	1	1	1	1	2	2	2	1	1	-	
069	10A	6	3	2	2	4	3	2	2	3	-	-	-	
070	10B	2	3	5	2	3	3	3	-	-	-	-	-	
071	10C	2	1	2	1	5	3	1	-	-	-	-	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
072	10D	2	3	3	2	5	3	2	-	-	-	-		
073	10E	3	2	3	1	3	2	2	-	1	-	-		
074	10F	1	-	1	1	1	1	1	1	-	-	-		
075	11	-	-	-	-	-	-	-	-	-	-	-		
076	11A	-	-	-	-	-	-	-	-	-	-	-		
077	11B	4	5	3	3	4	5	3	3	2	1	1		
078	11C	-	-	-	-	-	-	-	-	-	-	-		
079	12	-	1	-	-	1	-	-	1	-	1	1		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
080	12A	1	1	-	-	1	1	-	-	-	-	-		
081	12B	-	-	-	-	-	-	-	-	-	-	-		
082	12C	2	3	2	1	6	5	3	2	1	-	-		
083	12D	1	1	-	-	1	1	1	1	-	-	-	-	
084	12E	- 1* - - 2*	- - - - 2*	1 - - - -	1 - 1* - -	2 1* 1* 1* -	1 1* 1* - -	1 - 1* - -	1 - 1* - -	1 1* - - -	- - - - -	- - - - -	- - - - -	12E 12J 12E 12F 12E 12F 12H 12E 12F 12G 12H
085	12F	1 - - - 1* 2*	- - - - - 2*	1 - - - - -	- 1* - 1* - -	1 1* 1* - - -	1 1* - - - -	1 1* - - - -	- 1* - - - -	1 - - - - -	- - - - - -	- - - - - -	- - - - - -	12E 12F 12E 12F 12H 12F 12H 12F 12J 12E 12F 12G 12H
086	12G	1 2*	- 2*	1 -	- -	3 -	2 -	- -	- -	- -	- -	- -	- -	12E 12F 12G 12H
087	12H	- - - 2*	- - - 2*	- - - -	- 1* - -	- - 1* -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	12F 12H 12E 12F 12H 12E 12F 12G 12H

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
088	12I	-	-	-	-	-	-	-	-	-	-	-	-	
089	12J	2	1	1	-	1	1	1	1	1	-	-	-	
		1*	-	-	-	1*	1*	-	-	1*	-	-	-	12E 12J
		1*	-	-	-	-	-	-	-	-	-	-	-	12F 12J
090	13	-	-	-	-	-	-	-	-	-	1	1	-	
091	13A	-	-	-	-	-	-	-	-	-	-	-	-	
		-	-	-	-	-	-	-	1*	-	-	-	-	13A 13B
		-	-	-	-	-	-	-	-	-	-	1*	-	13A 13B 13E 13F
092	13B	-	-	-	-	-	-	-	-	-	-	-	-	
		-	-	-	-	-	-	-	1*	-	-	-	-	13A 13B
		-	-	-	-	-	-	-	-	-	-	1*	-	13A 13B 13E 13F
093	13C	2	2	-	-	4	4	3	-	2	-	-	-	
		-	-	-	-	-	-	-	-	-	1*	-	-	13C 13K
		1*	1*	-	-	1*	1*	1*	-	1*	-	-	-	13C 13J 13K
094	13D	2	2	-	1	1	2	2	1	1	-	-	-	
		-	-	1*	-	-	1*	1*	-	-	-	-	-	13D 13M
095	13E	-	1	-	-	-	1	-	-	1	-	-	-	
		-	-	-	-	-	-	-	-	-	-	1*	-	13A 13B 13E 13F
		1*	-	2*	-	3*	1*	1*	-	-	-	1*	-	13E 13F

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
096	13F	2 – 1*	2 – –	– – 2*	1 – –	– – 3*	1 – 1*	2 – 1*	1 – –	2 – –	– – 1*	– 1* –	– – –	13A 13B 13E 13F 13E 13F
097	13G	3	2	1	2	1	2	3	3	1	–	–	–	
098	13H	2	2	1	2	2	1	2	2	2	1	–	–	
099	13I	2 1*	1 –	2 –	1 1*	2 –	1 –	1 –	1 –	– –	– –	– –	– –	13I 13J
100	13J	3 1* – 1*	2 – – 1*	3 – – –	2 1* – –	2 – – 1*	2 – – 1*	1 – – 1*	1 – 1* –	1 – – 1*	– – – –	– – – –	– – – –	13I 13J 13J 13K 13C 13J 13K
101	13K	3 – – 1*	2 – – 1*	2 – – –	1 – – –	3 – – 1*	2 – – 1*	2 – – 1*	2 1* – –	2 – – 1*	– – 2* –	– – – –	– – – –	13J 13K 13C 13K 13C 13J 13 K
102	13L	–	–	–	–	–	–	–	–	–	–	–	–	
103	13M	2 –	2 –	1 1*	1 –	1 –	1 1*	2 1*	1 –	1 –	– –	– –	– –	13D 13M
104	13N	1	1	–	1	1	1	1	1	–	–	–	–	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
105	14	2	3	-	-	2	2	2	2	2	1	1	-	
106	14A	- 1* - -	- - 1* -	- - - -	- - - -	1 - - -	1 - - 1*	1 - - -	- - - -	1 - - -	- - - -	- - - -		14A 14D 14A 14E 14A 14G
107	14B	- 1* -	- - -	- - -	- - -	2 - 1*	1 - -	1 - -	- - -	1 - -	- - -	- - -		14B 14F 14B 14C
108	14C	1 -	1 -	- -	- -	1 1*	1 -	1 -	- -	1 -	- -	- -		14B 14C
109	14D	- 1* -	1 - -	- - -	- - -	1 - 1*	2 - -	- - -	1 - -	1 - -	- - -	- - -		14A 14D 14D 14G
110	14E	- -	- 1*	- -	- -	1 -	1 -	1 -	- -	1 -	- -	- -		14A 14E
111	14F	- 1*	- -	- -	- -	1 -	1 -	- -	1 -	1 -	- -	- -		14B 14F
112	14G	1 - -	1 - -	- - -	- - -	1 - 1*	1 1* -	1 - -	1 - -	- - -	- - -	- - -		14A 14G 14D 14G

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/53-E
25 February 1978
Original : Spanish

COMMITTEE 2

DRAFT

REPORT OF COMMITTEE 2 TO THE PLENARY MEETING

Credentials

1. Terms of reference of the Committee

The Committee's terms of reference are contained in Document No. 76.

2. Meetings

Committee 2 held two meetings, on 8 February and 27 February 1978.

The Working Group established by the Committee with the task of examining, pursuant to the provisions of the Convention, the credentials deposited at the Conference, met on 13, 24 and 27 February 1978.

The Chairman and Vice-Chairman of the Committee and the delegates of the Federal Republic of Germany, the Hungarian People's Republic and the Republic of Kenya participated in the meetings of the Working Group.

3. Conclusions

The Committee's conclusions, contained in annex, are submitted to the Plenary Meeting for adoption.

4. Final remarks

The Committee recommends to the Plenary Meeting that the Chairman and the Vice-Chairman of Committee 2 should be empowered to examine any credentials received after the date of this report and to convey their findings to the Plenary Meeting.

C.J. MARTINEZ
Chairman of Committee 2

Annex : 1

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A N N E X

CONCLUSIONS OF COMMITTEE 2

SUBMITTED TO THE PLENARY MEETING FOR APPROVAL

1. Credentials deposited

1.1 Credentials found to be in order

1.1.1 Credentials from countries which have ratified (or have acceded to) the Convention or to which the provisions of No. 97 of the Convention do not apply.

Algeria (Algerian Democratic and Popular Republic)
Germany (Federal Republic of)
Angola (People's Republic of)
Saudi Arabia (Kingdom of)
Argentine Republic
Bahrain
Bangladesh (People's Republic of)
Bulgaria (People's Republic of)
Canada
Chile
China (People's Republic of)
Colombia (Republic of)
Korea (Republic of)
Cuba
Denmark
United Arab Emirates
United States of America
Fiji
Finland
France
Greece
Guinea (Republic of)
Hungarian People's Republic
India (Republic of)
Indonesia (Republic of)
Iran
Ireland
Italy
Japan
Kuwait (State of)
Libya (Socialist People's Libyan Arab Jamahirya)
Malaysia
Mauritania (Islamic Republic of)
Mexico
Monaco
Norway
New Zealand
Pakistan (Islamic Republic of)
Papua New Guinea
Paraguay (Republic of)
Netherlands (Kingdom of the)

Philippines (Republic of the)
Poland (People's Republic of)
Portugal
Syrian Arab Republic
German Democratic Republic
Democratic People's Republic of Korea
Roumania (Socialist Republic of)
United Kingdom of Great Britain and Northern Ireland
Sao Tome and Principe (Democratic Republic of)
Senegal (Republic of the)
Singapore (Republic of)
Sweden
Switzerland (Confederation of)
Tanzania (United Republic of)
Czechoslovak Socialist Republic
Thailand
Union of Soviet Socialist Republics
Uruguay (Oriental Republic of)
Venezuela (Republic of)
Yemen Arab Republic
Yugoslavia (Socialist Federal Republic of)

Conclusion : the delegations of these countries are entitled to vote and to sign the Final Acts.

1.1.2 Countries which have not ratified (or which have not acceded to) the Convention or to which the provisions of No. 97 of the Convention apply (see Document No. 58).

Belgium
Bolivia (Republic of)
Gabon Republic
Guatemala (Republic of)
Upper Volta (Republic of)
Kenya (Republic of)
Liberia (Republic of)
Nigeria (Federal Republic of)
Panama (Republic of)
Yemen (People's Democratic Republic of)

Conclusion : the delegations of these countries are not entitled to vote; they are entitled to sign the Final Acts.

1.2 Credentials found not to be in order /_if applicable_7

--------- list of these countries ----------

Conclusion : the delegations of these countries are not entitled to vote; they are not entitled to sign the Final Acts.

2. Provisional credentials deposited

The provisional credentials deposited by the delegations of the following countries were found to be in order.

--------- list of these countries ----------

Conclusion : The delegations of these countries are entitled to vote; they are not entitled to sign the Final Acts.

3. Delegations which have not deposited credentials

Afghanistan (Republic of)
Australia
Brazil (Federative Republic of)
Cameroon (United Republic of)
Congo (People's Republic of the)
Ivory Coast (Republic of the)
Egypt (Arab Republic of)
Ecuador
Spain
Ethiopia
Mauritius
Mongolian People's Republic
Niger (Republic of the)
Qatar (State of)
Tunisia
Turkey
Zaire (Republic of)

Conclusion : the delegations of these countries are not entitled to vote; they are not entitled to sign the Final Acts.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/54-E
25 February 1978
Original: English

COMMITTEE 5

In the sixth meeting of Committee 5 it was decided that in each of the descriptions of Sub-Areas 6B, 6F and 6G, the following will be included:

"Between the point 32°30'N 124°E and the point 25°N 123°E, the limit of this Sub-Area is undefined".

M. CHEF
Chairman of Committee 5

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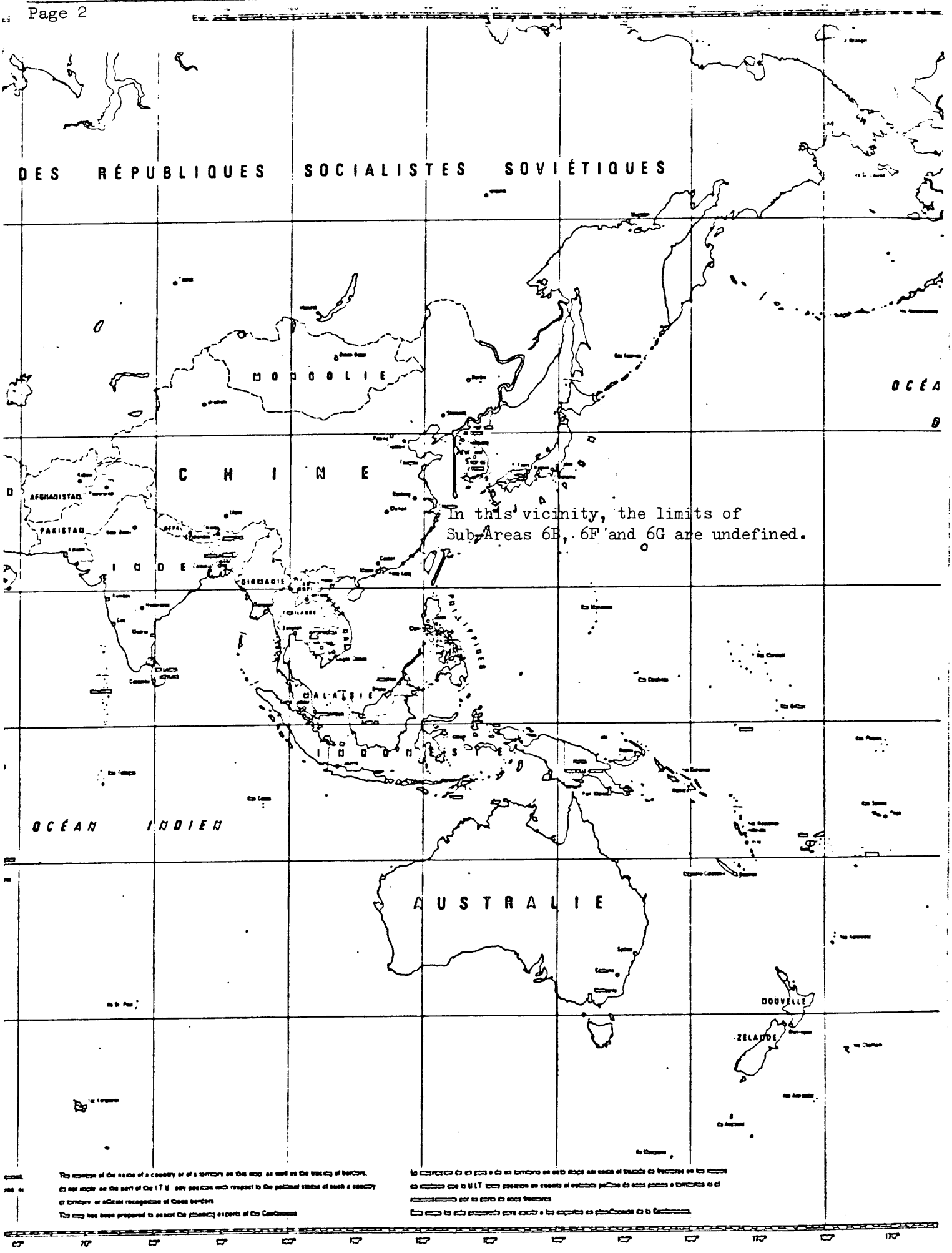
DES RÉPUBLIQUES SOCIALISTES SOVIÉTIQUES
MONGOLIE
CHINE
AFGHANISTAN
PAKISTAN
INDE
BIRMANIE
THAILANDE
PHILIPPINES
MALAISIE
INDONESIE
OCÉAN INDIEN
AUSTRALIE
NOUVELLE ZÉLANDE
In this vicinity, the limits of Sub-Areas 6E, 6F and 6G are undefined.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/55-E
27 February 1978
Original : French
English
Spanish

COMMITTEE 5

NOTE BY THE CHAIRMAN OF COMMITTEE 5

ON THE SECOND DRAFT PLAN

(Document No. DT/52)

1. Introduction

At the sixth meeting of Committee 5 consideration was given to the number of "world-wide" allotments that would need to be provided to cater for the long-distance operational control communications (see Document No. DT/45(Rev.1)). The purpose of this Note is to examine the results of the second draft plan and the possibility of providing the "world-wide" allotments in the plan.

2. A brief overview of the second draft plan

2.1 Table 1 has been prepared to give a summary of the results obtained in the second draft plan. The results show an improvement over the first draft plan (Document No. DT/40) due to the cooperation and understanding shown by all delegations in adjusting their frequency requirements in response to my appeal. The Table, however, falls short of my expectations and it is obvious that further efforts are needed to achieve an acceptable plan.

2.2 In Document No. DT/45(Rev.1), Sub-Working Group 5B1 has concluded that 63 channels are needed in the bands upto 18 MHz on a world-wide basis to satisfy the foreseeable requirements of long-distance operational control communications. This number represents 15 % of the total available channels in all the bands between 2850 kHz and 17970 kHz. If the 9 (nine) channels in 5.4 MHz band (available only in Region 2) are ignored, this proposed number 63 represents 16 % of the total remaining available channels. The second draft plan shows an improvement of the average sharing factor from 2.65 to 2.99. It also shows that the average sharing factor that can be achieved*remains fairly constant (3.42 in the first draft plan and 3.48 in the second draft plan). This latter figure is dictated by the configuration of aeronautical areas adopted by the Conference and the slight improvement is due to the relaxation of sharing conditions in the 13.3 MHz and 18 MHz bands, which Committee 5 accepted at its sixth meeting. Assuming that an average sharing factor of 3.2 can be achieved if the frequency requirements for VOLMET areas, MWARAs and RDARAs are further reduced, and made more uniform in various aeronautical areas around the world (especially by reduction in those areas which contribute to the present lack of balance in the requirements) it is possible determine to a first approximation how much further adjustment is necessary.

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* (the value shown for requirements included in the available channels in each band)

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3. Discussion on further adjustments required

3.1 In order to understand the problem in its proper perspective a summary of RDARA frequency requirements included in the second draft plan has been prepared and shown in Table 2.

3.2 The nature of a frequency requirement and its repercussions on the total plan depends upon the size of the aeronautical area; for example, a requirement for some of the smaller sub-RDARAs has more possibility of accommodation than that for a MWARA or a VOLMET. Nevertheless, for the purpose of this global analysis all are considered equivalent.

3.3 Three possible alternative are examined :

a) the number of channels for "world-wide" allotments would be 16% of the total number of available channels (excluding those in 5.4 MHz (Region 2) band), as determined in Document No. DT/45(Rev.1);

b) this number would be 13 %;

c) this number would be 10 %.

3.4 Table 3 shows the number of channels in each case that would be available to accommodate VOLMET, MWARA, RDARA requirements and the corresponding necessary reductions in frequency requirements to achieve an acceptable plan. It is my sincere hope that all delegations will give careful consideration to this Note and will endeavour to adjust the VOLMET, MWARA and RDARA frequency requirements further in the right direction.

M. CHEF
Chairman of Committee 5

TABLE 1

Summary of results of the second draft plan (Doc. No. DT/52)

Frequency band (MHz)	Available number of channels	Requirements included						Total		Grand total	Number of channels required	Sharing factor	Total requirements included in available channels	Sharing factor in available channels
		VOLMET		MWARA		RDARA								
		NC +	C +	NC +	C +	NC +	C +	NC +	C +					
3	57	8	–	18	–	136	77	162	77	239	75	3.19	221 (92%)	3.88
3.5	33	8	–	17	4	103	60	128	64	192	60	3.20	155 (81%)	4.70
4.7	16	3	–	10	–	63	32	76	32	108	38	2.84	68 (63%)	4.25
5.4 (Reg.2)	9	–	–	–	–	27	6	27	6	33	10	3.3	32 (97%)	3.56
5.6	66	9	–	21	4	164	62	194	66	260	67	3.88	259 (100%)	3.88
6.6	53	6	–	20	–	155	45	181	45	226	51*	4.43	226 (100%)	4.43
9	49	6	–	21	–	112	31	139	31	170	54	3.15	165 (97%)	3.37
10	31	5	–	15	2	86	20	106	22	128	50	2.56	103 (80%)	3.32
11.3	41	6	–	14	2	93	21	113	23	136	63	2.16	114 (84%)	2.79
13.3	33	11	–	21	7	32	9	64	16	80	55	1.45	53 (66%)	1.61
18	23	–	–	3	12	14	5	17	17	34	15*	2.27	34 (100%)	2.27
TOTAL	411	62	–	160	31	985	368	1207	399	1606	538	2.99 (Average)	1430 (89%)	3.48 (Average)

+ NC – Requirements not common to other aeronautical areas.

+ C – Requirements common to more than one aeronautical aera.

* Number of channels required to accommodate the requirements is less than the number of available channels in this band.

TABLE 2

RDARA requirements included in the second draft plan

Band (MHz)	3		3.5		4.7		5.4 (Reg.2)		5.6		6.6		9		10		11.3		13.3		18		Total	
	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC +	C +	NC+	C+
RDARA																								
1	8	–	7	1	2	–	–	–	7	–	6	–	2	–	5	–	3	–	1	–	–	–	41	1
2	8	30	3	22	2	14	–	–	12	21	12	15	7	7	7	6	10	6	3	–	1	–	65	121
3	12	22	3	17	1	8	–	–	12	19	12	15	11	7	4	6	12	6	6	–	2	–	75	100
4	4	–	2	1	1	–	–	–	5	–	7	–	4	–	2	–	3	–	5	–	1	–	34	1
5	6	–	4	2	–	–	–	–	7	2	7	2	6	2	5	–	3	–	3	–	2	–	43	8
6	32	2	26	2	17	4	–	–	36	–	38	–	23	4	22	2	20	2	7	5	3	–	224	21
7	6	–	4	–	–	–	–	–	9	–	5	–	4	–	4	–	4	–	1	–	–	–	37	–
8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
9	6	–	5	2	4	–	–	–	7	–	7	–	6	2	5	–	5	2	–	–	–	–	45	6
10	16	–	12	–	17	–	10	–	22	–	16	–	13	–	5	–	6	–	1	–	1	–	119	–
11	4	–	5	–	3	–	3	–	4	–	5	–	3	–	3	–	2	–	1	–	1	–	34	–
12	8	12	7	8	6	–	2	4	16	7	12	4	7	2	6	2	4	2	1	–	1	–	70	41
13	22	7	19	3	10	6	12	2	17	9	18	7	19	7	13	4	13	3	2	4	1	5	146	57
14	4	4	6	2	–	–	–	–	10	4	10	2	7	–	5	–	8	–	1	–	1	–	52	12
TOTAL	136	77	103	60	63	32	27	6	164	62	155	45	112	31	86	20	93	21	32	9	14	5	985	368

+ NC – requirement not common to other aeronautical areas.

+ C – requirement common to more than one aeronautical area.

TABLE 3

1)	Total number of SSB channels in the bands between 2850 kHz and 17970 kHz		411	
2)	less channels in 5.4 MHz (Region 2) band		9	
3)	Net available channels		402	
		16%	13%	10%
4)	Channels to be set aside for "world-wide" allotments	64	52	40
5)	Channels that would be available for VOLMET, MWARA and RDARA requirements [3) minus 4)]	338	350	362
6)	Average sharing factor	3.2	3.2	3.2
7)	Total number of VOLMET, MAWRA and RDARA requirements that can be accomodated in the plan [5) multiplied by 6)]	1081	1120	1158
8)	Requirements appearing in the Second draft plan	1606	1606	1606
9)	Further reductions necessary [8) minus 7)]	515	486	448

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/56-E
28 February 1978
Original : English

COMMITTEE 5

REPORT OF THE AD HOC GROUP

TO CONSIDER THE ANNEX TO RECOMMENDATION No. D IN DOCUMENT No. 224

In accordance with the instructions given by Committee 5 at its Sixth Meeting, I enclose herewith the Report of the Ad hoc Group on the subject mentioned above.

K. KING
Chairman of Ad hoc Group

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Annex : 1

ANNEX

REPORT OF THE AD HOC GROUP

TO CONSIDER DOCUMENT No. 224 - ANNEX TO RECOMMENDATION No. D

The Group recommends to Committee 5 that the above Annex be worded as follows :

Appendix 27

Page 3

Modify the title of Part II to read :

"Plan for the allotment of frequencies for the Aeronautical Mobile (R) Service in the exclusive bands between 2 850 kHz and ~~17-970~~ 22 000 kHz"

MOD 27/10 1. Frequency separation of channels

MOD 27/10 1.1 The frequency separation of channels between carrier (reference) frequencies shall be 3 kHz. This is adequate to permit communications using the classes of emission referred to in Nos. 27/49-27/52 in the frequency bands between 2 850 kHz and ~~17-970~~ 22 000 kHz allocated exclusively to the Aeronautical Mobile (R) Service. The carrier (reference) frequency of the channels in the Plan shall be an integral multiple of 1 kHz.

MOD 27/16 Add to the Table the following :

21 925	21 964
21 928	21 967
21 931	21 970
21 934	21 973
21 937	21 976
21 940	21 979
21 943	21 982
21 946	21 985
21 949	21 988
21 952	21 991
21 955	21 994
21 958	21 997
21 961	

Reasons : To leave room for Aeronautical Fixed Services and to retain as much spacing as possible from Radio Astronomy Service in band 21 850-21 870 kHz.

Page 25

Part II : amend title as for page 3 above.

MOD 27/189

MOD /27/207A/ /27/208/

Both these modifications must wait until Committee 5 has finalized a frequency plan and allotted frequencies to be used for the world-wide areas.

Radio Regulations - Article 5 (RR5-33)

21 870-21 924	AERONAUTICAL FIXED
21 924-22 000	AERONAUTICAL MOBILE (R)

MOD 431 Aer § 5 Frequencies in the bands allocated to the Aeronautical Mobile Service between 2 850 and ~~18-030~~ 22 000 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.

MOD 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~~ 22 000 kHz (see No. 500).

MOD 589 § 30 (1) Frequency bands allocated exclusively to the Aeronautical Mobile (R) Service between 2 850 and ~~17-970~~ 22 000 kHz.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/57-E
28 February 1978
Original : English

COMMITTEE 5

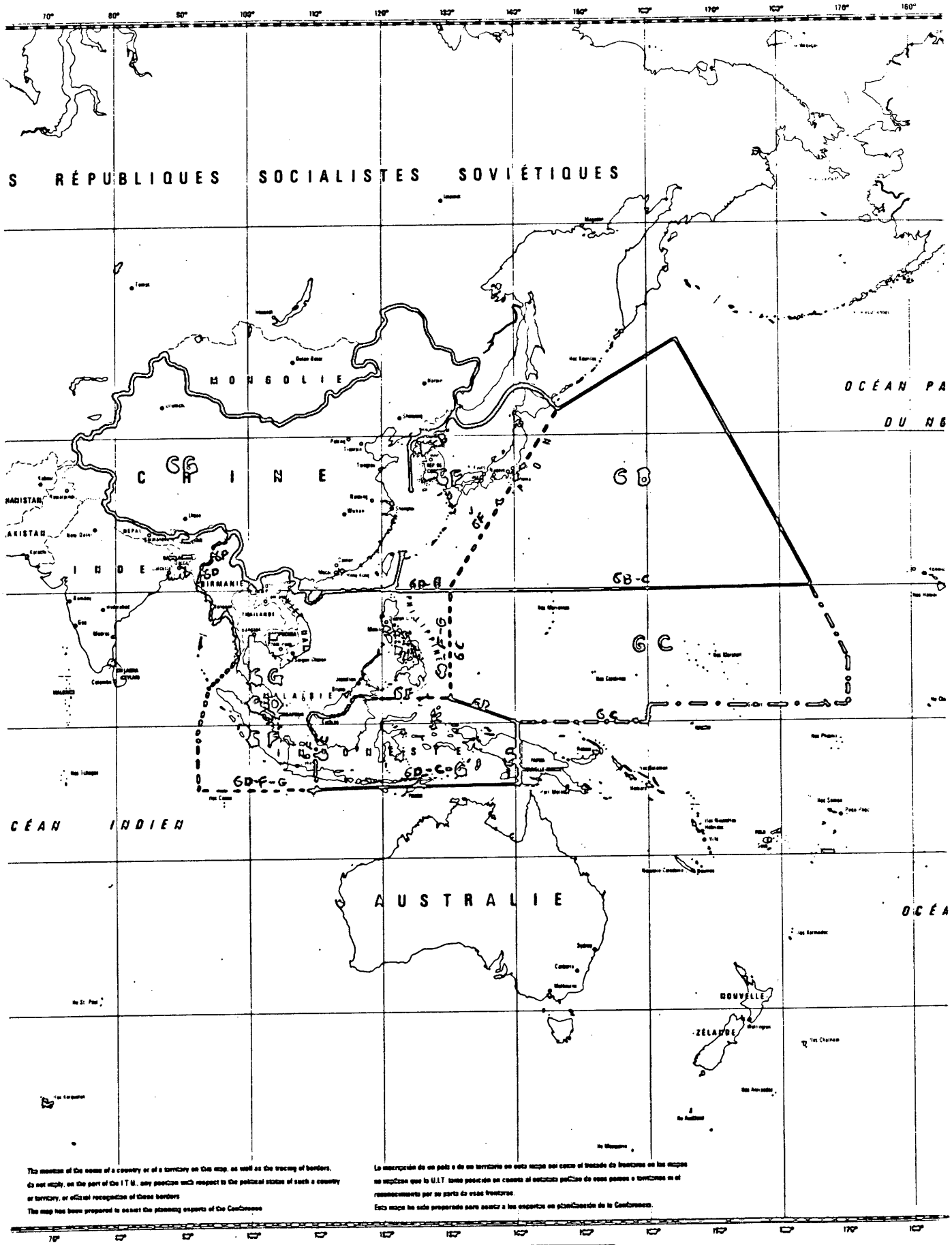
ADD 27/132A Sub-Area 6G

From the point 32°30'N 124°E northward to 39°N 124°E, 39°31'51"N 124°06'31"E then to 39°49'41"N 124°10'06"E on the border between the People's Republic of China and the Democratic People's Republic of Korea. Then along the border of the People's Republic of China to the junction of the border with India and Burma. Thence southward along the India-Burma and Bangladesh-Burma borders to the Bay of Bengal. Along the coast of Burma to its southernmost point. Then to Weh Island (off the north coast of Indonesia). Then to the point 02°S 92°E and through the point 10°S 92°E to 10°S 110°E. Then eastward to 10°S 141°E extending northward to 00°141°E and then to 04°N 130°E through the point 20°N 130°E to 20°N 120°40'E. Thence northward to the points 21°N 121°30'E and 25°N 123°E. Between the points 25°N 123°E and the point 32°30'N 124°E, the limit of this Sub-Area is undefined.

In the area where Sub-Areas 6D, 6F and 6G are common, the frequencies allotted to Sub-Area 6G will be used only by the aeronautical stations of the People's Republic of China; the frequencies allotted to Sub-Areas 6D and 6F will be used only by the aeronautical stations of the other Administrations in the common area. Also in this common area, the domestic flights of the People's Republic of China will be within the area defined by a line starting at 21°32'52"N 108°E and through the points 20°N 108°E, 20°N 107°E, 18°N 107°E, 18°N 108°E, 15°N 110°E, 10°N 110°E, 06°N 108°E, 03°30'N 112°E, 04°N 113°E, 08°N 116°E, 10°N 118°E, 14°N 119°E, 18°N 119°E to 20°N 120°40'E thence along the limit of Sub-Area 6D to 21°32'52"N 108°E.

M. CHEF
Chairman of Committee 5

ARCHIVES U.I.T. GENÈVE



The mention of the name of a country or of a territory on this map, as well as the tracing of borders, do not imply, on the part of the I.T.U., any position with respect to the political status of such a country or territory, or official recognition of these borders.
The map has been prepared to assist the planning experts of the Conference.

La mencion de un país o de un territorio en este mapa así como el trazado de fronteras en los mapas no implican que la U.I.T. tome posición en cuanto al estatuto político de esos países o territorios o el reconocimiento por su parte de esas fronteras.
Este mapa ha sido preparado para asistir a los expertos en planificación de la Conferencia.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/58-E
1 March 1978
Original: English

COMMITTEE 5

The revised description of the boundaries of Sub-Area 6F is proposed to be as follows:

MOD 27/132 Sub-Area 6F

From the point 25°N 123°E, 21°N 121°30'E, 20°N 120°E thence westward along 20°N latitude to the Island of Hainan, south around the Island of Hainan and along the China-Viet-Nam, China-Laos and China-Burma borders to the junction of the borders of China, India and Burma, south along the India-Burma and Bangladesh-Burma borders to the Bay of Bengal. Along the coast of Burma to its southernmost point then to Weh Island (off the north coast of Sumatra). Then to the point 02°S 92°E and through the point 10°S 92°E to 10°S 110°E. Then northward along 110°E meridian, and thence along the boundary of Sub-Area 6C to the points 20°N 130°E, 43°N 147°E, thence westward between the territorial waters of Japan and the U.S.S.R. and along the border between the Democratic People's Republic of Korea and the U.S.S.R., and then the border between China and the Democratic People's Republic of Korea, to the points 39°49'41"N 124°10'06"E, 39°31'51"N 124°06'31"E, 39°N 124°E and then 32°30'N 124°E.

Between the point 32°30'N 124°E and the point 25°N 123°E, the limit of this Sub-Area is undefined.

M. CHEF
Chairman of Committee 5

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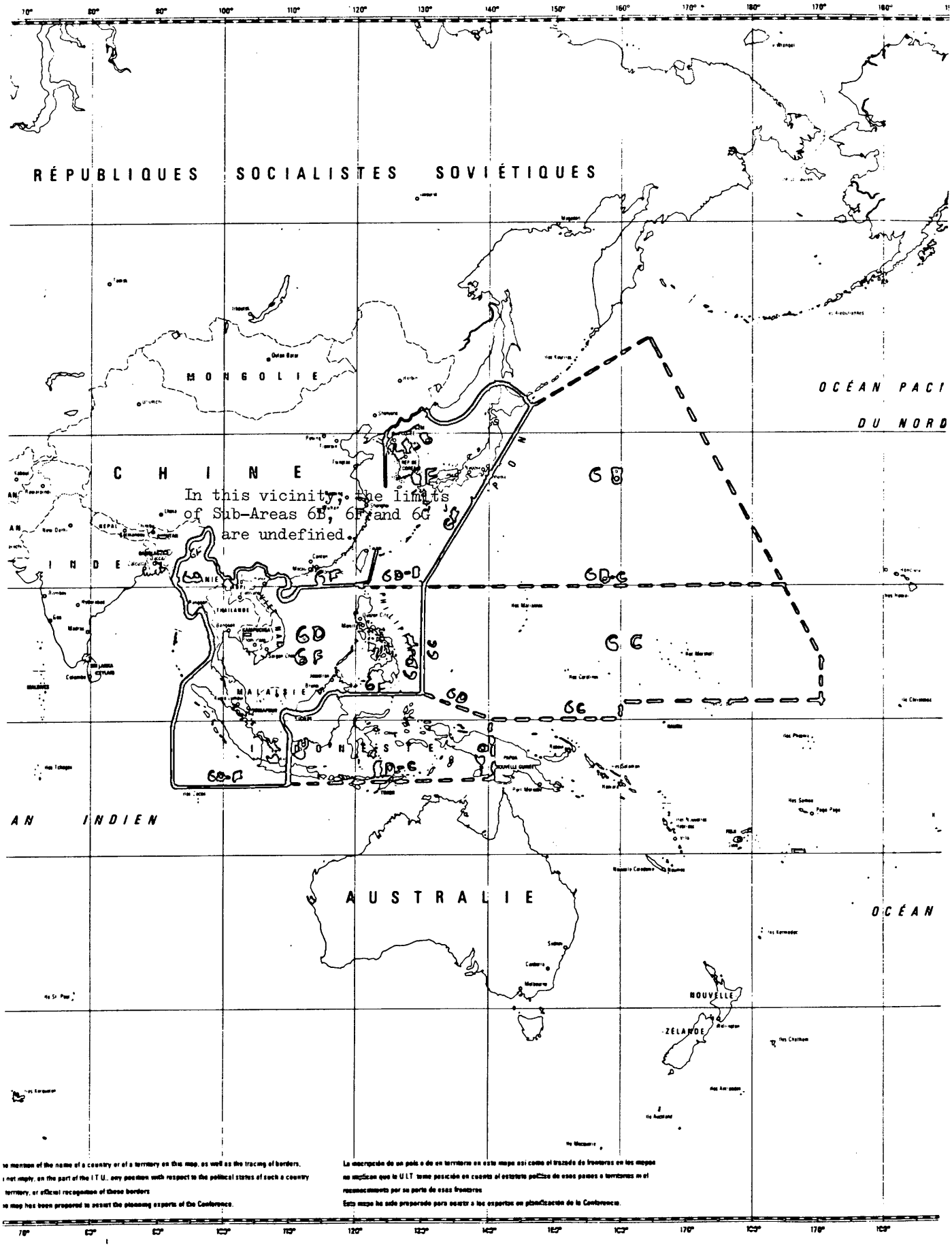

No mention of the name of a country or of a territory on this map, as well as the tracing of borders, does not imply, on the part of the I.T.U., any position with respect to the political status of such a country or territory, or official recognition of these borders.
This map has been prepared to assist the planning experts of the Conference.

La mencion de un país o de un territorio en este mapa así como el trazado de fronteras en los mapas no significan que la U.I.T. toma posición en cuanto al estatuto político de esos países o territorios ni el reconocimiento por su parte de esas fronteras.
Este mapa ha sido preparado para asistir a los expertos en planificación de la Conferencia.

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/59-E
1 March 1978
Original : English

COMMITTEE 5

In accordance with the decision taken in the Sixth Meeting of Committee 5, the boundaries of Sub-RDARAs 6B, 6C, 6D and 6F are defined and shown in the enclosed map. For definition of Sub-RDARA 6G please see Document No. DT/57.

M. CHEF
Chairman of Committee 5

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Annex : 1

ANNEX

MOD 27/132 Amend definition to read :

Sub-Area 6F

From the point 39°49'41"N 124°10'06"E, then through the points 39°31'51"N 124°06'31"E, 39°N 124°E, 32°30'N 124°E, between the point 32°30'N 124°E and the point 25°N 123°E, the limit of this sub-area is undefined, 25°N 123°E, 21°N 121°30'E, / 20°N 120°E / or / 18°N 119°E /, 14°N 119°E, 10°N 118°E, 08°N 116°E, 04°N 113°E, 03°30'N 112°E, 06°N 108°E, 10°N 110°E, 15°N 110°E, 18°N 108°E, 18°N 107°E, 20°N 107°E, 20°N 108°E, 21°32'52"N 108°E. Then along the China-Viet-Nam, China-Laos and China-Burma borders to the junction of the borders of China, India and Burma. Thence, south along the India-Burma and Bangladesh-Burma borders to the Bay of Bengal, following the coast of Burma to its southernmost point, then to Weh Island (off the north coast of Sumatra). Thence through the points 02°S 92°E, 10°S 92°E, 10°S 110°E, then northward along the 110°E meridian, and along the boundary of Sub-Area 6C to the point 04°N 130°E. Then through the points 20°N 130°E, 43°N 147°E, and then westward between the territorial waters of Japan and the USSR, and then along the DPRK-USSR and China-DPRK borders to the point 39°49'41"N 124°10'06"E.

ADD 27/132A New Sub-Area 6G

From the point 21°32'52"N 108°E on the China-Viet-Nam border, along the national boundary of the mainland part of the People's Republic of China to the point 39°49'41"N 124°10'06"E on the China-DPRK border, then through the points 39°31'51"N 124°06'31"E, 39°N 124°E, 32°30'N 124°E, between the point 32°30'N 124°E and the point 25°N 123°E, the limit of this sub-area is undefined 25°N 123°E, 21°N 121°30'E, / 20°N 120°E / or / 18°N 119°E /, between one of these points and the point 21°32'52"N 108°E the limit of this sub-area is undefined.

MOD 27/128 Amend definition to read :

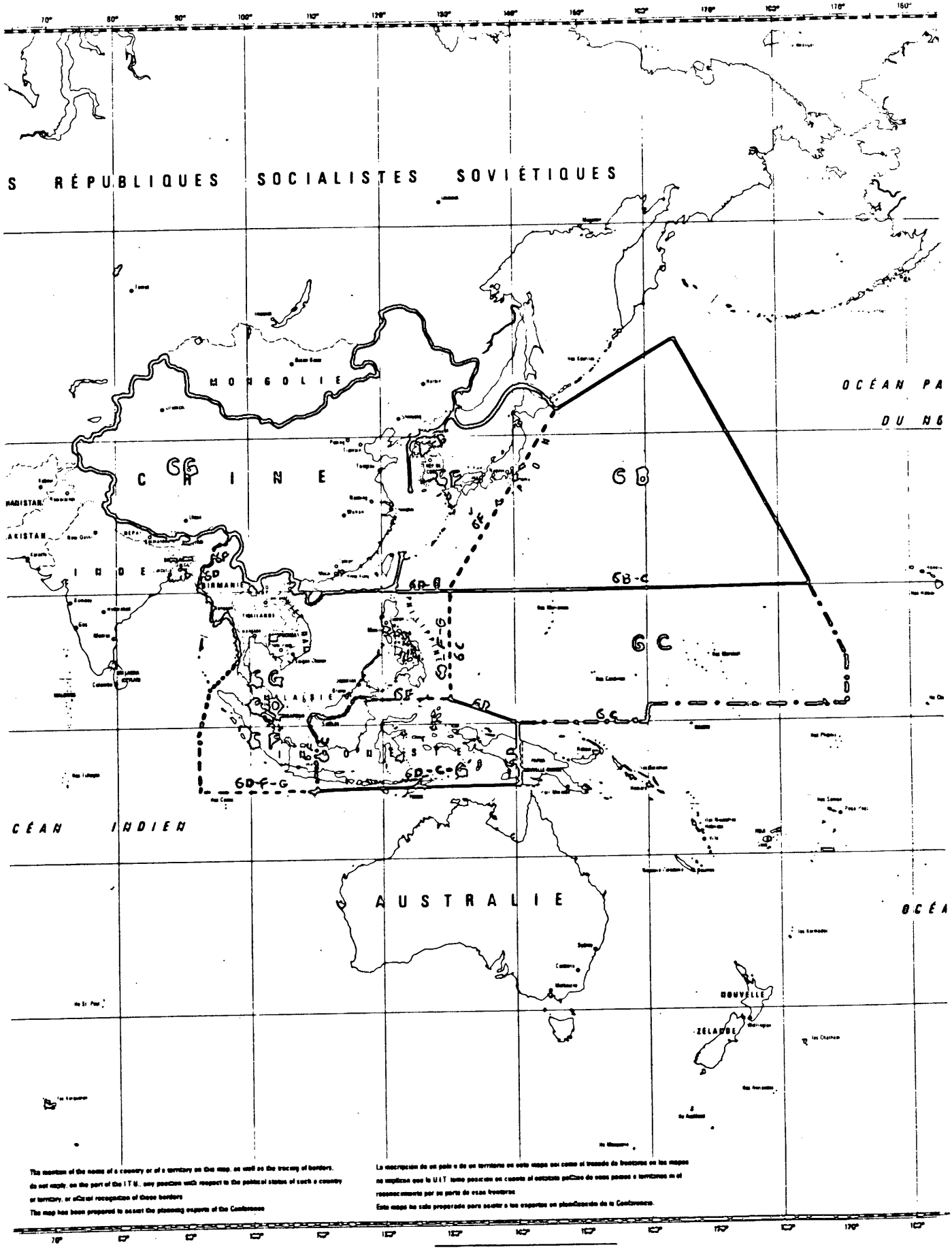
Sub-Area 6B

From the point 39°49'41"N 124°10'06"E, through the points 39°31'51"N 124°06'31"E, 39°N 124°E, 32°30'N 124°E, between the point 32°30'N 124°E and the point 25°N 123°E, the limit of this sub-area is undefined 25°N 123°E, 21°N 121°30'E, / 20°N 120°E / or / 20°N 120°40'E /, 20°N 176°W, 50°N 164°E, 43°N 147°E, thence west between the territorial waters of Japan and the USSR and along the border between the Democratic People's Republic of Korea and USSR, and then the border between China and the Democratic People's Republic of Korea, to the point 39°49'41"N 124°10'06"E.

NOC 27/129 Sub-Area 6C

MOD 27/130 Sub-Area 6D

From the junction of the borders of China, India and Burma, south along the India-Burma and Bangladesh-Burma borders to the Bay of Bengal. Along the coast of Burma to its southernmost point, then to Weh Island (off the north coast of Sumatra). Then to the point 02°S 92°E, and through the point 10°S 92°E to 10°S 110°E. Then eastward to 10°S 141°E extending northward to 0° 141°E and then to 04°N 130°E through the point 20°N 130°E to 20°N 113°E. Thence, south around the Island of Hainan, and along the China-Viet-Nam, China-Laos and China-Burma borders to close the sub-area at the junction of the borders of China, India and Burma.



The mention of the name of a country or of a territory on this map, as well as the tracing of borders, do not imply, on the part of the ITU, any position with respect to the political status of such a country or territory, or official recognition of these borders.
The map has been prepared to assist the planning experts of the Conference.

La mencion de un país o de un territorio en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatuto político de esos países o territorios o el reconocimiento por su parte de esas fronteras.
Este mapa ha sido preparado para asistir a los expertos en planificación de la Conferencia.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/60-F/E/S
2 mars 1978
Original: français
anglais
espagnol

COMMISSION 5
COMMITTEE 5
COMISION 5

Resumé des résultats obtenus du troisième projet de Plan

Summary of the results obtained of the Third Draft Plan

Resumen de los resultados obtenidos del Tercer proyecto de Plan

Tenant compte des décisions prises dans la huitième séance de la Commission 5 le 1/2 mars 1978 on trouvera le resumé des résultats obtenus dans l'Annexe ci-jointe.

Taking into account the frequency requirements agreed to in Committee 5 on 1/2 March 1978, a Summary of the results obtained is attached as an Annex.

Teniendo en cuenta las decisiones tomadas en la octava sesión de la Comisión 5 el 1/2 de marzo de 1978, en el Anexo adjunto se presenta un Resumen de los resultados obtenidos.

M. CHEF
Président de la Commission 5

Annexe
Annex : 1
Anexo

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ANNEXE - ANNEX - ANEXO

Resumé des résultats obtenus - Troisième projet de plan

Summary of results obtained - Third Draft Plan

Resumen de los resultados obtenidos - Tercer proyecto de plan

Bande Band Banda	Nombre total de voies disponibles Total number of channels available Numero total de canales disponibles	Nombre de voies requises pour satisfaire aux besoins Channels required to satisfy requirements Número de canales requeridos para satisfacer las necesidades			Difference Difference Diferencia
		Mondiale Worldwide Mundial	ZLAMP/VOLMET/ZLARN MWARA/VOLMET/RDARA ZRMP /VOLMET/ ZRRN	Total requis Total required Total requerido	
3	57	4	57	61	+ 4
3.5	33	2	43	45	+12
4.7	16	2	25	27	+11
5.4 (Reg.2)	9	-	10	10	+ 1
5.6	66	7	67	74	+ 8
6.6	53	4	53	57	+ 4
9	49	6	54	60	+11
10	31	8	44	52	+21
11.3	41	6	50	56	+15
13.3	33	12	40	52	+19
18	23	9	14	23	0

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE AERONAUTIQUE (R)

(Genève, 1978)

Document N° DT/61-F/E/S
2 mars 1978
Original: français
anglais
espagnol

DISTRIBUTION LIMITEE AUX CHEFS DE DELEGATION (suivant décision de la Commission de Direction en date du 16 février 1978)

LIMITED DISTRIBUTION TO THE HEADS OF DELEGATIONS (according to the decision of the Steering Committee on 16 February 1978)

DISTRIBUCIÓN LIMITADA A LOS JEFES DE DELEGACIÓN (según decisión de la Comisión de Dirección de fecha 16 de febrero de 1978)

PROJET DE PLAN - DRAFT PLAN - PROYECTO DE PLAN

Le troisième projet de Plan a été élaboré en tenant compte des besoins en fréquences acceptés par la Commission 5 le 1/2 mars 1978 ainsi que des limites des zones aéronautiques et des matrices de partage stipulées dans le Document N° 234(Rév.1).

Un résumé des résultats obtenus figure dans le Document N° DT/60.

Le détail des résultats correspondant à chaque bande de fréquences figure dans l'Annexe 1. On trouve dans l'Annexe 2 les besoins en fréquences qui ont été utilisés.

Taking into account the frequency requirements agreed to in Committee 5 on 1/2 March, 1978 and the boundaries of the aeronautical areas and sharing matrices given in Document No. 234(Rev.1), the Third Draft Plan has been prepared.

The summary of the results obtained appears in Document No. DT/60.

Detailed results for each frequency band appear in Annex 1. Annex 2 contains the frequency requirements that were used.

Ha sido preparado el tercer proyecto de Plan, teniendo en cuenta las necesidades de frecuencias adoptadas en Comisión 5 el 1/2 de marzo de 1978, así como los límites de las zonas aeronáuticas y las matrices de compartición indicados en el Documento N.° 234(Rev.1).

En el Documento N.° DT/60 figura el resumen de los resultados logrados.

En Anexo 1 se indican los resultados detallados para cada banda de frecuencias. El Anexo 2 hace mención de las necesidades de frecuencias utilizadas.

Annexes: 2

M. CHEF
Président de la Commission 5

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ANNEXE 1 - ANNEX 1 - ANEXO 1

Résultats detaillés pour chaque bande de fréquence

Detailed results for each frequency band

Resultados detallados para cada banda de frecuencia

Titre des colonnes

Column headings

Títulos de las columnas

Colonne 1	Numéro de référence, suivi d'un numéro de ligne, dans l'ordre consécutif à chaque bande de fréquence
Column 1	Reference number followed by a line number in consecutive order within each frequency band
Columna 1	Número de reference seguido de un número de línea por orden consecutivo en cada banda de frecuencia
Colonne 2	Zone d'emploi autorisé
Column 2	Authorised area of use
Columna 2	Zona de uso autorizado
Colonne 3	Observations
Column 3	Remarks
Columna 3	Observaciones

Colonne 2
Column 2
Columna 2

M = ZLAMP / MWARA / ZRMP
R = ZLARN / RDARA / ZRRN
V = VOLMET

Colonne 3
Column 3
Columna 3

CC = voie commune à / common channel to / canal común a

C001/....	In area indicated after the oblique stroke is restricted to daytime only
C002/6G	In area 6G, operation is restricted to east of 95°E.
C003/6G	In area 6G, operation is restricted to west of 95°E.

1	2		3	
01 001 R 002	2A 6G* 12E 12F 12G 12H 5D 10B 13F 7D 9C	 CC	C002/6G 12E 12F 12G 12H	
02 003 R 004	2A 6G* 12E 12F 12G 12H 5D 10B 13F 12A	 CC	C002/6G 12E 12F 12G 12H	
03 005 R 006	2A 2C 6G* 12E 12J 4B 13H 10F	CC CC	2A 2C 12E 12J	C002/6G
04 007 R 008	2A 2C 6G* 12F 12J 4B 10E 13H	CC CC	2A 2C 12F 12J	C002/6G
05 009 M 010 R	CEP 2A 2C 6G* 13C 13J 13K 10E 7C	CC CC	2A 2C 13C 13J 13K	C002/6G
06 011 R 012	2A 2C 6G* 13E 13F 11B 7B	CC CC	2A 2C 13E 13F	C002/6G
07 013 R	6G 13I 13J 4A 12C 10C 1B*	CC	13I 13J	C001/1B
08 014 M 015 R	NAT 6G 13G 7B			
09 016 M 017 R	NAT 6G 13G 7E			
10 018 R 019 V	2B 2C 3B 14A 14D VSAM	CC CC	2B 2C 14A 14D	3B
11 020 M 021 R	NAT 6G 13G 9D 7F			
12 022 R 023 V	2B 2C 3B 14 1B* VCAR	CC	2B 2C	3B C001/1B
13 024 R 025 V	3A 3C 12C 13N 9B 10C VAFI	CC	3A 3C	

1	2							3		
14 026 M	NAT									
027 R	6G	13I	14G							
15 028 M	CAR						CC	2B	2C	3B
029 R	2B	2C	3B	9B	13I					
16 030 R	3A	3C	5C	14			CC	3A	3C	
031 V	VNAT									
17 032 M	NAT									
033 R	6G	14G								
18 034 M	NP						CC	2B	2C	
035 R	2B	2C	6C	12G						
19 036 M	SAT						CC	3A	3B	
037 R	3A	3B	6E	1E	14C	10D				
20 038 M	AFI						CC	3C	3B	
039 R	3C	3B	1D	11B	13D					
21 040 M	SAT									
041 R	6G	1B	10D	2A*			CC 1/2A			
22 042 M	SAM						CC	2A	2B	3A
043 R	10A	2A	2B	3A	6C	10E				
23 044 M	AFI						CC	3C	3B	
045 R	3C	3B	1D	12F						
24 046 R	6G	1C	12J							
25 047 R	10A	2A	2B	3A	12J		CC	2A	2B	3A
26 048 R	2C	3	11B	13D			CC	2C	3	
27 049 R	2	3C	11B	13J			CC	2	3C	
28 050 R	6G	1C	13C							
29 051 R	10A	2A	2B	3A	13C		CC	2A	2B	3A

page 4

1	2	3
30 052 R	2B 2C 6B 13J 3B*	CC 2B 2C C001/3B
31 053 R	3C 5A 13J	
32 054 R	6A 6E 3B 13K 4A*	CC 6A 6E C001/4A
33 055 R	6G 13K	
34 056 R	10A 2A 2B 3A 13K	CC 2A 2B 3A
35 057 M 058 R	MID 10A 13M	
36 059 M 060 R	NCA 13M	
37 061 R 062 V	2C VPAC	
38 063 R	3C 1D	
39 064 M 065 R	CWP 5B 3C*	C001/3C
40 066 R	6A 10A	
41 067 R	6D 3A	
42 068 R 069 V	6F VEUR	
43 070 R	6G	
44 071 R 072 V	6B VMID	
45 073 V	VSEA	
46 074 M	EA	

1	2	3
47 075 M	MID 3B*	C001/3B
48 076 M	NCA	
49 077 R	2	
50 078 R	2C 6D 3A* 3B*	CC 3A 3B C001/3A 3B
51 079 R	3	
52 080 R	3C	
53 081 R	5B 3A*	C001/3A
54 082 R	6A 3A*	C001/3A
55 083 R	6E 2B* 2C* 3B*	CC 2B 2C 3B C001/2B 2C 3B
56 084 R	6F	
57 085 R	6G	

1	2	3
01 001 R 002 003	2A 2C 6G* 9C 9D 12E 12F 12G 12H 7C 10B	CC 2A 2C CCC2/6G CC 9C 9D CC 12E 12F 12G 12H
02 004 R 005	2A 2C 6G* 12E 12F 12G 12H 7B 9C 10B	CC 2A 2C CCC2/6G CC 12E 12F 12G 12H
03 006 M 007 R	SP 2A 2C 6G* 13C 13J 13K 10B 7F	CC 2A 2C CCC2/6G CC 13C 13J 13K
04 008 R	2C 6G* 12 7E 1B*	CCC2/6G CCC1/1B
05 009 M 010 R	CAR 2B 2C 3B 14A 14E 13H	CC 2B 2C 3B CC 14A 14E
06 011 M 012 R	CEP 6G 1E 4A 13M	CC 1E 4A
07 013 R 014	2B 2C 3B 14B 14F 4B 13D 10D	CC 2B 2C 3B CC 14B 14F
08 015 R 016 V	3A 3C 12J 10D 9B VAFI	CC 3A 3C
09 017 M 018 R	NAT 6G 13F	
10 019 M 020 R	SAM 2B 2C 10C 6C 1B*	CC 2B 2C CCC1/1B
11 021 M 022 R	SAT 3A 3C 9B	CC 3A 3C
12 023 R 024 V	3A 3B 5D 6D 13H VNAT	CC 3A 3B
13 025 R	6G 4A 10D 13J 1B*	CCC1/1B

1	2		3
14 026 M 027 R	AFI MID 11B 13D 14	CC	AFI MID
15 028 R	1D 3C 3B 12D 13F 14	CC	3C 3B
16 029 R	2B 2C 10A 14 13E 10E	CC	2B 2C
17 030 R	6G 1C 11B 13G		
18 031 M 032 R	AFI 3C 3B 11B 13G 14C	CC	3C 3B
19 033 M 034 R	EA SEA 11B 13I	CC	EA SEA
20 035 R 036 V	1D 13J VPAC		
21 037 R	2A 2B 3A 10A 14D 10E 13C	CC	2A 2B 3A
22 038 M 039 R	CWP 5B 12C 13K 3B*	CC CC1/3B	
23 040 R	6A 6E 1C 3B 12C 13K	CC	6A 6E
24 041 R	6B 5A 5C 13C 2A* 2B* 3A*	CC CC	5A 5C 2A 2B 3A CC1/2A 2B 3A
25 042 R 043 V	6F 13M 3A* 3B* VEUR	CC 3A 3B CC1/3A 3B	
26 044 R	6G 13N		
27 045 R 046 V	6B VMID		
28 047 V	VNCA		
29 048 V	VSEA		
30 049 M 050 R	AFI 3C		

1	2	3
31 051 M	EA	
32 052 M 053 R	EUR 6E	
33 054 M	INO 2A* 2B* 3A*	COI/2A 2B 3A CC 2A 2B 3A
34 055 M	MID	
35 056 M	NCA	
36 057 M	SEA	
37 058 R	1D 6F	
38 059 R	2	
39 060 R	2A 2B 3A	CC 2A 2B 3A
40 061 R	3 5D	
41 062 R	5B	
42 063 R	6A	
43 064 R	6G	

1	2	3
01 001 R 002 V	13E 13F 6C 6G* 14A* 14G* VEUR	CC 13E 13F CC 14A 14G CCC1/6G CCC1/14A 14G
02 003 R 004 V	13D 13M 9B 10B 14B* 14C* VMID	CC 13D 13M CC 14B 14C CCC1/14B 14C
03 005 R 006 V	13E 13F 10F 14D* VNCA	CC 13E 13F CCC1/14D
04 007 M 008 R	AFI CEP 13H 2A* 2C* 6G*	CC 2A 2C CCC1/2A 2C CCC1/6G
05 009 M 010 R	CWP 1C 10D 13G	-
06 011 M	MID SAM 4A*	CCC1/4A
07 012 M 013 R	NAT 6A 6E 9C	CC 6A 6E -
08 014 M 015 R	NCA 10D 13I	
09 016 R	1D 9 10B 13I 6G*	CCC1/6G
10 017 R	2 10B 10E 13J	CC 10B 10E
11 018 R	6A 6E 10 13J	CC 6A 6E
12 019 R	6D 10A 12F	
13 020 R	10D 2A 2B 3A 13J	CC 2A 2B 3A
14 021 R	11B 2A 2B 3A	CC 2A 2B 3A

1	2 page 10						3			
15 022 R	2A	2C	10B	13K	5G*	CC	2A	2C		
						CC1/6G				
16 023 R	10B	2B	2C	13K		CC	2B	2C		
17 024 R	12E	2B	2C	3B		CC	2B	2C	3B	
18 025 R	2B	2C	3B	10E	6G*	CC	2B	2C	3B	
						CC1/6G				
19 026 R	10E	3A	3C			CC	3A	3C		
20 027 R	3A	3C	10C	13H		CC	3A	3C		
21 028 R	10C									
22 029 R	12G									
23 030 R	12J									
24 031 R	12C									
25 032 R	12C									

1	2						3	
01 001 R	10	12E	12F	13I	13J	CC	12E	12F
002						CC	13I	13J
02 003 R	10A	12F	12H	13G	10D	CC	12F	12H
03 004 R	10A	13D	10D	12C				
04 005 R	10B	13G	10E	12E				
05 006 R	10B	13N						
06 007 R	10C	13I	13M					
07 008 R	10F	13H	13K	11B				
08 009 R	11B	13H						
09 010 R	11B	13F	13J					
10 011 R	13J							

1	2															3		
01 001 R	2A	6G*	5A	5C	10C	10E	12E	12J	13E	13F	14D	14G	7B	13K		C002/6G		
01 002	9C														CC	5A	5C	
003															CC	10C	10E	
004															CC	12E	12J	
005															CC	13E	13F	
006															CC	14D	14G	
007																		
02 008 R	2A	6G*	12E	12F	13E	13F	10	4A	7E	9	13K					C002/6G		
009															CC	12E	12F	
010															CC	13E	13F	
03 011 R	2A	6G*	12E	12F	12H	13E	13F	4A	7F	10E	10B	12A	14			C002/6G		
012															CC	12E	12F	12H
013															CC	13E	13F	
04 014 H	SP														CC	2A	2C	C002/6G
015 R	2A	2C	6G*	13C	13J	13K	10E	4B	7D						CC	13C	13J	13K
05 016 H	SAH														CC	2A 2C	C002/6G	
017 R	2A	2C	6G*	5D	14	10F												
06 018 H	CAR															C002 / 6G		
019 R	2C	6G*	5D	9D														
07 020 H	SAT														CC	3B	3C	
021 R	3B	3C	6A	6C	14G													
08 022 R	3B	3C	7C	6D	14G										CC	3B	3C	
023 V	VCAR																	
09 024 R	3B	6G*														C003/6G		
025 V	VSAH																	
10 026 H	CAR															C003/6G		
027 R	3B	6G*	1D	7B														
11 028 R	6G																	
029 V	VNAT																	

1	2	3
12 030 M 031 R	CEP 6G 5A 7F 13G	
13 032 M 033 R	CEP 6G 7 13K 13H	
14 034 M 035 R	SP 6G 12G 13J 1B 4B	
15 036 R	2B 2C 3B 12 6D 10B 13J CC	2B 2C 3B
16 037 R	6G 4B 11B 9B 12F 13N	
17 038 R	2B 2C 3B 6D 11B 12G 13H CC	2B 2C 3B
18 039 R	3A 3B 1D 6D 11B 12G 13I CC	3A 3B
19 040 R	6G 11B 9B 12J 13I	
20 041 R	2B 2C 3B 6E 6C 10B 12C 13C CC	2B 2C 3B
21 042 R	3A 3B 1D 6E 9B 10C 12C 13C CC	3A 3B
22 043 R	6G 9B 10A 12C 10D 13C	
23 044 R	2B 2C 6F 10A 12C 10D 13C CC	2B 2C
24 045 R	3A 3C 5B 1B 10A 12C 10D 13M CC	3A 3C
25 046 R	6G 10A 10D 12D 13D	
26 047 R	2B 2C 6F 10C 12E CC	2B 2C
27 048 R	3A 3C 5B 1C 10C 12E CC	3A 3C
28 049 R	6G 10C	
29 050 R	2A 2B 3A 6E 6B 10D CC	2A 2B 3A

1	2						3		
30 051 R	6G								
31 052 R	2A	2B	3A	6B		CC	2A	2B	3A
32 053 R	6G								
33 054 R	2A	2B	3A	6B		CC	2A	2B	3A
34 055 R	6G	2C							
35 056 M	AFI	MID				CC	AFI	MID	
36 057 M	NAT	SEA							
37 058 R	2B	1C							
38 059 R	3A	5B	1E						
39 060 R	3C	2C							
40 061 R	6G	2C							
41 062 M	AFI	CWP							
42 063 M	EA	SEA				CC	EA	SEA	
43 064 M	NAT								
44 065 M	NCA								
45 066 R	2B								
46 067 R	3A	6A							
47 068 R	3C	6A							
48 069 R	6G								

1	2	3
49 070 R	3B	
071 V	VAFI	
50 072 V	VEUR	
51 073 V	VMID	
52 074 V	VNCA	
53 075 V	VPAC	
54 076 V	VSEA	
55 077 M	AFI CWP	
56 078 M	EA	
57 079 M	EUR	
58 080 M	INO	
59 081 M	MID	
60 082 M	NAT	
61 083 M	NCA	
62 084 M	NP	
63 085 R	2 3 CC	2 3
64 086 R	2B	
65 087 R	3A	
66 088 R	3C	
67 089 R	6G	

1	2													3		
01 001 R	6G	2A	2C	12E	12F	13E	13F	10	4B	13K	9	14A	CC	2A	2C	
002													CC	12E	12F	
003													CC	13E	13F	
02 004 R	6G	2A	2C	12E	12J	5D	13F	13K	10E	10B	9B	14A	CC	2A	2C	
005													CC	12E	12J	
03 006 R	6G	13C	13J	13K	10B	9B	12C	7E					CC	13C	13J	13K
007 V	VEUR															
04 008 M	NAT												CC	13D	13M	
009 R	6G	13D	13M	5A	12C	9C	14	7E								
05 010 M	NAT															
011 R	6G	12C	13D	7F	9B											
06 012 M	SAT															
013 R	6G	12J	2C	5D	10A	10D	12C	14								
07 014 R	6G	13N	1D	10A	7C	14B	9D									
015 V	VNAT															
08 016 M	AFI															
017 R	6G	2A	10A	13D	12D	10D	14B									
09 018 M	AFI															
019 R	6G	2A	13M	13I	10B	12C	9B									
10 020 M	AFI															
021 R	6G	2A	11B	13J	10F	14B										
11 022 M	SAM												CC	3A	3B	
023 R	3A	3B	5A	5C	6C	1C	10E	10C					CC	5A	5C	
12 024 M	EUR	CEP														
025 R	6G	12F	13H	4B	14D											

1	2									3		
13 026 M 027 R	CAR 2B	2C	3B	6D	13E	4B			CC	2B	2C	3B
14 028 R 029 V	3A VAFI	3B	11B	14C	13G				CC	3A	3B	
15 030 M 031 R	CAR 6G	2C	13G	7	14C							
16 032 R	2B	2C	3B	6D	7C	10C	12E	13J	CC	2B	2C	3B
17 033 M 034 R	SEA 3A	3C	1	7B	10C	13C			CC	3A	3C	
18 035 R	6G	2C	10D	13C	14D							
19 036 M 037 R	CWP 2B	2C	11B	13C					CC	2B	2C	
20 038 R	3A	3C	6D	5B	1B	11B	13C		CC	3A	3C	
21 039 R	6G	2A	4	12G	14E							
22 040 M 041 R	CWP 2A	2B	3A	4A	12G				CC	2A	2B	3A
23 042 R	6G	4A	14E									
24 043 R	2A	2B	3A	6F	4A	14F			CC	2A	2B	3A
25 044 R	3C	3B	6D	5B	1B				CC	3C	3B	
26 045 R	6G	1D	14F									
27 046 R	2B	6F	1E									
28 047 R	3A	6B	6A									
29 048 M 049 R	MID 3B	6C										

1	2	3
	page 18	
30 050 R	6G	
31 051 M 052 R	NP 2B 6E	
32 053 R	3A 6B 6E	
33 054 M 055 R	MID 3B	
34 056 R	3C 6E	
35 057 R	6G	
36 058 R	2 3 CC	2 3
37 059 M 060 R	NP 2B	
38 061 R	3A 6B	
39 062 R	3B 6A	
40 063 R	3C 6A	
41 064 R	6G	
42 065 V	VNCA	
43 066 V	VPAC	
44 067 V	VSEA	
45 068 M	EA	
46 069 M	NCA	
47 070 R	2	

1	2	3
48 071 R	2B	
49 072 R	3	
50 073 R	3A	
51 074 R	3B	
52 075 R	3C	
53 076 R	6G	

1	2									3		
01 001 R	6G	9C	9D	12E	12F	1C	7B	13I	CC	9C	9D	
002									CC	12E	12F	
02 003 M	CEP								CC	13C	13J	13K
004 R	6G	13C	13J	13K	5D	10E	14D					
03 005 M	SP								CC	13D	13M	
006 R	6G	13D	13M	4	10B							
04 007 R	6G	13E	13F	4A	10B	14D			CC	13E	13F	
05 008 R	6G	7C	14F									
009 V	VNAT											
06 010 M	CAR											
011 R	6G	7E	10F	14F								
07 012 M	CAR											
013 R	6G	7F	14G									
08 014 M	NAT											
015 R	6G	7F	13F	14G								
09 016 M	NAT											
017 R	6G	13F										
10 018 M	NAT											
019 R	6G	13H										
11 020 M	SAM								CC	2B	2C	
021 R	2B	2C	6C	10A								
12 022 M	SAT								CC	3A	3B	
023 R	3A	3B	9B	10D								
13 024 R	3C	3B	9B	10D	12J				CC	3C	3B	
025 V	VAFI											

1	2							3	
14 026 M	NAT								
027 R	6G	13H							
15 028 R	2	3	9	10E	13C		CC	2	3
16 029 R	2A	2C	6B	6F	10B	12F	CC	2A	2C
030							CC	6B	6F
17 031 R	2B	2C	6C	10	13C		CC	2B	2C
18 032 R	3A	3C	4A	9	10C	13D	CC	3A	3C
19 033 M	NAT						CC	6A	6E
034 R	6A	6E	9B						
20 035 M	NAT								
036 R	6G								
21 037 R	11B	5A	5C	3B	9B	13D	CC	5A	5C
22 038 M	CWP								
039 R	12C	13G							
040 V	VEUR								
23 041 R	14	6B	11B	13G					
042 V	VMID								
24 043 M	AFI								
044 R	3B	6D	12C	13G					
25 045 M	MID								
046 R	10	13C	14						
26 047 R	2	10A	12D	14					
27 048 R	2A	6D	11B	13J					
28 049 R	2B	12C	13K	14A					
29 050 R	3	4A	12E	14A					

1	2	3
30 051 R	3A 13K 14B	
31 052 M 053 R	AFI 3C 13M 14B	
32 054 R	5 13M 14C	
33 055 R	5B 13N 14C	
34 056 R	6A 14E	
35 057 R	6G	
36 058 R 059 V	1D VPAC	
37 060 V	VSEA	
38 061 M	EA	
39 062 M	INO	
40 063 M 064 R	MID 14E	
41 065 M	NCA	
42 066 M	SEA	
43 067 R	2	
44 068 R	2A 6E	
45 069 R	2B	
46 070 R	2C 6F	
47 071 R	3	

1	2	3
48 072 R	3A	
49 073 R	3C 5A	
50 074 R	5	
51 075 R	5B	
52 076 R	6	
53 077 R	6A	
54 078 R	6G	

1	2		3
01 001 R	6G 12E 12F 7B 10F	CC	12E 12F
02 002 R	6G 13A 13B 4B	CC	13A 13B
03 003 R	2B 2C 3B 13C 13J 13K 9	CC	2B 2C 3B
004		CC	13C 13J 13K
04 005 M	SP	CC	6A 6E
006 R	6A 6E 13J 13K	CC	13J 13K
05 007 M	SAT		
008 R	6G 9C		
06 009 M	AFI MID CEP	CC	AFI MID
010 R	13F		
07 011 R	2 12 14		
08 012 R	2B 2C 10 13J 14	CC	2B 2C
09 013 R	3A 3C	CC	3A 3C
014 V	VSAM		
10 015 R	6E		
016 V	VNAT		
11 017 M	CAR		
018 R	6G		
12 019 R	9B 2A 2B 3A 11B 13I	CC	2A 2B 3A
13 020 R	13G 3C 3B	CC	3C 3B
021 V	VEUR		
14 022 M	AFI NP		
023 R	13H		

1	2	3
15 024 M 025 V	SAM VNCA	
16 026 R	1D 6F 11B 13H	
17 027 R	2 10 13G	
18 028 M 029 R	SAM 5	
19 030 R	5B 6B 12D	
20 031 R	6A 12C	
21 032 M 033 R	AFI 6C	
22 034 R	6E 1E 10A 13G	
23 035 R	6G 13K	
24 036 R	9B 1 13N	
25 037 V	VAFI	
26 038 M 039 R	CWP EUR 12E	
27 040 M 041 R	EA 13K	
28 042 M 043 R	MID 9B 12J	
29 044 M 045 R	NCA 13D	
30 046 M 047 R	SEA 1B 13M	

1	2 page 26	3
31 048 R	1D 6C 12C	
32 049 R	2	
33 050 R	2A 7 6B	
34 051 R	2B	
35 052 R	2C	
36 053 R	3 7C	
37 054 R	3A 7D	
38 055 R	4A 6D	
39 056 R	5	
40 057 R	5B	
41 058 R	5D	
42 059 R	6A	
43 060 R	6E	
44 061 R	6G	

1	2						3	
01 001 R	6G	9C	9D	7E	10E	CC	9C	9D
02 002 R	6G	12E	12J			CC	12E	12J
03 003 M 004 R	SAT 6G							
04 005 R 006 V	6G VCAR							
05 007 R	2A	2C	10	14	13E	CC	2A	2C
06 008 R	2A	3B	7	12E		CC	2A	3B
07 009 R 010 V	3C VEUR	3B	9C	13H		CC	3C	3B
08 011 R	6G	11B	13F					
09 012 M	NAT							
10 013 M 014 R	SAM 2	3				CC	2	3
11 015 R	2B	2C	10	13J		CC	2B	2C
12 016 R	3A	3C	4B	12C		CC	3A	3C
13 017 R	6G	11B	13F					
14 018 R	10A	6A	6E	12F		CC	6A	6E
15 019 M 020 R	AFI 13H	NP						

1	2						3	
16 021 M	CAR	EA	SEA			CC	EA	SEA
17 022 M 023 R	NAT 6F							
18 024 R	2	9	13K					
19 025 M 026 R	SP 2B	13C						
20 027 R	3	4A	13D					
21 028 M 029 R	CEP 3A	4A	13G					
22 030 M 031 R	AFI 3B							
23 032 M 033 R	CAR 3C	7C						
24 034 R	5	9B	12J					
25 035 R	6B	6F	1C	13C		CC	6B	6F
26 036 M 037 R	NAT 6D							
27 038 R	6G	13M						
28 039 M 040 R	MID 10A	13K						
29 041 V	VMID							
30 042 V	VNCA							
31 043 V	VPAC							
32 044 V	VSEA							

1	2	3
33 045 M 046 R	CWP 1	
34 047 M	NCA	
35 048 R	1D 6B	
36 049 R	2 10A	
37 050 R	2A	
38 051 R	2B	
39 052 R	2C	
40 053 R	3	
41 054 R	3A	
42 055 R	3B	
43 056 R	3C	
44 057 R	5	
45 058 R	5A	
46 059 R	6	
47 060 R	6A	
48 061 R	6D	
49 062 R	6E	
50 063 R	6G	

1	2		3
01 001 M	AFI EUR MID	CC	AFI EUR MID
02 002 M	EA NCA	CC	EA NCA
03 003 M	AFI		
04 004 M	EA SEA	CC	EA SEA
005 R	13C 13K	CC	13C 13K
05 006 R	6G 13E 13F	CC	13E 13F
06 007 V	VEUR		
07 008 R	14		
009 V	VNAT		
08 010 V	VPAC		
09 011 M	AFI		
10 012 M	EA CAR		
11 013 M	NAT		
12 014 M	SAT		
13 015 R	2 3	CC	2 3
14 016 R	5 11B		
15 017 R	6G		
018 V	VNAT		
16 019 V	VAFI		

1	2	3
17 020 V	VEUR	
18 021 V	VNCA	
19 022 V	VPAC	
20 023 V	VSAM	
21 024 R 025 V	13H VSEA	
22 026 M	AFI	
23 027 M	CEP MID	
24 028 M 029 R	CWP 4	
25 030 M	EA SAM	
26 031 M	INO	
27 032 M	NAT	
28 033 M	NCA	
29 034 M	NP	
30 035 M	SAT	
31 036 M 037 R	SEA 13	
32 038 M 039 R	SP 7	
33 040 R	1	
34 041 R	2	

1	2 page 32	3
35 042 R	3	
36 043 R	5	
37 044 R	6	
38 045 R	6G	
39 046 R	10	
40 047 R	12	

1	2						3			
01 001 R	5	13A	13B	13E	13F	CC	13A	13B	13E	13F
02 002 M	AFI	EUR	INO	MID		CC	AFI	EUR	INO	MID
03 003 M	CAR	SAM	EA	SEA		CC	CAR	SAM		
004						CC	EA	SEA		
04 005 M	CEP	CWP	NP	SP		CC	CEP	CWP	NP	SP
006 R	4									
05 007 M	NAT									
008 R	14									
06 009 M	NCA									
07 010 M	SAT									
011 R	6B									
08 012 R	2	11B								
09 013 R	3									
10 014 R	5									
11 015 R	6									
12 016 R	6G	13								
13 017 R	10									
14 018 R	12									

ANNEXE 2 - ANNEX 2 - ANEXO 2

Demandes de fréquences utilisées — Frequency requirements used — Solicitudes de frecuencias utilizadas

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
001	VAFI	1	1	-	-	1	1	1	1	-	1	-	-	
002	VCAR	1	-	-	-	1	-	-	-	1	-	-	-	
003	VEUR	1	1	1	-	1	1	1	1	1	2	-	-	
004	VMID	1	1	1	-	1	-	1	-	1	-	-	-	
005	VNAT	1	1	-	-	1	1	1	1	-	2	-	-	
006	VNCA	-	1	1	-	1	1	-	1	1	1	-	-	
007	VPAC	1	1	-	-	1	1	1	-	1	2	-	-	
008	VSAM	1	-	-	-	1	-	-	1	-	1	-	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
009	VSAT	-	-	-	-	-	-	-	-	-	-	-		
010	VSEA	1	1	-	-	1	1	1	-	1	1	-		
011	AFI	2 - - -	2 1* - -	1 - - -	- - - -	2 1* - -	3 - - -	2 - - -	2 1* - -	2 - - -	3 - - 1*	- - 1* -		AFI MID AFI EUR MID INO AFI EUR MID
012	CAR	1 -	1 -	- -	- -	2 -	2 -	2 -	1 -	2 -	1 -	- 1*		CAR SAM
013	CEP	1 -	1 -	1 -	- -	2 -	1 -	1 -	1 -	1 -	1 -	- 1*		CEP CWP NP SP
014	CWP	1 -	1 -	1 -	- -	2 -	2 -	1 -	1 -	1 -	1 -	- 1*		CEP CWP NP SP
015	EA	1 - -	1 1* -	- - -	- - -	1 1* -	1 - -	1 - -	1 - -	- 1* -	2 1* 1*	- 1* -		EA SEA EA NCA
016	EUR	- - -	1 - -	- - -	- - -	1 - -	1 - -	- - -	1 - -	- - -	- 1* -	- - 1*		AFI EUR MID AFI EUR MID INO

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
017	INO	- -	1 -	- -	- -	1 -	- -	1 -	- -	- -	1 -	- 1*		AFI EUR MID INO
018	MID	2 - -	1 1* -	1 - -	- - -	1 1* -	2 - -	2 - -	1 1* -	1 - -	1 - 1*	- - 1* -		AFI MID AFI EUR MID INO AFI MID EUR
019	NAT	5	1	1	-	3	2	6	-	3	2	1		
020	NCA	2 -	1 -	1 -	- -	2 -	1 -	1 -	1 -	1 -	1 1*	1 -		EA NCA
021	NP	1 -	- -	- -	- -	1 -	2 -	- -	1 -	1 -	1 -	- 1*		CEP CWP NP SP
022	SAM	1 -	1 -	1 -	- -	1 -	1 -	1 -	2 -	1 -	1 -	- 1*		CAR SAM
023	SAT	2	1	-	-	1	1	1	1	1	2	1		
024	SEA	- -	1 1*	- -	- -	1 1*	1 -	1 -	1 -	- 1*	1 1*	- 1*		EA SEA

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
025	SP	- -	1 -	- -	- -	2 -	- -	1 -	1 -	1 -	1 -	- 1*		CEP CWP NP SP
026	1	-	-	-	-	-	1	-	1	1	1	-		
027	1A	-	-	-	-	-	-	-	-	-	-	-		
028	1B	1 2**	- 3**	-	-	2	2	-	1	-	-	-		COO1
029	1C	2	2	1	-	2	1	1	-	1	-	-		
030	1D	3	3	1	-	3	2	1	2	1	-	-		
031	1E	1 -	- 1*	- -	- -	1 -	1 -	- -	1 -	- -	- -	- -		1E 4A

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
032	2	1	1	1	-	-	1	2	3	2	1	1	-	
		-	-	-	-	1*	1*	1*	-	1*	1*	-	-	2 3
		1*	-	-	-	-	-	-	-	-	-	-	-	2 3C
033	2A	2+1**	-	-	-	3	4	2	1	1	-	-	-	
		4*	3*	1*	-	2*	2*	1*	-	1*	-	-	-	2A 2C
		4*	2*+1**	2*	-	3*	2*	-	1*	-	-	-	-	2A 2B 3A
		-	-	-	-	-	-	-	-	1*	-	-	-	2A 3B
034	2B	1	-	-	-	3	4	2	1	2	-	-	-	
		3*+1**	2*	2*	-	3*	2*	-	1*	-	-	-	-	2B 2C 3B
		2*	2*	1*	-	2*	1*	2*	1*	1*	-	-	-	2B 2C
		4*	2*+1**	2*	-	3*	2*	-	1*	-	-	-	-	2A 2B 3A
		-	-	-	-	-	-	-	-	1*	-	-	-	2A 2B
035	2C	2	1	-	-	4	3	1	1	1	-	-	-	
		4*	3*	1*	-	2*	2*	1*	-	1*	-	-	-	2A 2C
		1*	-	-	-	-	-	-	-	-	-	-	-	2C 3
		3*+1**	2*	2*	-	3*	2*	-	1*	-	-	-	-	2B 2C 3B
		2*	2*	1*	-	2*	1*	2*	1*	1*	-	-	-	2B 2C
036	3	1	1	-	-	-	1	2	1	2	1	1	-	
		-	-	-	-	1*	1*	1*	-	1*	1*	-	-	2 3
		1*	-	-	-	-	-	-	-	-	-	-	-	2C 3
037	3A	1+2**	-	-	-	3+1** (Nof 65°N)	4	2	1	2	-	-	-	
		2*	2*	2*	-	2*	2*	1*	1*	1*	-	-	-	3A 3C
		1*+1**	1*+1**	-	-	2*	2*	1*	-	-	-	-	-	3A 3B
		4*	2*+1**	2*	-	3*	2*	-	1*	-	-	-	-	2A 2B 3A
038	3B	1	1	-	-	3	4	2	-	2	-	-	-	
		1*+1**	1*+1**	-	-	2*	2*	1*	-	-	-	-	-	3A 3B
		2*	2*	-	-	2*	1*	1*	1*	1*	-	-	-	3B 3C
		3*+1**	2*	2*	-	3*	2*	-	1*	-	-	-	-	2B 2C 3B
039	3C	3+1**	1	-	-	3	3	2	-	2	-	-	-	
		2*	2*	2*	-	2*	2*	1*	1*	1*	-	-	-	3A 3C
		2*	2*	-	-	2*	1*	1*	1*	1*	-	-	-	3B 3C
		1*	-	-	-	-	-	-	-	-	-	-	-	2 3C

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
040	4	-	-	-	-	-	1	1	-	-	1	1		
041	4A	1 1** -	1 - 1*	- 1** -	- - -	2 - -	3 - -	3 - -	1 - -	2 - -	- - -	- - -		C001 1E 4A
042	4B	2	1	-	-	3	3	-	1	1	-	-		
043	5	-	-	-	-	-	-	2	2	2	2	2		
044	5A	1 -	- 1*	- -	- -	1 1*	1 1*	1 1*	- -	1 -	- -	- -		5A 5C
045	5B	2	2	-	-	3	2	2	2	-	-	-		
046	5C	1 -	- 1*	- -	- -	- 1*	- 1*	- 1*	- -	- -	- -	- -		5A 5C
047	5D	2	2	-	-	2	2	1	1	-	-	-		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
048	6	-	-	-	-	-	-	1	-	1	1	1	-	
049	6A	2* 1	1* 1	- 2*	- -	3 -	3 -	2* 1	2 1*	1 1*	- -	- -		6A 6E
050	6B	2 -	2 -	- -	- -	3 -	3 -	1* 1	2 -	1* 1	- -	1 -		6B 6F
051	6C	2	1	1	-	2	2	2	2	-	-	-		
052	6D	2	1	1	-	4	4	2	1	2	-	-		
053	6E	2* 1	1 1	- 2*	- -	3 -	3 -	1* 1	3* 1	1 1*	- -	- -		6A 6E
054	6F	2 -	2 -	- -	- -	2 -	2 -	1* 1	1 -	1* 1	- -	- -		6B 6F
055	6G	12+ 6***	6+4***	5**	-	15+8***	20	14	6	8	3	1		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
056	7	-	-	-	-	1	1	-	1	1	1	-	-	
057	7A	-	-	-	-	-	-	-	-	-	-	-	-	
058	7B	2	1	-	-	2	1	1	1	-	-	-	-	
059	7C	1	1	-	-	1	2	1	1	1	-	-	-	
060	7D	1	-	-	-	1	-	-	1	-	-	-	-	
061	7E	1	1	-	-	1	2	1	-	1	-	-	-	
062	7F	1	1	-	-	2	1	2	-	-	-	-	-	
063	8	-	-	-	-	-	-	-	-	-	-	-	-	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
064	9	-	-	1	-	1	1	2	1	1	-	-	-	
065	9B	2+2**	2+2**	1	-	4	4	4	3	1	-	-	-	
066	9C	1 -	1 1*	1 -	- -	1 -	1 -	- 1*	1 -	1 1*	- -	- -	- -	9C 9D
067	9D	1 -	- 1*	- -	- -	1 -	1 -	- 1*	- -	- 1*	- -	- -	- -	9C 9D
068	10	-	-	1	1	1	1	2	2	2	1	1	-	
069	10A	6	2	1	2	4	3	2	1	3	-	-	-	
070	10B	2 -	3 -	4 1*	2 -	3 -	3 -	3 -	- -	- -	- -	- -	- -	10B 10E
071	10C	2 -	1 -	2 -	1 -	4 1*	3 -	1 -	- -	- -	- -	- -	- -	10C 10E

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
072	10D	2	3	3	2	5	3	2	-	-	-	-		
073	10E	3 - -	2 - -	2 1* -	1 - -	2 - 1*	2 - -	2 - -	- - -	1 - -	- - -	- - -		10B 10E 10C 10E
074	10F	1	-	1	1	1	1	1	1	-	-	-		
075	11	-	-	-	-	-	-	-	-	-	-	-		
076	11A	-	-	-	-	-	-	-	-	-	-	-		
077	11B	4	4	1	3	4	4	3	2	2	1	1		
078	11C	-	-	-	-	-	-	-	-	-	-	-		
079	12	-	1	-	-	1	-	-	1	-	1	1		

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
080	12A	1	-	-	-	1	-	-	-	-	-	-		
081	12B	-	-	-	-	-	-	-	-	-	-	-		
082	12C	2	2	2	1	5	5	3	2	1	-	-		
083	12D	-	1	-	-	1	1	1	1	-	-	-	-	
084	12E	- 1* - - 2*	- - - - 2*	1 - - - -	1 - 1* - -	2 1* 1* 1* -	1 1* 1* - -	1 - 1* - -	1 - 1* - -	1 1* - - -	- - - - -	- - - - -	- - - - -	12E 12J 12E 12F 12E 12F 12H 12E 12F 12G 12H
085	12F	1 - - - 1* 2*	- - - - - 2*	1 - - - - -	- 1* - 1* - -	1 1* 1* - - -	1 1* - - - -	1 1* - - - -	- 1* - - - -	1 - - - - -	- - - - - -	- - - - - -	- - - - - -	12E 12F 12E 12F 12H 12F 12H 12F 12J 12E 12F 12G 12H
086	12G	1 2*	- 2*	1 -	- -	3 -	2 -	- -	- -	- -	- -	- -	- -	12E 12F 12G 12H
087	12H	- - - 2*	- - - 2*	- - - -	- 1* - -	- - 1* -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	12F 12H 12E 12F 12H 12E 12F 12G 12H

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
088	12I	-	-	-	-	-	-	-	-	-	-	-	-	
089	12J	2 1* 1*	1 - -	1 - -	- - -	1 1* -	1 1* -	1 - -	1 - -	1 1* -	- - -	- - -	- - -	 12E 12J 12F 12J
090	13	-	-	-	-	-	-	-	-	-	1	1	-	
091	13A	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- 1* -	- - -	- - -	- - 1*	- - -	 13A 13B 13A 13B 13E 13F
092	13B	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- 1* -	- - -	- - -	- - 1*	- - -	 13A 13B 13A 13B 13E 13F
093	13C	2 - 1*	2 - 1*	- - -	- - -	4 - 1*	4 - 1*	3 - 1*	- - 1*	2 - -	- 1* -	- - -	- - -	 13C 13K 13C 13J 13K
094	13D	2 -	2 -	- 1*	1 -	1 -	2 1*	2 1*	1 -	1 -	- -	- -	- -	 13D 13M
095	13E	- - 1*	1 - -	- - 2*	- - -	- - 3*	1 - 1*	- - 1*	- - -	1 - -	- - -	- 1* 1*	- - -	 13A 13B 13E 13F 13E 13F

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channel Voies communes Canales comunes
No.	Area Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6MHz	9 MHz	10 MHz	11.3MHz	13.3MHz	18 MHz	22 MHz	
096	13F	2 – 1*	2 – –	– – 2*	1 – –	– – 3*	1 – 1*	2 – 1*	1 – –	2 – –	– – 1*	– 1* –	– – –	13A 13B 13E 13F 13E 13F
097	13G	3	2	1	2	1	2	3	3	1	–	–	–	
098	13H	2	2	1	2	2	1	2	2	2	1	–	–	
099	13I	2 1*	1 –	2 –	1 1*	2 –	1 –	1 –	1 –	– –	– –	– –	– –	13I 13J
100	13J	3 1* – 1*	2 – – 1*	3 – – –	2 1* – –	2 – – 1*	2 – – 1*	1 – – 1*	1 – 1* 1*	1 – – –	– – – –	– – – –	– – – –	13I 13J 13J 13K 13C 13J 13K
101	13K	3 – – 1*	2 – – 1*	2 – – –	1 – – –	3 – – 1*	2 – – 1*	2 – – 1*	2 1* – 1*	2 – – –	– – 1* –	– – – –	– – – –	13J 13K 13C 13K 13C 13J 13 K
102	13L	–	–	–	–	–	–	–	–	–	–	–	–	
103	13M	2 –	2 –	1 1*	1 –	1 –	1 1*	2 1*	1 –	1 –	– –	– –	– –	13D 13M
104	13N	1	1	–	1	1	1	1	1	–	–	–	–	

Band/Bande/Banda		1	2	3	11	4	5	6	7	8	9	10	12	Common channels Voies communes Canales comunes
No.	Area/ Zone/Zona	3 MHz	3.5 MHz	4.7 MHz	5.4 MHz	5.6 MHz	6.6 MHz	9 MHz	10 MHz	11.3 MHz	13.3 MHz	18 MHz	22 MHz	
105	14	2	3	-	-	2	2	3	2	1	1	1	-	
106	14A	- 1* - -	- - 1* -	- - - 1* (Day)	- - - -	- - - -	2 - - -	2 - - -	- - - -	- - - -	- - - -	- - - -		14A 14D 14A 14E 14A 14G
107	14B	- - -	- 1* -	- - 1*(Day)	- - -	- - -	3 - -	2 - -	- - -	- - -	- - -	- - -		14B 14F 14B 14C
108	14C	1 -	1 -	- 1*(Day)	- -	- -	2 -	2 -	- -	- -	- -	- -		14B 14C
109	14D	- 1* -	1 - -	1(Day) - -	- - -	- - 1*	2 - -	2 - -	- - -	- - -	- - -	- - -		14A 14D 14D 14G
110	14E	- -	- 1*	- -	- -	- -	2 -	2 -	- -	- -	- -	- -		14A 14E
111	14F	- 1*	- -	- -	- -	- -	2 -	2 -	- -	- -	- -	- -		14B 14F
112	14G	2 - -	- - -	- 1*(Day) -	- - -	2 - 1*	- - -	2 - -	- - -	- - -	- - -	- - -		14A 14G 14D 14G

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/62-E
2 March 1978
Original : French
English
Spanish

LIST OF DOCUMENTS

(201 - 300)

C = Committee
PL = Plenaries
WG = Working Group

Number	Origin	Title	Destination
201	Kuwait	Frequency band 21 870 - 22 000 kHz	C.5
202	Senegal	Frequency requirements in the band 21 870 - 22 000 kHz	C.5
203	Bangladesh	Frequency band 21 870 - 22 000 kHz	C.5
204	C.6	First Report of Committee 6	PL, C.7
205	Turkey	Frequency requirements in the 22 000 kHz band	C.5
206	C.7	Summary Record of the First Meeting of Committee 7 (Editorial)	C.7
207(Rev.2)	WG 5B	Frequency requirements for RDARAs	C.5
208	C.4	Summary Record of the Third Meeting of Committee 4 (Technical)	C.4
209	Poland	Frequency requirements in the band 21 870 - 22 000 kHz	C.5
210	Thailand	Frequency requirement in the 22 000 kHz band	C.5
211	United States	Excerpts from ICAO guidance for frequency management of operational control communications	C.6
212	United Arab Emirates	Frequency band 21 870 - 22 000 kHz	C.5
213	Korea (Rep.of)	Frequency requirements in the 22 000 kHz band	C.5
214	Cuba	Frequency requirements in band 21 870 - 22 000 kHz	C.5
215	Spain	Frequency requirements in the 21 870 - 22 000 kHz band	C.5

ARCHIVES U.I.T. GENÈVE

Number	Origin	Title	Destination
216	Zaire	Consideration of proposals by the People's Democratic Republic of Angola : RDARA boundary descriptions and allotment requirements	C.5
2.7(Rev.1)	WG 6A	Note from the Chairman of WG 6A	C.6
218	Yemen P.D.R.	Frequency requirements	C.5
219	Fiji	Frequency requirements in the band 21 870 - 22 000 kHz	C.5
220	C.5	Note from the Chairman of Committee 5 to the Chairman of Committee 7	C.7
221	C.5	Note from the Chairman of Committee 5 to the Chairman of Committee 6	C.6
222	Bulgaria	Frequency requirements in the 22 000 kHz band	C.5
223	Egypt	Frequency requirement in the 21 870 - 22 000 kHz band	C.5
224	C.6	Second Report of Committee 6	PL, C.7
225	C.5	Time-table of the work of Committee 5	C.5, WG 5A, WG 5B, WG 5C
226	C.2	Summary Record of the Second Meeting of Committee 2 (Credentials)	C.2
227	Qatar	Frequency requirements in the band 21 870 - 22 000 kHz	C.5
228	WG C.6	Report of Committee 6 Drafting Group to Commiteee 6	C.6
229	C.6	Summary Record of the First Meeting of Committee 6 (Regulatory procedures)	C.6
230 + Corr.	C.4	Summary Record of the Fourth and last Meeting of Committee 4 (Technical)	C.4
231 + Corr.	C.5	Summary Record of Fourth Meeting of Committee 5 (Planning)	C.5

Number	Origin	Title	Destination
232	USSR	Frequency requirement in the 21 870 - 22 000 kHz band	C.5
233 + Add.1	WG 6B	Second Report of Working Group 6B to Committee 6	C.6
234(Rev.1)	WG 5C	Report of Working Group 5C	C.5
235	Turkey & Syrian Arab Republic	Amendments to the limits of RDARA Sub-Area 1D	C.5
236	Panama	Frequency requirements in the band 21 870 - 22 000 kHz	C.5
237	C.6	Third Report of Committee 6	PL, C.7
238	Iran	Frequency requirements in the 21 870 - 22 000 kHz band	C.5
239	C.7	B1	PL
240	Denmark, Norway and Sweden	Draft Recommendation relating to the use of frequencies for exercising control over regularity of flight and for safety of aircraft	C.6
241	Democratic People's Rep. of Korea	Final Protocol	PL
242	People's Democratic Rep. of Yemen	RDARA 5A Boundaries	C.5
243	Canada and Ireland	Frequency separation required between assigned frequencies at aeronautical stations for the avoidance of local interchannel interference	C.6
244 + Add.1	WG 6 Ad hoc	Report of Working Group 6 Ad hoc set up to draft procedures for use of frequencies designated for world-wide use	C.6
245	C.7	B2	PL
246	C.7	L.3	PL

Number	Source	Title	Destination
247	WG 6B	Third and last Report of Working Group 6B to Committee 6	C.6
248	C.5	Second Report of Committee 5	PL, C.7
249	WG C.2	Second Report of Working Group of Committee 2 - Credentials	C.2
250	C.2	Report of Committee 2 to the Plenary	PL
251	Yemen Arab Republic	Final Protocol	PL
252	Japan	World-wide allotment areas and associated frequency requirements	C.5, C.6
253	Senegal	Final Protocol	PL
254	People's Dem. Rep. of Yemen	Final Protocol	PL
255	Venezuela	Final Protocol	PL
256	Cameroon	Final Protocol	PL
257	Algeria	French translation of Provision No. 27/20 (Appendix 27 Aer2) from the English	PL
258	Argentine	Final Protocol	PL
259	C.6	Summary Record of the Second Meeting of Committee 6 (Regulatory Procedures)	C.6
260	C.6	Fourth Report of Committee 6	PL, C.7
261	C.3	Final Report of the Budget Control Committee to the Plenary	PL
262 (Rev.1)	C.7	R.1	PL
263	C.6	Drafting Group of Committee 6	C.6
264	C.6	Summary Record of the Fourth Meeting of Committee 6	C.6

Number	Source	Title	Destination
265	C.6	Note from the Chairman of Committee 5 to the Chairman of Committee 6	C.6
266	Finland, Norway & Sweden	World-wide allotment areas and associated requirements	C.5
267	C.6	Summary Record of the Third Meeting of Committee 6 (Regulatory Procedures)	C.6
268	Malaysia	Final Protocol	PL
269 + Add.1	Mexico	Final Protocol	PL
270	Gabon	Final Protocol	PL
271	Libya	Final Protocol	PL
272	Ivory Coast	Final Protocol	PL
273	Iran	Final Protocol	PL
274	Mauritania	Final Protocol	PL
275	Afghanistan	Final Protocol	PL
276	Panama	Final Protocol	PL
277	Kenya	Final Protocol	PL
278	Brazil	Final Protocol	PL
279	Cuba	Final Protocol	PL
280	Uruguay	Final Protocol	PL
281	India	Final Protocol	PL
282	Saudi Arabia	Final Protocol	PL
283	WG C.6	Report of the Ad hoc Drafting Group of Committee 6	C.6
284	Bolivia	Final Protocol	PL
285	C.7	B.4	PL

Number	Source	Title	Destination
286	Paraguay	Final Protocol	PL
287	Thailand	Final Protocol	PL
288	Philippines	Final Protocol	PL
289	Nigeria	Final Protocol	PL
290	Guinea	Final Protocol	PL
291	Singapore	Final Protocol	PL
292	C.5	Summary Record of the Fifth Meeting of Committee 5 (Planning)	C.5
293	C.7	R.2	PL
294	C.6	Fifth Report of Committee 6	PL, C.7
295	C.5	Note by Chairman of Committee 5	PL
296	Upper Volta	Final Protocol	PL
297	Liberia	Final Protocol	PL
298	Indonesia	Final Protocol	PL
299	Colombia	Final Protocol	PL
300	Spain	Final Protocol	PL

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/63-E
2 March 1978
Original : English
French
Spanish

COMMITTEE 5

PART II - Section I

Article 4

World-wide allotment areas

World-wide Area I

ADD 27/185E [The boundaries of this allotment area will be defined so as to include RDARAs 1, 2 and 3.]

World-wide Area II

ADD 27/185F [The boundaries of this allotment area will be defined so as to include RDARAs 10, 11, 12A, 12B, 12C and 12D.]

World-wide Area III

ADD 27/185G [The boundaries of this allotment area will be defined so as to include RDARAs 6, 8, 9 and 14.]

World-wide Area IV

ADD 27/185H [The boundaries of this allotment area will be defined so as to include RDARAs 12E to 12J inclusive and 13.]

World-wide Area V

ADD 27/185I [The boundaries of this allotment area will be defined so as to include RDARAs 4, 5 and 7.]

M. CHEF
Chairman of Committee 5

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INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/64-E
3 March 1978
Original : English

COMMITTEE 5

Note by the Chairman of Committee 5

With reference to Documents Nos. 333 and 337, it is necessary to make entries at suitable frequencies in the Frequency Allotment Plan for allotment to World-wide Allotment Areas. The following table taken from Document No. 266 is illustrative only for the purpose of deciding the actual frequencies to be included in the Plan.

TABLE

	Frequency / No. /	Authorized area of use	Remarks
I.	301	WW : I	Aeronautical station, aircraft stations world-wide
	302	WW : II, III	
	303	WW : II, V	
	304	WW : II	
	305	WW : II	
	306	WW : IV	
II.	501	WW : I, IV	
	502	WW : I, IV	
	503	WW : I, IV	
	504	WW : I, II	
	505	WW : I, II	
	506	WW : I, II	
	507	WW : I, II, III	
	508	WW : I, II, III	
	509	WW : I, V	
	510	WW : II, V	
	511	WW : II, V	
	512	WW : II, V	
	513	WW : II, V	
III.	1001	WW : I, IV	
	1002	WW : I, IV	
	1003	WW : I, IV	
	1004	WW : I, IV	

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	Frequency / No. /	Authorized area of use	Remarks
III. (cont'd)	1005	WW : I, IV	
	1006	WW : I, III	
	1007	WW : I, III	
	1008	WW : I, III	
	1009	WW : I, III	
	1010	WW : I, III	
	1011	WW : I, II	
	1012	WW : I, II	
	1013	WW : II, III	
	1014	WW : II, V	
	1015	WW : II, V	
	1016	WW : II, V	
	1017	WW : II, V	
	1018	WW : II, V	
	1019	WW : II, V	
	1020	WW : II, V	
IV.	1301	WW : I, III	
	1302	WW : I, III	
	1303	WW : I, III	
	1304	WW : I, III	
	1305	WW : I, III	
	1306	WW : I, IV	
	1307	WW : I, IV	
	1308	WW : I, IV	
	1309	WW : I, III, V	
	1310	WW : II, V	
	1311	WW : II, V	
	1312	WW : II, V	
	1313	WW : II, V	
V.	1801	WW : I	
	1802	WW : I, III	
	1803	WW : II, III	
	1804	WW : II, III	
	1805	WW : II, V	
	1806	WW : II, V	
	1807	WW : III, IV	
	1808	WW : IV, V	
VI.	2101-2107	WW : I	
	2108-2109	WW : II	
	2110	WW : III	
	2111-2112	WW : IV	
	2113-2115	WW : V	

Committee 5 is requested to consider the question of designating specific frequencies in each band.

It is recalled that during the ninth meeting of Committee 5 it was decided that the number of channels for world-wide allotments would be as follows :

Band (MHz)	No. of channels
3	3
3.5	2
4.7	2
5.4 (Reg.2)	-
5.6	6
6.6	4
9	6
10	7
11.3	5
13.3	10
18	9

M. CHEF
Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

AERONAUTICAL (R) CONFERENCE

(Geneva, 1978)

Document No. DT/65-E
3 March 1978
Original : English

COMMITTEE 5

WORLD-WIDE ALLOTMENT AREAS

/ Frequencies provisionally identified by numbers /

A. For inclusion in MOD 27/189 :

Bands MHz	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18	21
Areas											
WW I	301		504 507	501 502 505 509	503 508	1001 1006 1007 1011	1002 1003 1008 1009 1012	1004 1010	1301 1302 1303 1304 1306 1307 1308	1801 1802 1810	2101 2102 2103 2104 2105 2106 2107 2116 2117
WW II	302 303	304 305	504 507	505 510 511	508 512 513	1011 1015 1016	1012 1017 1018	1013 1019 1020	1310 1311 1312	1804 1805 1806 1809	2108 2109
WW III	302		507		508	1006 1007	1008 1009	1010 1013	1301 1302 1303 1304	1801 1802 1804 1807 1809	2110 2118
WW IV	301			501 502	503	1001	1002 1003	1004	1306 1307 1308	1807 1808	2111 2112 2119
WW V	303			509 510 511	512 513	1015 1016	1017 1018	1019 1020	1310 1311 1312	1805 1806 1808 1810	2113 2114 2115 2120

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B. For inclusion in MOD 27/195-207 and ADD 27/208 :

	Frequency 1	Authorized area of use 2	Remarks 3
MOD 27/195	301	World-wide	Allotted for assignments in WW I, IV in accordance with 27/194A
	302	"	WW II, III
	303	"	WW II, V
MOD 27/197	304	"	WW II
	305	"	WW II
MOD 27/198	504	"	WW I, II
	507	"	WW I, II, III
MOD 27/200	501	"	WW I, IV
	502	"	WW I, IV
	505	"	WW I, II
	509	"	WW I, V
	510	"	WW II, V
	511	"	WW II, V
MOD 27/202	503	"	WW I, IV
	508	"	WW I, II, III
	512	"	WW II, V
	513	"	WW II, V
MOD 27/203	1001	"	WW I, IV
	1006	"	WW I, III
	1007	"	WW I, III
	1011	"	WW I, II
	1015	"	WW II, V
	1016	"	WW II, V
MOD 27/204	1002	"	WW I, IV
	1003	"	WW I, IV
	1008	"	WW I, III
	1009	"	WW I, III
	1012	"	WW I, II
	1017	"	WW II, V
	1018	"	WW II, V
MOD 27/205	1004	"	WW I, IV
	1010	"	WW I, III
	1013	"	WW II, III
	1019	"	WW II, V
	1020	"	WW II, V

	Frequency 1	Authorized area of use 2	Remarks 3
MOD 27/206	1301	World-wide	Allotted for assignments in WW I, III, in accordance with 27/194A
	1302	"	WW I, III
	1303	"	WW I, III
	1304	"	WW I, III
	1306	"	WW I, IV
	1307	"	WW I, IV
	1308	"	WW I, IV
	1310	"	WW II, V
	1311	"	WW II, V
	1312	"	WW II, V
MOD 27/207	1801	"	WW I, III
	1802	"	WW I, III
	1804	"	WW II, III
	1805	"	WW II, V
	1806	"	WW II, V
	1807	"	WW III, IV
	1808	"	WW IV, V
	1809	"	WW II, III
	1810	"	WW I, V
ADD 27/208	2101	"	WW I
	2102	"	WW I
	2103	"	WW I
	2104	"	WW I
	2105	"	WW I
	2106	"	WW I
	2107	"	WW I
	2108	"	WW II
	2109	"	WW II
	2110	"	WW III
	2111	"	WW IV
	2112	"	WW IV
	2113	"	WW V
	2114	"	WW V
	2115	"	WW V
	2116	"	WW I
	2117	"	WW I
	2118	"	WW III
	2119	"	WW IV
	2120	"	WW V