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INTERNATIONAL TELECOMMUNICATION UNION

# FINAL ACTS

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



INTERNATIONAL TELECOMMUNICATION UNION

# **FINAL ACTS**

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

Geneva 1978

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## **ABBREVIATIONS**

The following abbreviations are used in the Annexes to indicate the nature of amendments made in the partial revision of the Radio Regulations:

Symbol	Meaning
MOD ADD	Modification Addition

*Note:* If a modification affects only the drafting of a number, without changing the substance, the following symbol is used:

(MOD)

## TABLE OF CONTENTS

### FINAL ACTS

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

Page

#### PARTIAL REVISION OF THE RADIO REGULATIONS . . . . .

ANNEX 1: Partial revision of Articles 5, 9, 28 and 35 of the Radio Regulations and Appen-  
dices 1 and 3 to these Regulations . . . . . 7

ANNEX 2: Revision of Appendix 27 to the Radio Regulations . . . . . 11

FINAL PROTOCOL . . . . . 81

*(Figures between parentheses indicate the order in which the statements appear in the Final Protocol)*

Afghanistan (Republic of) (13)	Liberia (Republic of) (29)
Algeria (Algerian Democratic and Popular Republic) (38, 41)	Libya (Socialist People's Libyan Arab Jamahiriya) (10, 38)
Argentine Republic (6)	Malaysia (7)
Bahrain (State of) (38)	Mauritania (Islamic Republic of) (12, 38)
Bangladesh (People's Republic of) (38, 42)	Mexico (8)
Bolivia (Republic of) (21)	Morocco (Kingdom of) (38)
Brazil (Federative Republic of) (16)	Nigeria (Federal Republic of) (25)
Cameroon (United Republic of) (5)	Norway (34, 45)
Chile (39)	Pakistan (Islamic Republic of) (35, 38)
China (People's Republic of) (48)	Panama (Republic of) (14)
Colombia (Republic of) (31)	Paraguay (Republic of) (22)
Cuba (17)	Philippines (Republic of the) (24)
Denmark (45)	Qatar (State of) (38)
Ecuador (40)	Sao Tome and Principe (Democratic Republic of) (33)
Ethiopia (44)	Saudi Arabia (Kingdom of) (20, 38, 55)
Gabon Republic (9)	Senegal (Republic of the) (3)
Germany (Federal Republic of) (45)	Singapore (Republic of) (27)
Greece (45)	Spain (32)
Guatemala (Republic of) (37)	Sweden (45)
Guinea (Republic of) (26)	Switzerland (Confederation of) (45)
India (Republic of) (19, 50)	Syrian Arab Republic (38, 43)
Indonesia (Republic of) (30)	Tanzania (United Republic of) (36)
Iran (56)	Thailand (23)
Ivory Coast (Republic of the) (11)	Union of Soviet Socialist Republics (49)
Japan (51)	Upper Volta (Republic of) (28)
Kenya (Republic of) (15)	Uruguay (Oriental Republic of) (18)
Korea (Republic of) (46, 52)	Venezuela (Republic of) (4)
Korea (People's Democratic (Republic of) (1, 47)	Yemen Arab Republic (2, 38, 53)
Kuwait (State of) (38)	Yemen (People's Democratic Republic of) (38, 54)

**RESOLUTIONS**

	<i>Pages</i>
RESOLUTION No. Aer2 — 1 Relating to the Use of Frequencies 3 023 and 5 680 kHz common to the Aeronautical Mobile (R) and (OR) Services . . . . .	95
RESOLUTION No. Aer2 — 2 Relating to the Unauthorized Use of Frequencies in the Bands Allocated to the Aeronautical Mobile (R) Service . . . . .	95
RESOLUTION No. Aer2 — 3 Relating to the Implementation of the New Arrangement applicable to Bands Allocated Exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz . . . . .	97
RESOLUTION No. Aer2 — 4 Relating to the Treatment of Notices Concerning Frequency Assignments to Aeronautical Stations in the Bands Allocated Exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz . . . . .	98
RESOLUTION No. Aer2 — 5 Relating to the Implementation of the Frequency Allotment Plan in the Bands Allocated Exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz . . . . .	100
RESOLUTION No. Aer2 — 6 Relating to the Use of Frequency Bands, higher than the HF Bands, in the Aeronautical Mobile (R) Service and the Aeronautical Mobile-Satellite (R) Service for Communication and for Meteorological Broadcasts . . . . .	101
RESOLUTION No. Aer2 — 7 Relating to the Use of Frequencies of the Aeronautical Mobile (R) Service . . . . .	102
RESOLUTION No. Aer2 — 8 Relating to the Abrogation of various Resolutions and a Recommendation of the Extraordinary Administrative Radio Conference, Geneva, 1966, and a Resolution of the Administrative Radio Conference, Geneva, 1959 . . . . .	103

**RECOMMENDATIONS**

RECOMMENDATION No. Aer2 — 1 Relating to the Development of Techniques which would help to reduce Congestion in the High Frequency Bands Allocated to the Aeronautical Mobile (R) Service . . . . .	104
RECOMMENDATION No. Aer2 — 2 Relating to the Efficient Use of Aeronautical Mobile (R) World-Wide Frequencies . . . . .	104
RECOMMENDATION No. Aer2 — 3 Relating to Cooperation in the Efficient Use of World-Wide Frequencies in the Aeronautical Mobile (R) Service . . . . .	105
RECOMMENDATION No. Aer2 — 4 Relating to the Transition from the Existing to the Revised Frequency Allotment Plan in the Bands Allocated Exclusively to the Aeronautical Mobile (R) Service between 2 850 and 17 970 kHz . . . . .	106
RECOMMENDATION No. Aer2 — 5 Relating to the Inclusion of the Band 21 924 — 22 000 kHz in the Frequency Allotment Plan for the Aeronautical Mobile (R) Service (Appendix 27 Aer2 to the Radio Regulations) . . . . .	107
RECOMMENDATION No. Aer2 — 6 Relating to the Concordance of the French, English and Spanish Texts of No. 429 of the Radio Regulations . . . . .	110
RECOMMENDATION No. Aer2 — 7 Relating to No. 27/123 of Appendix 27 Aer2 — Sub-Area 5B . . . . .	110
RECOMMENDATION No. Aer2 — 8 To the World Administrative Radio Conference, 1979, Relating to the Inapplicability of Resolution No. 13 to the Aeronautical Mobile (R) Service . . . . .	111
RECOMMENDATION No. Aer2 — 9 Relating to Public Correspondence with aircraft . . . . .	111

## **PARTIAL REVISION OF THE RADIO REGULATIONS <sup>1</sup>**

The Plenipotentiary Conference, Malaga-Torremolinos, 1973, at its 25th Plenary Meeting, approved the principle of convening a World Administrative Radio Conference on the Aeronautical Mobile (R) Service subject to receipt of a sufficient number of requests from administrations of the Members of the Union.

At its 29th Session (1974) the Administrative Council examined requests to convene the Conference from four countries Members of the Union. It also took note of a letter from the Secretary-General of the International Civil Aviation Organization (ICAO) on this question. The Administrative Council instructed the Secretary-General to request Members to inform him of their views.

At the 30th Session (1975) the Administrative Council examined the Secretary-General's report on this enquiry and, after consulting the Members of the Union, adopted Resolution No. 763 containing the agenda of the Conference and stipulating that it should meet in Geneva on 7 March 1977 for a maximum duration of four weeks.

At its 31st Session (1976), having examined the budget and in view of financial difficulties, the Administrative Council proposed to Members of the Union that the Conference be postponed until 6 February 1978, that its duration should not exceed four weeks and that the agenda item concerning the re-arrangement of the Radio Regulations be transferred to the World Broadcasting-Satellite Administrative Radio Conference (Geneva, 1977). Those proposals were approved by the Members of the Union.

The World Administrative Radio Conference on the Aeronautical Mobile (R) Service accordingly convened on the appointed date, and considered and revised the relevant parts of the Radio Regulations in conformity with its agenda. Particulars of this revision are given in Annexes 1 and 2 hereto.

The revised provisions of the Radio Regulations shall form an integral part of the Radio Regulations which are annexed to the International Telecommunication Convention. These revised provisions shall come into force on and from 1 September 1979, except for the Frequency Allotment Plan for the aeronautical mobile (R) service contained in Appendix 27 Aer2 which shall come into force at 00.01 hours G.M.T. on 1 February 1983. The provisions of the Radio Regulations which are cancelled, superseded or modified by these revised provisions shall be abrogated on the dates of the entry into force of the revised provisions.

The delegates signing this revision of the Radio Regulations hereby declare that, should an administration make reservations concerning the application of one or more of the revised provisions of the Radio Regulations, no other administration shall be obliged to observe that provision, or those provisions, in its relations with that particular administration.

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<sup>1</sup> Namely the Radio Regulations, Geneva, 1959, as partially revised by the Extraordinary Administrative Radio Conference to Allocate Frequency Bands for Space Radiocommunication Purposes (Geneva, 1963), by the Extraordinary Administrative Radio Conference for the Preparation of a Revised Allotment Plan for the Aeronautical Mobile (R) Service (Geneva, 1966), by the World Administrative Radio Conference to deal with matters relating to the Maritime Mobile Service (Geneva, 1967), by the World Administrative Radio Conference for Space Telecommunications (Geneva, 1971) and by the World Maritime Administrative Radio Conference (Geneva, 1974).

Members of the Union shall inform the Secretary-General of their approval of the revision of the Radio Regulations by the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978). The Secretary-General shall inform Members promptly regarding receipt of such notifications of approval.

In witness whereof the delegates of the Members of the Union represented at the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) have signed in the names of their respective countries this revision of the Radio Regulations in a single copy which will remain in the archives of the International Telecommunication Union and of which a certified copy will be delivered to each Member of the Union.

Done at Geneva, 5 March 1978.

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## ANNEX 1

### Partial revision of Articles 5, 9, 28 and 35 of the Radio Regulations and Appendices 1 and 3 to these Regulations

#### ARTICLE 5

Article 5 of the Radio Regulations shall be amended as follows:

*Replace Regulation No. 201A by the following new text:*

MOD 201A Aer2 The frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz, 121.5 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles.

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

*Replace Regulation No. 205A by the following new text:*

MOD 205A Aer2 The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Nos. 1326C and 1353B respectively, by stations of the maritime mobile service engaged in coordinated search and rescue operations.

#### ARTICLE 9

Article 9 of the Radio Regulations shall be amended as follows:

*After Regulation No. 553 add the following new Regulation:*

ADD 553A Aer2 aa) the notice is in conformity with the provisions of No. 501;

*Regulation No. 557 is amended as follows:*

(MOD) 557 Aer2 ..... Plan;

*After Regulation No. 557 add the following new Regulation:*

ADD 557A Aer2 (2A) A notice which is not in conformity with the provisions of No. 553A shall be examined with respect to Nos. 520 and 521. The date to be entered in Column 2b shall be determined in accordance with the relevant provisions of Section III of this Article.

*Replace Regulation No. 558 by the following new text:*

- MOD 558  
Aer2 (3) In the case of a notice in conformity with the provisions of Nos. 553A to 556, but not with those of No. 557, the Board shall examine whether the protection specified in Appendix 27 Aer2 (Part I, Section IIA, paragraph 5) is afforded to the allotments in the Plan. In doing so, the Board shall assume that the frequency will be used in accordance with the "Sharing conditions between areas" specified in Appendix 27 Aer2, Part I, Section IIB, paragraph 4.
- 

## ARTICLE 28

Article 28 of the Radio Regulations shall be amended as follows:

*Replace Regulation No. 969A by the following new text:*

- MOD 969A  
Aer2 (3) The aeronautical carrier (reference) frequencies 3 023 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).
- 

## ARTICLE 35

Article 35 of the Radio Regulations shall be amended as follows:

*Replace Regulation No. 1326C by the following new text:*

- MOD 1326C  
Aer2 § 3A. The aeronautical carrier (reference) frequency 3 023 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, in accordance with the provisions of Appendix 27 Aer2.

*Replace Regulation No. 1353B by the following new text:*

- MOD 1353B  
Aer2 § 15A. The aeronautical carrier (reference) frequency 5 680 kHz may be used for intercommunication between mobile stations when engaged in coordinated search and rescue operations, including communication between these stations and participating land stations, in accordance with the provisions of Appendix 27 Aer2.
- 

## APPENDIX 1

Appendix 1 to the Radio Regulations shall be amended as follows:

*Replace paragraph 3 on page AP1-15 of the Radio Regulations by the following text:*

- MOD 3. In any case where there are one or more reference frequencies in a particular transmission (e.g. in the case of (a) the frequency of the reduced carrier in an independent or single-sideband emission, and (b) the frequencies of the sound and vision

carriers in a television emission), such reference frequencies shall be supplied. In the case of television broadcasting stations in Region 1, each notice shall include, as supplementary information, both the frequency of the other carrier and the assigned frequency.

## APPENDIX 3

Mar Mar2 Aer2

Appendix 3 to the Radio Regulations shall be amended as follows:

## Table of frequency tolerances \*

(See Article 12)

Frequency bands (lower limit exclusive, upper limit inclusive) and Categories of stations		Tolerances applicable until 1st January, 1966* to trans- mitters 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.	
MOD	. . . . . <i>Band: 1 605 to 4 000 kHz</i> . . . . . 2. <i>Land stations</i> — power 200 W or less — power above 200 W 3. <i>Mobile stations</i> . . . . .	100 50	100 h) l) r) 50 h) l) r)
	MOD c) Aircraft stations	200*	100* r)
MOD	<i>Band: 4 to 29.7 MHz</i> . . . . . 2. <i>Land stations</i> . . . . . b) Aeronautical stations: — power 500 W or less — power above 500 W . . . . . 3. <i>Mobile stations</i> . . . . .	100 50	100 r) 50 r)
	MOD c) Aircraft stations	200*	100* r)

**Notes referring to Table of Frequency Tolerances**

*after note q) add the following new note:*

**ADD**

- r) For single-sideband transmitters operating in the frequency bands 1 605-4 000 kHz and 4-29.7 MHz which are allocated exclusively to the aeronautical mobile (R) service, the tolerance on the carrier (reference) frequency is:

- |    |  |          |
|----|--|----------|
| 1. | for all aeronautical stations                                    | 10 Hz    |
| 2. | for all aircraft stations operating on international services    | 20 Hz    |
| 3. | for aircraft stations operating exclusively on national services | 50 Hz ** |

\*\* *Note.* — In order to achieve maximum intelligibility it is suggested that administrations encourage the reduction of this tolerance to 20 Hz.

---

## ANNEX 2

### Revision of Appendix 27 to the Radio Regulations

Appendix 27 to the Radio Regulations shall be amended as follows:

#### TABLE OF CONTENTS

##### PART I

##### General Provisions

	<i>Page</i>
SECTION I. Definitions . . . . .	13
SECTION II. Technical and Operational Principles used for the Establishment of the Plan of Allotment of Frequencies in the Aeronautical Mobile (R) Service	
A. Channel characteristics and utilization . . . . .	14
B. Interference range contours . . . . .	17
Major World Air Route Area Maps (MWARAs) (Maps 1, 4 and 6)	
Regional and Domestic Air Route Area Maps (RDARAs) (Maps 2, 5 and 7)	
VOLMET Allotment and Reception Area Maps (Maps 3, 8 and 9)	
Transparencies used with above Maps	
C. Classes of emission and power . . . . .	20
D. Limits to the power levels of unwanted emissions . . . . .	23
E. Other technical provisions . . . . .	24

##### PART II

#### Plan for the Allotment of Frequencies for the Aeronautical Mobile (R) Service in the Exclusive Bands between 2 850 and 17 970 kHz

SECTION I. Description of the Boundaries of the Areas and Sub-Areas	
Article 1. Description of the Boundaries of the Major World Air Route Areas (MWARAs)	26
Article 2. Description of the Boundaries of the Regional and Domestic Air Route Areas (RDARAs) . . . . .	29

\* Certain errors which have been found in the plotting of the limits of areas in the maps of the Final Acts presented to the signature have been corrected.

	<i>Page</i>
Article 3. Description of the Boundaries of the VOLMET Allotment Areas and VOLMET Reception Areas . . . . .	47
Article 4. World-wide Allotment Areas . . . . .	50
 SECTION II. Allotment of Frequencies in the Aeronautical Mobile (R) Service	
Article 1. Frequency Allotment Plan by Areas . . . . .	51
Article 2. Frequency Allotment Plan (in numerical order of frequencies) . . . . .	59
Article 3. Frequencies for common use . . . . .	78

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MOD

## APPENDIX 27 Aer2

to the Radio Regulations

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

(See Article 7 of the Radio Regulations)

#### PART I

##### General Provisions

##### Section I

##### Definitions

*After number 27/8 add the following new number:*

- ADD 27/8A 8A. *A World-Wide Allotment Area* is one in which frequencies are allotted to  
Aer2 provide long-distance communication between an aeronautical station within that allotment area and aircraft operating anywhere in the world <sup>1</sup>.

*Replace number 27/9 by the following new text:*

- MOD 27/9 9. *A Family of Frequencies in the Aeronautical Mobile (R) Service* contains two  
Aer2 or more frequencies selected from different aeronautical mobile (R) bands and is intended to permit communication at any time within the authorized area of use (see Nos. 27/189 to 27/207) between aircraft stations and appropriate aeronautical stations.

ADD 27/8A.1  
Aer2

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<sup>1</sup> The type of communication referred to in 27/8A may be regulated by administrations.

## Section II

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

*Replace the title following the title of Section II by the following new title:*

MOD

#### A. Channel characteristics and utilization

##### 1. Frequency separation

*Replace numbers 27/10 and 27/11 by the following new texts:*

MOD 27/10  
Aer2

- 1.1 The frequency separation 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 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 27/11  
Aer2

- 1.2 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 Nos. 27/66B and 27/66C).

*After number 27/11 add the following new numbers:*

ADD 27/11A  
Aer2

*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 27/11B  
Aer2

- 1.3 On account of the possibility of interference, a given channel should not be used in the same allotment area for radiotelephony and data transmissions.

*Replace number 27/12 by the following new text:*

MOD 27/12  
Aer2

- 1.4 The use of channels derived from the frequencies indicated in No. 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.

*Delete number 27/13.*

*Replace numbers 27/14 and 27/15 by the following new texts:*

- MOD 27/14  
Aer2 1.5 To preclude the possibility of interference, adjacent channels in the list of frequencies in No. 27/16 have not as a rule been allotted to the same MWARA, RDARA or VOLMET areas. However, to satisfy particular needs, the administrations concerned may conclude special arrangements for the assignment of adjacent channels derived from the frequencies in the table (No. 27/16).
- MOD 27/15  
Aer2 1.6 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 Arrangements".

*Replace the sub-title preceding number 27/16 and number 27/16 by the following new texts:*

MOD 2. *Frequencies allotted*

MOD 27/16  
Aer2 The list of carrier (reference) 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 <sup>1</sup>:

[see page 16]

ADD 27/16.1  
Aer2 <sup>1</sup> To calculate the assigned frequency from a carrier (reference) frequency given in the table, reference should be made to Nos. 27/72, 27/72B and 27/73.

kHz											
2 850-3 025		4 650-4 700		6 525-6 685		10 005-10 100		13 260-13 360			
2 851	2 938	4 651	4 675	6 526	6 607	10 006	10 054	13 261	13 312		
2 854	2 941	4 654	4 678	6 529	6 610	10 009	10 057	13 264	13 315		
2 857	2 944	4 657	4 681	6 532	6 613	10 012	10 060	13 267	13 318		
2 860	2 947	4 660	4 684	6 535	6 616	10 015	10 063	13 270	13 321		
2 863	2 950	4 663	4 687	6 538	6 619	10 018	10 066	13 273	13 324		
2 866	2 953	4 666	4 690	6 541	6 622	10 021	10 069	13 276	13 327		
2 869	2 956	4 669	4 693	6 544	6 625	10 024	10 072	13 279	13 330		
2 872	2 959	4 672	4 696	6 547	6 628	10 027	10 075	13 282	13 333		
2 875	2 962	5 450-5 480		6 550	6 631	10 030	10 078	13 285	13 336		
2 878	2 965			6 553	6 634	10 033	10 081	13 288	13 339		
2 881	2 968			6 556	6 637	10 036	10 084	13 291	13 342		
2 884	2 971	Region 2		6 559	6 640	10 039	10 087	13 294	13 345		
2 887	2 974			6 562	6 643	10 042	10 090	13 297	13 348		
2 890	2 977			6 565	6 646	10 045	10 093	13 300	13 351		
2 893	2 980			6 568	6 649	10 048	10 096	13 303	13 354		
2 896	2 983			6 571	6 652	10 051		13 306	13 357		
2 899	2 986	5 451	5 466	6 574	6 655	11 275-11 400		13 309			
2 902	2 989	5 454	5 469	6 577	6 658						
2 905	2 992	5 457	5 472	6 580	6 661						
2 908	2 995	5 460	5 475	6 583	6 664	17 900-17 970					
2 911	2 998	5 463		6 586	6 667						
2 914	3 001	5 480-5 680		6 589	6 670	11 276	11 339	17 901	17 937		
2 917	3 004			6 592	6 673	11 279	11 342	17 904	17 940		
2 920	3 007			6 595	6 676	11 282	11 345	17 907	17 943		
2 923	3 010	5 481	5 580	6 598	6 679	11 285	11 348	17 910	17 946		
2 926	3 013	5 484	5 583	6 601	6 682	11 288	11 351	17 913	17 949		
2 929	3 016	5 487	5 586	6 604		11 291	11 354	17 916	17 952		
2 932	3 019	5 490	5 589	8 815-8 965		11 294	11 357	17 919	17 955		
3 023	(R) and (OR)	5 493	5 592			11 297	11 360	17 922	17 958		
		5 496	5 595			11 300	11 363	17 925	17 961		
		5 499	5 598			11 303	11 366	17 928	17 964		
3 400-3 500		5 502	5 601	8 816	8 891	11 306	11 369	17 931	17 967		
		5 505	5 604	8 819	8 894	11 309	11 372	17 934			
		5 508	5 607	8 822	8 897	11 312	11 375				
		5 511	5 610	8 825	8 900	11 315	11 378				
		5 514	5 613	8 828	8 903	11 318	11 381				
		5 517	5 616	8 831	8 906	11 321	11 384				
		5 520	5 619	8 834	8 909	11 324	11 387				
		5 523	5 622	8 837	8 912	11 327	11 390				
		5 526	5 625	8 840	8 915	11 330	11 393				
		5 529	5 628	8 843	8 918	11 333	11 396				
3 401	3 452	5 532	5 631	8 846	8 921	11 336					
3 404	3 455	5 535	5 634	8 849	8 924	41 channels					
3 407	3 458	5 538	5 637	8 852	8 927						
3 410	3 461	5 541	5 640	8 855	8 930						
3 413	3 464	5 544	5 643	8 858	8 933						
3 416	3 467	5 547	5 646	8 861	8 936						
3 419	3 470	5 550	5 649	8 864	8 939						
3 422	3 473	5 553	5 652	8 867	8 942						
3 425	3 476	5 556	5 655	8 870	8 945						
3 428	3 479	5 559	5 658	8 873	8 948						
3 431	3 482	5 562	5 661	8 876	8 951						
3 434	3 485	5 565	5 664	8 879	8 954						
3 437	3 488	5 568	5 667	8 882	8 957						
3 440	3 491	5 571	5 670	8 885	8 960						
3 443	3 494	5 574	5 673	8 888							
3 446	3 497	5 577	5 676								
3 449		5 680	(R) and (OR)								

*Delete numbers 27/17, 27/18 and 27/19.*

*Replace number 27/20 by the following new text:*

- MOD 27/20 Aer2 4. The International Civil Aviation Organization (ICAO) coordinates 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.

*Replace number 27/23 by the following new text:*

- MOD 27/23 Aer2 7. The coordination described in No. 27/20 shall be effected where appropriate and desirable for the efficient utilization of the frequencies in question, and especially when the procedures of No. 27/22 are unsatisfactory.

#### **B. Interference range contours**

*Replace the sub-title preceding number 27/24 and number 27/24 by the following new texts:*

- MOD 27/24 Aer2 1. *General provisions*

- ADD 27/24A Aer2 1.1 *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. The boundary of the air route area is often assumed to be the limiting distance.

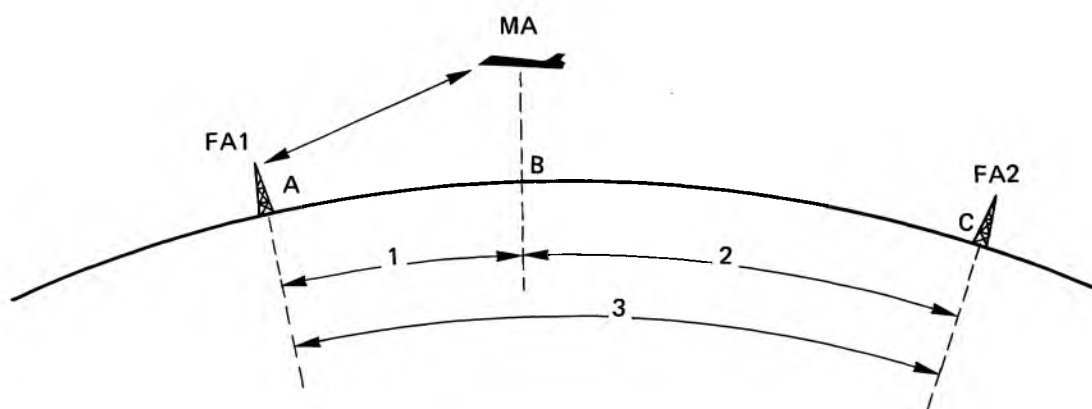
- ADD 27/24B Aer2 1.2 *Interference range*

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 median latitudes, for conditions of median sunspot activity and for a mean effective radiated power of 1 kW at the aeronautical station.

- ADD 27/24C Aer2 1.3 *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.

- ADD 27/24D Aer2 1.4 Figure 1 illustrates the use of the concept of interference range in frequency planning through the determination of 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.

FIGURE 1

*Service range, interference range, repetition distance*

ADD 27/24E 1.5 The transparencies associated with this Appendix show, for the frequencies stated, the interference range defined in No. 27/24B 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 daytime 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.

ADD 27/24F 1.6 Supplementary information on service range, interference range and repetition distance, as well as on the use of the transparencies can be found in the technical documentation issued by the IFRB, such as texts of the IFRB Seminar on frequency management and use of the frequency spectrum; Doc. No. 11/76 or revisions thereof.

*Replace number 27/25 by the following new text:*

MOD 27/25 1.7 Two types of transparencies are provided for use respectively with the Mercator projection world maps and the Lambert azimuthal equal area projection maps for the polar areas. The Mercator projection transparencies encompass the area between latitude 60° North and 60° South. The transparencies associated with the Polar area projections encompass the areas north of latitude 30° North and south of latitude 30° South. The Mercator projection overlaps the Polar projection maps between latitudes 30° and 60° North and 30° and 60° South. This overlap is intended to provide continuity between transparencies of the two projections.

2. *Type of maps used*

*Replace number 27/26 by the following new text:*

MOD 27/26  
Aer2

The transparencies mentioned in Nos. 27/24E 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.

4. *Sharing conditions between areas*

*Preceding number 27/30 add the following new sub-title:*

ADD

4.1 *Frequency bands 3 MHz to 11.3 MHz*

*Replace numbers 27/30 and 27/31 by the following new texts:*

MOD 27/30  
Aer2

4.1.1 The transparencies are constructed on the basis of the following sharing conditions:

Areas	Bands between: (MHz)	Sharing conditions
MWARA or VOLMET area to MWARA or VOLMET area	3 and 6.6 9 and 11.3	night propagation day propagation  <i>Note: 6.6 MHz and 5.6 MHz sharing conditions are considered to be the same</i>
MWARA or VOLMET area to RDARA	3 and 5.6 6.6 and 11.3	night propagation day propagation
RDARA to RDARA	3 and 4.7 5.6 and 11.3	night propagation day propagation

MOD 27/31  
Aer2

4.1.2 The additional “Day” contours included for 3 MHz, 3.5 MHz and 4.7 MHz are for determining daylight sharing possibilities.

*After number 27/31 add the following new sub-title and numbers:*

ADD 4.2 *Frequency bands 13 MHz and 18 MHz*

ADD 27/31A 4.2.1 The revised Frequency Allotment Plan for the 13 MHz and 18 MHz  
Aer2 bands is based on daytime protection only. This results in the following sharing possibilities:

ADD 27/31B 4.2.2 for the 13 MHz band, the repetition factor is at least 3 whilst for the  
Aer2 18 MHz band it is 4. It is to be noted that the longitudinal separation might be decreased to allow for a repetition of 4 (at 13 MHz) and 6 (at 18 MHz), taking into account operational and local circumstances;

ADD 27/31C 4.2.3 the sharing takes into account the likely locations of the aeronautical  
Aer2 stations rather than the area boundaries.

*Replace numbers 27/32, 27/33, 27/34, 27/35 and 27/36, as well as the sub-title preceding them, by the following new texts:*

MOD 5. *Method of use of the transparencies for the bands 3 MHz to 11.3 MHz*

MOD 27/32 5.1 Take the appropriate MWARA, RDARA or VOLMET area map associated  
Aer2 with this Appendix and select the transparency for the frequency order and sharing conditions under consideration.

MOD 27/33 5.2 The equal area projections (Lambert) are applicable in the polar areas north  
Aer2 of 60°N and south of 60°S; and the Mercator projections are applicable between 60°N and 60°S.

MOD 27/34 5.3 Place the centre of the transparency (i.e. the intersection of the axis of  
Aer2 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.

MOD 27/35 5.4 A transmitter located at any point outside the contour will result, as defined  
Aer2 in No. 27/24B, in a protection ratio of better than 15 dB.

MOD 27/36 5.5 A transmitter located at any point inside the contour will result in a  
Aer2 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.

.....  
(MOD) 27/37 [Concerns the Spanish text only]  
.....

*Delete number 27/38.*

### C. Classes of emission and power

#### 1. *Classes of emission*

*Replace numbers 27/49, 27/50, 27/51 and 27/52 by the following new texts:*

MOD 27/49      In the aeronautical mobile (R) service the use of emissions such as those  
Aer2      listed below is permissible subject to compliance with the special provisions applicable to  
each case 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:*  
Aer2

— 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 as well as in cases covered by Resolution N° Aer2 — 3, resolves 5.

#### 1.2 *Telegraphy (including automatic data transmission)*

MOD 27/51      1.2.1 *Amplitude modulation:*  
Aer2

— 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 transmissions such as automatic data transmission, single sideband, suppressed carrier	A9J

\*\* (see number 27/52)

MOD 27/52  
Aer2

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 Nos. 27/65 to 27/66C and care should be taken to place these emissions at or near the centre of the channel. However, a modulating audio frequency is permitted with single sideband transmitters, where the carrier is suppressed in accordance with No. 27/63.

*Delete number 27/53.*

2. *Power*

*Replace numbers 27/54, 27/55 and 27/56 by the following new texts:*

MOD 27/54  
Aer2

- 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
A2H, A3J, A7J, A9J A3*, A3H* (100 % modulation)	Aeronautical stations Aircraft stations	6 kW 400 W
Other emissions such as A1, F1	Aeronautical stations Aircraft stations	1.5 kW 100 W

\* A3 and A3H to be used only on 3 023 kHz, and 5 680 kHz, as well as in cases covered by Resolution No. Aer2-3, resolves 5.

MOD 27/55  
Aer2

- 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 used as a basis for the interference range contours.

MOD 27/56  
Aer2

- 2.3 In order to provide satisfactory communication with aircraft, aeronautical stations serving MWARA, VOLMET and world-wide allotment areas may exceed the power limits specified in No. 27/54, except in the case of

3 023 kHz and 5 680 kHz which are subject to the special provisions of Nos. 27/208 to 27/214. In each such case, the administration having jurisdiction over the aeronautical station shall note No. 694 of the Radio Regulations and ensure:

*Replace number 27/62 by the following new text:*

- MOD 27/62 Aer2 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 (which normally should not exceed 600 W P<sub>p</sub>) shall not cause harmful interference to stations using frequencies in accordance with the technical principles on which the Allotment Plan is based.

*After number 27/62 add the following new title:*

- ADD D. Limits to the power levels of unwanted emissions

*Replace the sub-title preceding number 27/63 and number 27/63 by the following new texts:*

- MOD 1. Technical provisions relating to the use of single-sideband emissions

- MOD 27/63 Aer2 1.1 Definitions of carrier modes:

Carrier mode	Level $N$ (dB) of the carrier with respect to peak envelope power
Full carrier (for example A2H)	$0 \geq N \geq -6$
Suppressed carrier (for example A3J)	Aircraft stations $N < -26$ Aeronautical stations $N < -40$

*Delete number 27/64.*

*Replace the sub-title preceding number 27/65 and the numbers 27/65 and 27/66 by the following new texts:*

- MOD 2. Tolerance for levels of emission outside the necessary bandwidth

- MOD 27/65 Aer2 2.1 In a single-sideband 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<sub>m</sub>) of the transmitter in accordance with the table in No. 27/66.

- MOD **27/66** 2.2 For aircraft station transmitter types and for aeronautical station transmitters  
**Aer2** first installed before 1 February 1983 :

Frequency separation $\Delta$ from the assigned frequency kHz	Minimum attenuation below mean power ( $P_m$ ) dB
$2 \leq \Delta < 6$	25
$6 \leq \Delta < 10$	35
$10 \leq \Delta$	$\left\{ \begin{array}{l} \text{Aircraft stations:} \quad 40 \\ \text{Aeronautical stations:} \quad 43 + 10 \log_{10} (P_m) \text{ (watts)} \end{array} \right.$

*After number 27/66 add the following new numbers:*

- ADD **27/66A** *Note:* All transmitters first placed in operation after 1 February 1983 shall comply with the specifica-  
**Aer2** tions contained in No. 27/66C.

- ADD **27/66B** 2.3 In a single-sideband transmission, the peak envelope power ( $P_p$ ) of any  
**Aer2** 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 ( $P_p$ ) of the transmitter in accordance with the table in No. 27/66C.

- ADD **27/66C** 2.4 For aircraft station transmitters first installed after 1 February 1983 and for  
**Aer2** aeronautical station transmitters in use after 1 February 1983 :

Frequency separation $\Delta$ from the assigned frequency kHz	Minimum attenuation below peak envelope power ( $P_p$ ) dB
$1.5 \leq \Delta < 4.5$	30
$4.5 \leq \Delta < 7.5$	38
$7.5 \leq \Delta$	$\left\{ \begin{array}{l} \text{Aircraft stations:} \quad 43 \\ \text{Aeronautical stations} \quad * \end{array} \right.$

\* For transmitter power up to and including 50 watts:  $43 + 10 \log_{10} P_p$  (watts). For transmitter powers more than 50 watts, the attenuation shall be at least 60 dB.

*Delete numbers 27/67, 27/68, 27/69, 27/70 and 27/71.*

*After the new number 27/66C add the following new title:*

ADD

**E. Other technical provisions**

*Replace the title preceding number 27/72 and number 27/72 by the following new texts:*

MOD 1. *Assigned frequencies*

MOD 27/72 1.1 For single-sideband emissions, except the class of emission A2H, the assigned  
Aer2 frequency shall be at a value 1400 Hz above the carrier (reference) frequency.

*After number 27/72 add the following new numbers:*

ADD 27/72A 1.2 For aeronautical stations equipped with selective calling systems, the class of  
Aer2 emission A2H shall be indicated in the Supplementary Information column of the form of notice (see Appendix 1 to the Radio Regulations).

ADD 27/72B 1.3 For classes of emission A1 and F1 the assigned frequency shall be chosen in  
Aer2 accordance with the provisions of the footnote to Nos. 27/51 and 27/52.

*Replace number 27/73 by the following new text:*

MOD 27/73 1.4 The assigned frequency of a station employing double sideband emissions  
Aer2 (A3) shall be at the carrier (reference) frequency.

## PART II

*Replace the title of Part II by the following:*

(MOD) **Plan for the Allotment of Frequencies for the Aeronautical Mobile (R)  
Service in the Exclusive Bands between 2 850 and 17 970 kHz**

### Section I

#### Description of the Boundaries of the Areas and Sub-Areas

*Replace number 27/76 by the following new text:*

(MOD) 27/76  
Aer2 3. References to the name of a country or of a geographical area in the descriptions or on the maps and the borders shown on the maps do not imply the expression of any opinion whatsoever on the part of the ITU concerning the political status of such a country or geographical area or any official recognition of these borders.

## ARTICLE 1

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

*Delete number 27/81.*

*Replace numbers 27/82, 27/83 and 27/84 by the following new texts:*

MOD 27/82  
Aer2 **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  
Aer2 **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  
Aer2

*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.

*Delete number 27/85.*

*After number 27/84 add the following new number:*

ADD 27/85A  
Aer2

*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.

*Replace numbers 27/86 and 27/87 by the following new texts:*

MOD 27/86  
Aer2

*Major World Air Route Area – MIDDLE EAST*  
(MWARA-MID)

From the point 51°N 30°E through the points 57°N 37°E, 50°N 80°E, 44°N 94°E, 08°N 76°E, 11°45'N 42°E, 16°N 42°E, 30°N 30°E, to the point 51°N 30°E.

MOD 27/87  
Aer2

*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.

*After number 27/87 add the following new number:*

ADD 27/87A  
Aer2

*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, 45°N 113°E, 46°30'N 120°E, 49°N 116°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.

*Delete numbers 27/88, 27/89, 27/90, 27/91, 27/92 and 27/93.*

*Replace numbers 27/94 and 27/95 by the following new texts:*

MOD 27/94  
Aer2

*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.

MOD 27/95  
Aer2

*Major World Air Route Area – AFRICA*  
(MWARA-AFI)

From the point 40°N 35°W, through the points 37°N 03°W, 37°N 44°E, the border between the Republic of Iraq and Iran, the points 29°N 48°E, 26°N 56°E, 20°N 62°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.

*Delete numbers 27/96 and 27/97.*

*Replace number 27/98 by the following new text:*

MOD 27/98  
Aer2

*Major World Air Route Area – SOUTH ATLANTIC*  
(MWARA-SAT)

From the South Pole through the points 30°S 75°W, 19°S 53°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.

*Delete number 27/99.*

*Replace number 27/100 by the following new text:*

MOD 27/100  
Aer2

*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.

*Delete number 27/101.*

From the North Pole along the 15°W meridian to the point 72°N 15°W, then through the points 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-Tunisia border to the Mediterranean, thence along the coast of Libya and the Arab Republic of Egypt to Alexandria. Thence to Cairo, eastward along the Cairo parallel to intersect the 40°E meridian, and north along the 40°E meridian to the south coast of the Black Sea. Thence west along the Black Sea coast of Turkey to intersect the 30°E meridian, then along the 30°E meridian to the border of Roumania and the U.S.S.R., thence along the border between the U.S.S.R. and the following countries: Roumania, Hungary, the Czechoslovak Socialist Republic and Poland. Thence along the U.S.S.R. Baltic Sea coast, to the border between Finland and the U.S.S.R., and between Norway and the U.S.S.R., to the point 70°N 32°E, and along the 32°E meridian to the North Pole.

MOD 27/105 *Sub-Area 1A*  
Aer2

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*  
Aer2

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 points 50°N 20°W and 50°N 10°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 French coastline northeastward and the frontier of France with 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 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. 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 the 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*  
Aer2

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 and continuing along the western borders of the Czechoslovak Socialist Republic and Austria to the borders between Austria and Switzerland, Austria and Liechtenstein and Austria and Switzerland. 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 Czechoslovak Socialist Republic and Poland. Thence to the Baltic Sea, along the U.S.S.R. Baltic Sea coast, along the borders between Finland and the U.S.S.R. and between Norway and the U.S.S.R. to the point 70°N 32°E, then along the 32°E meridian to the North Pole.

(MOD) 27/108 *Sub-Area 1D*  
Aer2

From the junction of the borders of the U.S.S.R., Hungary and Roumania, westward along the southern borders of Hungary and Austria to the border between Switzerland and Italy, and the border between France and Italy to the Mediterranean Sea. Thence to 43°N 10°E to 41°N 10°E to 41°N 07°E, thence along the 07°E meridian to the North African coast. Then along the North African coast including Tunis, Tripoli, Benghazi, to the coastal border between Libya and the Arab Republic of Egypt. Thence along the coast to Alexandria, then to Cairo, and along the Cairo parallel to the 40°E meridian. North along the 40°E meridian to the intersection with the border between the Syrian Arab Republic and the Republic of Iraq and along this border up to the Turkish border. Then along the border between Turkey and the Republic of Iraq, Iran and the U.S.S.R. up to the Black Sea Coast. Thence along the Black Sea Coast of

Turkey to intersect the 30°E meridian. Along the 30°E meridian to the border of Roumania and the U.S.S.R., thence along this border to the junction of the borders of the U.S.S.R., Hungary and Roumania.

MOD 27/109 *Sub-Area 1E*  
Aer2

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 border between Libya and Tunisia to the Mediterranean, thence along the Tunisian coast to intersect the 10°E meridian. Thence along this meridian to the point 43°N 10°E; thence to the borders between Italy and France and between Italy and Switzerland, Austria and Switzerland, Austria and Liechtenstein, Austria and Switzerland, 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 points 50°N 10°W and 50°N 20°W.

(MOD) 27/110 *Regional and Domestic Air Route Area-2*  
Aer2 (RDARA-2)

From the North Pole along the 32°E meridian to the 70°N parallel. Then along the border between Norway and the U.S.S.R. and Finland and the U.S.S.R. to the Baltic coast. Along the territorial waters of the U.S.S.R. Baltic coast to the border between the U.S.S.R. and Poland. Thence along the border between the U.S.S.R. and the following countries: Poland, the Czechoslovak Socialist Republic, Hungary and Roumania, to the Black Sea coast at the intersection of the 30°E meridian. Then along the 30°E meridian to the Black Sea coast of Turkey. Along the Black Sea coast of Turkey to the junction of the borders of Turkey and the U.S.S.R. Thence along this common border and the Iran-U.S.S.R. border to Caspian Sea. Then along the Iran Caspian Sea coast and the southern border of the U.S.S.R. to the intersection of the Mongolia-People's Republic of China-U.S.S.R. borders at approximately 49°N 88°E. Then along the 88°E meridian to 55°N. Then along the 55°N parallel to 60°E, and along the 60°E meridian to the North Pole.

(MOD) 27/111 *Sub-Area 2A*  
Aer2

From the North Pole along the 32°E meridian to 70°N. Then along the border between Norway and the U.S.S.R., and Finland and the U.S.S.R. to the Baltic coast, and along the territorial waters of the U.S.S.R. Baltic coast to the point 55°N 20°E, and thence to Moscow. Then to 55°N 60°E, and along the 60°E meridian to the North Pole.

.....  
(MOD) 27/112 [*Does not concern the English text*]  
Aer2  
.....

*Replace Regulation No. 27/113 by the following new text:*

(MOD) 27/113    *Sub-Area 2C*  
Aer2

From the point 55°N 60°E, to Moscow, to 55°N 20°E. Thence south along the border between the U.S.S.R. and Poland. Thence along the border between the U.S.S.R. and the following countries: Poland, the Czechoslovak Socialist Republic, Hungary and Roumania, to the Black Sea coast at the meridian 30°E. Along the meridian 30°E to the Black Sea coast of Turkey. Along this coastline to the junction of the border between Turkey and the U.S.S.R. Thence along this common border and the Iran-U.S.S.R. border to the Caspian Sea, then along the south coast of the Caspian Sea and thence north along the East Caspian Sea coast and through the point 47°N 53°E to 55°N 60°E.

.....  
(MOD) 27/114    [*Does not concern the English text*]  
Aer2

(MOD) 27/115    [*Does not concern the English text*]  
Aer2

(MOD) 27/116    [*Concerns the Spanish text only*]  
Aer2

(MOD) 27/117    [*Does not concern the English text*]  
Aer2  
.....

*Replace numbers 27/118, 27/119, 27/120, 27/121, 27/122 and 27/123 by the following new texts:*

(MOD) 27/118  
Aer2

*Regional and Domestic Air Route Area-4*  
(RDARA-4)

From the point 30°N 39°W, and through the points 10°N 20°W, 05°S 20°W, to the point 05°S 12°E. Thence along the border between People's Republic of Congo and the People's Republic of Angola, then along the northern border of the Republic of Zaire, and the borders of the People's Republic of Congo, of the Central African Empire and the Sudan. Thence north along the western border of the Sudan. Along the western border of the Arab Republic of Egypt, northwards to the Mediterranean and along the Mediterranean and Atlantic coasts of North Africa to the point 30°N 10°W. West along the 30°N parallel to close the area at 30°N 39°W.

(MOD) 27/119     *Sub-Area 4A*  
Aer2

From the point 30°N 39°W to 21°N 31°W. Thence to Gao and to Zinder. From Zinder, along the northern border of Nigeria, to a point west of N'Djamena. Then along the parallel to 12°N 22°E. Thence north along the western border of the Sudan, and along the western border of the Arab Republic of Egypt to the Mediterranean. Along the North African Mediterranean coast and Atlantic coast to a point 30°N 10°W. Thence along the 30°N parallel to close the sub-area at 30°N 39°W.

MOD     27/120     *Sub-Area 4B*  
Aer2

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 Empire to the junction between the Republic of Zaire, the Sudan and the Central African Empire. Along the western border of the Sudan to the point 12°N 22°E. Thence along the N'Djamena parallel to the Nigerian border. Then westward along this border to the point 13°12'N 10°45'E, through Zinder and Gao, to the point 21°N 31°W.

(MOD) 27/121  
Aer2

*Regional and Domestic Air Route Area-5*  
(RDARA-5)

From the point 41°N 40°E to the point 37°N 40°E. Then along the border between Turkey and the Syrian Arab Republic to the Mediterranean coast. Thence to the common border of Libya and the Arab Republic of Egypt on the North African coast excluding Cyprus. Southward along the western border of the Arab Republic of Egypt, and the Sudan to the border of Kenya. Thence east along the northern border of Kenya, then south along the border between Kenya and Somalia and to the East African coast at 02°S 41°E. Then through the point 02°S 73°E to 37°N 73°E. Then east along the border between the Republic of Afghanistan and Pakistan, and west along the southern border of the U.S.S.R. to the Caspian Sea. Then along the northern border of Iran and Turkey to close the area at 41°N 40°E.

MOD 27/122 Sub-Area 5A  
Aer2

From the point 37°N 40°E, along the border between Turkey and the Syrian Arab Republic to the Mediterranean coast. Thence to the Libyan-Egyptian border on the North African coast, excluding Cyprus. Southward, along the western border of the Arab Republic of Egypt and east along the common border of the Arab Republic of Egypt and the Sudan to 24°N 37°E. Then through the points 11°45'N 42°E, 11°45'N 55°E, 20°N 52°E, to the point 26°N 52°E. Thence along the border between Iran and the Republic of Iraq, and the border between the Republic of Iraq and Turkey, to the point 37°N 40°E.

(MOD) 27/123 Sub-Area 5B  
Aer2

From the point 41°N 40°E to 37°N 40°E. Thence east along the borders between Turkey and the Syrian Arab Republic, and Turkey and the Republic of Iraq, and along the border between the Republic of Iraq and Iran to the point 30°N 49°E. Thence along the middle of the Persian Gulf through the points 26°N 52°E and 24°N 60°E, to Bombay. Then to 37°N 73°E. Then east along the border between the Republic of Afghanistan and Pakistan, then west along the southern border of the U.S.S.R., to the Caspian Sea. Then along the northern border of Iran and Turkey to close the sub-area at 41°N 40°E.

.....  
(MOD) 27/124 [Concerns the Spanish text only]  
Aer2  
.....

*Replace number 27/125 by the following new text:*

(MOD) 27/125 Sub-Area 5D  
Aer2

From the junction of the Arab Republic of Egypt, Libya and the Sudan southward along the western border of Sudan to the border of Kenya. Thence along the northern border of Kenya. Then south along the border between Kenya and Somalia to the east African coast, at the point 02°S 42°E. Then through the points 02°S 54°E, 13°N 54°E, 13°N 52°E to the point 12°N 44°E. Thence northwest along the middle of the Red Sea to 24°N 37°E. Thence along the southern border of the Arab Republic of Egypt to close the sub-area.

*Replace numbers 27/127 and 27/128 by the following new texts:*

(MOD) 27/127 Sub-Area 6A  
Aer2

From the point 37°N 75°E, along the border between Pakistan and the Republic of Afghanistan, and Iran and Pakistan to the point 23°N 61°E. Thence to Bombay. From Bombay to 24°N 80°E. Thence to Calcutta. Thence along the coast of

Bangladesh and Burma to reach the border between Burma and Thailand. North along this border and that between Burma and Lao People's Democratic Republic. Thence along the border between the People's Republic of China and Burma. Thence westward along the southern border of the People's Republic of China to the point 37°N 75°E.

MOD 27/128 Sub-Area 6B  
Aer2

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 to the point 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. From the point 25°N 123°E, through the points 21°N 121°30'E, 20°N 120°E, 20°N 176°W, 50°N 164°E, 43°N 147°E, thence west 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 the People's Republic of China and the Democratic People's Republic of Korea, to the point 39°49'41''N 124°10'06''E.

*Replace numbers 27/130, 27/131 and 27/132 by the following new texts:*

MOD 27/130 Sub-Area 6D  
Aer2

From the junction of the borders of the People's Republic 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 00° 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 border between the People's Republic of China, Viet Nam, the Lao People's Democratic Republic and Burma, to close the Sub-Area at the junction of the borders of the People's Republic of China, India and Burma.

(MOD) 27/131 Sub-Area 6E  
Aer2

From the point 20°N 73°E, and through the points 02°S 73°E, 02°S 92°E, through Weh Island (off the north coast of Sumatra) to 10°N 97°E. Thence along the coasts of Burma, Bangladesh and India to Calcutta. Then through the points 24°N 80°E to 20°N 73°E.

MOD 27/132 Sub-Area 6F  
Aer2

From the point 25°N 123°E, 21°N 121°30'E, 20°N 120°E, 20°N 113°E, thence south around the Island of Hainan and along the People's Republic of China-Viet Nam, People's Republic of China-Lao People's Democratic Republic and People's Republic of China-Burma borders to the junction of the borders of the People's Republic 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, 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., then the border between the People's Republic of 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, then to the point 32°30'N 124°E.

Between the points 32°30'N 124°E and 25°N 123°E, the limit of this Sub-Area is undefined.

*After number 27/132 add the following new number:*

ADD 27/132A Sub-Area 6G  
Aer2

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 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 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 shall 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 operational use by the People's Republic of China of the frequencies allotted to Sub-Area 6G shall be within the area defined by a line starting at 21°32'52''N 108°E, passing 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 and thence along the limit of Sub-Area 6D to 21°32'52''N 108°E.

*Replace number 27/133 by the following new text:*

MOD 27/133  
Aer2

*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 the borders between Kenya and Sudan, Ethiopia and Somalia, to the point 02°S 42°E. Then to 02°S 60°E and along the 60°E meridian to 11°S, then through the points 11°S 65°E, 40°S 65°E, 40°S 60°E to the South Pole.

.....  
(MOD) 27/134 [Concerns the Spanish text only]  
Aer2  
.....

*Replace numbers 27/135, 27/136, 27/137 and 27/138 by the following new texts:*

MOD 27/135 *Sub-Area 7B*  
Aer2

From the point 05°S 10°E to 05°S 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, to the junction of the borders of Uganda, Republic of Zaire and Sudan. Thence along the eastern borders of the Republic of Zaire, the Republic of Rwanda, the Republic of Burundi, and the Republic of Zaire. Thence along the southern borders of the Republic of Zaire and the People's Republic of Angola to the coast of the South Atlantic. Thence to the point 17°S 10°E, and then to the point 05°S 10°E.

(MOD) 27/136 *Sub-Area 7C*  
Aer2

From the junction of the borders of Uganda, Republic of Zaire and Sudan along the western borders 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 and thence to the east coast of Africa. Then north along the eastern border of Kenya, then west along the northern borders of 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*  
Aer2

From the border between Tanzania and Mozambique on Lake Nyasa, south along the west border of Mozambique to the east coast of Africa, 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  
Aer2

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 part of the western border of Tanzania as far as the northern point of Lake Nyasa. Thence along the borders 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 Namibia to the coast at the point 17°S 10°E.

*After number 27/138 add the following new number:*

ADD 27/138A Sub-Area 7F  
Aer2

From the point 05°S 10°E to 05°S 12°E, along the border between the People's Republic of the Congo and the People's Republic of Angola to the junction point of the borders of the People's Republic of the Congo, the People's Republic of Angola, and the Republic of Zaire. Thence along the border between the People's Republic of Angola and the Republic of Zaire until the coast of the Atlantic, along the coastline until the Zaire River and thence along the northern, eastern and southern border of the People's Republic of Angola to the coast of the South Atlantic. Thence to the point 17°S 10°E and then to the point 05°S 10°E.

*Replace number 27/139 by the following new text:*

MOD 27/139 Regional and Domestic Air Route Area-8  
Aer2 (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 110°E meridian to the South Pole.

*Delete number 27/140.*

*Replace number 27/141 by the following new text:*

MOD 27/141 Regional and Domestic Air Route Area-9  
Aer2 (RDARA-9)

From the South Pole along the 160°E meridian 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.

*Delete number 27/142.*

*Replace number 27/143 by the following new text:*

MOD 27/143 Sub-Area-9B  
Aer2

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.

.....  
(MOD) 27/144 [Concerns the Spanish text only]  
Aer2  
.....

*Replace number 27/145 by the following new text:*

MOD 27/145 Sub-Area 9D  
Aer2

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.

*Replace the title preceding number 27/146 and number 27/146 by the following new texts:*

ADD 27/145A Regional and Domestic Air Route Area-10  
Aer2 (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°N 00°, 73°N 00°, 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 the point 50°N 164°E.

MOD 27/146 Sub-Area 10A  
Aer2

From the point 50°N 164°E to 66°N 169°W, along the 169°W meridian to the North Pole, along the 130°W meridian to 50°N, then westward to the point 50°N 164°E.

.....  
(MOD) 27/147 [Concerns the Spanish text only]  
Aer2

(MOD) 27/148 [Concerns the Spanish text only]  
Aer2

(MOD) 27/149 [Concerns the Spanish text only]  
Aer2

(MOD) 27/150 [Concerns the Spanish text only]  
Aer2

.....

*After number 27/150 add the following new number:*

ADD 27/150A Sub-Area 10F  
Aer2

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.

*Replace the title preceding number 27/151 and the numbers 27/151 and 27/152 by the following new texts:*

ADD 27/150B Regional and Domestic Air Route Area-11  
Aer2 (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 the point 29°N 180°.

MOD 27/151 Sub-Area 11A  
Aer2

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 the point 29°N 180°.

MOD 27/152 Sub-Area 11B  
Aer2

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 of America and Canada through 50°N 127°W, to the point 50°N 130°W.

*After number 27/152 add the following new number:*

ADD 27/152A Sub-Area 11C  
Aer2

From the point 25°N 65°W and through the points 40°N 65°W, 40°N 50°W, 25°N 35°W, to the point 25°N 65°W.

*Replace the title preceding number 27/153 and the numbers 27/153, 27/154, 27/155 and 27/156 by the following new texts:*

ADD 27/152B Regional and Domestic Air Route Area-12  
Aer2 (RDARA-12)

From the point 03°30'N 170°W to the point 10°N 170°W, then along the boundary between ITU 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 boundary between ITU Regions 1 and 2 to 00° 20°W. Thence through the points 00° 44°W, 04°24'N 50°39'W. Then along the boundaries between Brazil and the French Department of Guiana, Surinam, Guyana, Venezuela, Colombia to the junction of Brazil, Peru and Colombia then along the boundaries between Peru and Colombia and Peru and Ecuador 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 the point 03°30'N 170°W.

(MOD) 27/153 Sub-Area 12A  
Aer2

From the point 03°30'N 170°W to the point 10°N 170°W, then along the boundary between ITU Regions 2 and 3 to 29°N 180°, and thence through the points 29°N 153°W, 03°30'N 153°W to the point 03°30'N 170°W.

(MOD) 27/154 Sub-Area 12B  
Aer2

From the point 03°30'N 153°W to 33°N 153°W, through the points 33°N 120°W, 17°N 115°W, 14°N 93°W, 02°N 86°W, 02°N 93°W, 05°S 93°W, 05°S 120°W, 03°30'N 120°W, to the point 03°30'N 153°W.

(MOD) 27/155 Sub-Area 12C  
Aer2

From the point 33°N 120°W, through the points 35°N 120°W, 32°N 104°W, 25°N 91°W, 23°N 83°W, 22°N 83°W, 13°N 90°W, 16°N 116°W, to the point 33°N 120°W.

MOD 27/156 Sub-Area 12D  
Aer2

From the point 20°N 91°W, through the points 26°N 91°W, 26°N 79°W, 27°N 79°W, 27°N 76°30'W, 26°N 73°W, 17°N 58°W, to 10°N 58°W. Thence through Panama City, Colon, Swan Island, and Belize City to the point 20°N 91°W.

.....  
(MOD) 27/157 [Concerns the Spanish text only]  
Aer2  
.....

*Replace numbers 27/158, 27/159, 27/160 and 27/161 by the following new texts:*

MOD 27/158 Sub-Area 12F  
Aer2

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, 13°N 70°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 the point 02°N 79°W.

MOD 27/159 Sub-Area 12G  
Aer2

From the point 07°N 73°W, through the points 14°N 73°W, 14°N 58°W, 01°31'N 58°W and along the borders of Brazil with Guyana, Venezuela, Colombia through the points 01°57'N 68°W, 05°N 69°W, to the point 07°N 73°W.

MOD 27/160 Sub-Area 12H  
Aer2

From the point 05°N 70°W, 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 the French Department of Guiana, Surinam, Guyana, Venezuela and Colombia to the junction of the borders of Brazil, Colombia and Peru, to the point 05°N 70°W.

(MOD) 27/161 Sub-Area 12I  
Aer2

From the point 25°N 70°W, through the point 25°N 35°W and along the boundary between ITU Regions 1 and 2, to 00° 20°W. Thence through the points 00° 44°W, 08°N 54°W, 08°N 58°W, 17°N 58°W, to the point 25°N 70°W.

*After number 27/161 add the following new number:*

ADD 27/161A *Sub-Area 12J*  
Aer2

From the point 04°S 93°W, 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 the point 04°S 93°W.

*Replace the title preceding number 27/162 and the numbers 27/162, 27/163, 27/164 and 27/165 by the following new texts:*

ADD 27/161B *Regional and Domestic Air Route Area-13*  
Aer2 (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, Guyana, Surinam, the French Department of 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.

(MOD) 27/162 *Sub-Area 13A*  
Aer2

From the point 05°S 120°W through the points 05°S 93°W, 04°S 82°W, 19°S 81°W, 57°S 81°W, to 57°S 90°W. Thence to the South Pole to the point 05°S 120°W.

(MOD) 27/163 *Sub-Area 13B*  
Aer2

From the point 29°S 111°W, through the points 24°S 111°W, 24°S 104°W, 29°S 104°W, to the point 29°S 111°W.

MOD 27/164 *Sub-Area 13C*  
Aer2

From the point 15°S 47°W, 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 borders of Brazil with Paraguay, Bolivia, Peru, Colombia, Venezuela, Guyana, Surinam and the French Department of Guiana to 04°24'N 50°39'W, 04°24'N 47°W, to the point 15°S 47°W.

MOD 27/165 Sub-Area 13D  
Aer2

From 11°S 69°30'W along the border between Bolivia and Brazil and through the point 20°10'S 58°W, along the border between Bolivia and Paraguay to 22°30'S 62°30'W. Then along the border between Bolivia and Argentina and through the point 23°S 67°W along the border between Bolivia and Chile and through the point 16°30'S 69°30'W following the border between Bolivia and Peru to the point 11°S 69°30'W.

*After number 27/165 add the following new numbers:*

ADD 27/165A Sub-Area 13M  
Aer2

From the point 19°S 81°W, 04°S 82°W, 03°S 80°W, following the border between Peru and Ecuador and the border between Peru and Colombia to the point 11°S 69°30'W, along the border of Peru with Bolivia to 17°30'S 69°30'W, then along the border of Peru with Chile to the point 19°S 81°W.

ADD 27/165B Sub-Area 13N  
Aer2

From the point 22°30'S 62°30'W along the border of Paraguay with Bolivia to 20°10'S 58°W, along the border of Paraguay with Brazil to 25°50'S 54°30'W and thence along the border of Paraguay with Argentina to the point 22°30'S 62°30'W.

*Replace numbers 27/166, 27/167, 27/168, 27/169, 27/170, 27/171, 27/172 and 27/173 by the following new texts:*

(MOD) 27/166 Sub-Area 13E  
Aer2

From the point 32°S 81°W through the point 19°S 81°W, up to the intersection of the coast with the border between Chile and Peru, Bolivia and Argentina, to the point of intersection with 32°S and then to the point 32°S 81°W.

(MOD) 27/167 Sub-Area 13F  
Aer2

From the point 57°S 81°W, through the point 32°S 81°W to the intersection of 32°S with the border between Chile and Argentina, through the points 52°S 67°W, 57°S 67°W, 57°S 40°W to the South Pole to the point 57°S 81°W.

(MOD) 27/168 Sub-Area 13G  
Aer2

From the point 36°S 55°W to the intersection of 32°S with the border between Argentina and Chile, then north along the borders of Argentina with Bolivia, Paraguay, Brazil and Uruguay to the point 36°S 55°W.

(MOD) 27/169 *Sub-Area 13H*  
Aer2

From the point 57°S 90°W and through the point 57°S 70°W to 52°S 70°W. Then along the border between Chile and Argentina to its intersection by 32°S and through the points 36°S 55°W, 57°S 55°W, 57°S 25°W to the South Pole and then to the point 57°S 90°W.

(MOD) 27/170 *Sub-Area 13I*  
Aer2

From the point 40°S 50°W through the point 36°S 55°W and along the borders of Uruguay with Argentina and Brazil, then through the point 35°S 45°W to the point 40°S 50°W.

MOD 27/171 *Sub-Area 13J*  
Aer2

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 the point 15°S 47°W.

MOD 27/172 *Sub-Area 13K*  
Aer2

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 the point 22°30'S 50°39'W.

(MOD) 27/173 *Sub-Area 13L*  
Aer2

From the point 00° 32°W through the points 00° 20°W, the South Pole, 57°S 55°W, 36°S 55°W, 40°S 50°W, 20°S 32°W, to the point 00° 32°W.

*After 27/173 add the following new numbers:*

ADD 27/173A *Regional and Domestic Air Route Area-14*  
Aer2 (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*  
Aer2

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*  
Aer2

From the point 19°S 110°E to the point 10°S 110°E, thence through 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*  
Aer2

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

ADD 27/173E *Sub-Area 14D*  
Aer2

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*  
Aer2

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 27/173G *Sub-Area 14F*  
Aer2

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*  
Aer2

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)***

*Replace numbers 27/174 and 27/175 by the following new texts:*

MOD 27/174      *The AFI-MET allotment area is defined by a line drawn from the point*  
Aer2      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*  
Aer2      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, the points 29°N 40°W, 29°N 20°W, to the point 37°N 03°W.

*Replace the title preceding number 27/176 and the numbers  
27/176 and 27/177 by the following new texts:*

MOD      ***VOLMET Area — NORTH ATLANTIC  
(NAT-MET)***

MOD 27/176      *The NAT-MET allotment area is defined by a line drawn from the point*  
Aer2      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*  
Aer2      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.

*Replace the title preceding number 27/178 and the numbers  
27/178 and 27/179 by the following new texts:*

MOD      ***VOLMET Area — EUROPE  
(EUR-MET)***

MOD 27/178      *The EUR-MET allotment area is defined by a line drawn from the point*  
Aer2      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 27/182 The *PAC-MET allotment area* is defined by a line drawn from the point  
Aer2 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.

- MOD 27/183            The *PAC-MET reception area* is defined by a line drawn from the point  
Aer2            60°N 100°E through the points 75°N 160°W, 75°N 110°W, 65°S 110°W, 65°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.

*VOLMET Area – SOUTH EAST ASIA*  
(SEA-MET)

*Replace numbers 27/184 and 27/185 by the following new texts:*

- MOD 27/184            The *SEA-MET allotment area* is defined by a line drawn from the point  
Aer2            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  
Aer2            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.

*After number 27/185 add the following new titles and numbers:*

ADD                            *VOLMET Area – CARIBBEAN*  
(CAR-MET)

- ADD 27/185A            The *CAR-MET allotment area* is defined by a line drawn from the point  
Aer2            30°N 110°W, through the points 30°N 75°W, 00° 50°W, following the 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  
Aer2            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.

ADD                            *VOLMET Area – SOUTH AMERICA*  
(SAM-MET)

- ADD 27/185C            The *SAM-MET allotment area* is defined by a line drawn from the point  
Aer2            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  
Aer2            30°N 120°W through the point 30°N 00°, the South Pole, to the point 30°N 120°W.

After the new number 27/185D add the following new article:

ADD

ARTICLE 4

ADD

**World-wide Allotment Areas**

ADD 27/185E *World-wide Area I*  
Aer2

The boundaries of this allotment area comprise those of RDARAs 1, 2 and 3.

ADD 27/185F *World-wide Area II*  
Aer2

The boundaries of this allotment area comprise those of RDARAs 10, 11, 12A, 12B, 12C, and 12D.

ADD 27/185G *World-wide Area III*  
Aer2

The boundaries of this allotment area comprise those of RDARAs 6, 8, 9 and 14.

ADD 27/185H *World-wide Area IV*  
Aer2

The boundaries of this allotment area comprise those of RDARAs 12E to 12J inclusive and 13.

ADD 27/185I *World-wide Area V*  
Aer2

The boundaries of this allotment area comprise those of RDARAs 4, 5 and 7.

**Section II**

*Replace the title of Section II by the following new title:*

(MOD)

**Allotment of Frequencies in the Aeronautical Mobile (R) Service**

**ARTICLE 1**

*Replace number 27/186 by the following new text:*

MOD 27/186  
Aer2

**Frequency Allotment Plan by Areas**

*Notes:*

*Replace number 27/188 by the following new text:*

MOD 27/188  
Aer2

- b) The following list does not include the world-wide common (R) and (OR) frequencies of 3 023 kHz and 5 680 kHz. The allotment of these frequencies is shown in Article 2.

*Replace number 27/189 by the following new text:*



MOD 27/189  
Aer 2

Zones Áreas Zonas	Bandes de fréquences/Frequency bands/Bandas de frecuencias (MHz)										
	3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18
	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz
AFI	2 851 2 878	3 419 3 425 3 467	4 657		5 493 5 652 5 658	6 559 6 574 6 673	8 894 8 903		11 300 11 330	13 273 13 288 13 294	17 961
CAR	2 887	3 455			5 520 5 550	6 577 6 586	8 846 8 918		11 387 11 396	13 297	17 907
CEP	2 869	3 413	4 657		5 547 5 574	6 673	8 843	10 057	11 282	13 300	17 904
CWP	2 998	3 455	4 666		5 652 5 661	6 532 6 562	8 903	10 081	11 384	13 300	17 904
EA	3 016	3 485 3 491			5 655 5 670	6 571	8 897	10 042	11 396	13 297 13 303 13 309	17 907
EUR		3 479			5 661	6 598		10 084		13 288	17 961
INO		3 476			5 634		8 879			13 306	17 961
MID	2 944 2 992	3 467 3 473	4 669		5 658 5 667	6 625 6 631	8 918 8 951	10 018	11 375	13 288 13 312	17 961
NAT	2 872 2 899 2 962 2 971 3 016	3 476	4 675		5 598 5 616 5 649	6 622 6 628	8 825 8 831 8 864 8 879 8 891 8 906		11 279 11 309 11 336	13 291 13 306	17 946
NCA	3 004 3 019		4 678		5 646 5 664	6 592		10 096		13 303 13 315	17 958
NP	2 932				5 628	6 655 6 661		10 048	11 330	13 300	17 904
SAM	2 944	3 479	4 665		5 526	6 649	8 855	10 024 10 096	11 360	13 297	17 907
SAT	2 854 2 935	3 452			5 565	6 535	8 861		11 291	13 315 13 357	17 955
SEA		3 470 3 485			5 649 5 655	6 556	8 942	10 066	11 396	13 309 13 318	17 907
SP		3 467			5 559 5 643		8 867	10 084	11 327	13 300	17 904
1						6 556		10 021	11 363		
1B	2 860* 2 881* 2 890	3 458* 3 473* 3 488*			5 484 5 568	6 550 6 595		10 066			
1C	2 977 2 983	3 464 3 470	4 666		5 577 5 595	6 544	8 840		11 366		
1D	2 974 2 980 2 989	3 410 3 416 3 446	4 651		5 622 5 628 5 637	6 604 6 610	8 828	10 060	11 384		
1E	2 965	3 491			5 583	6 667		10 036			
2	2 938 2 950		4 696		5 556	6 583 6 601	8 846 8 855 8 888	10 015 10 045	11 297 11 360 11 390	13 321 13 357	17 964

\* Voir/See/Véase 27/187

(voir suite/cont.)

(suite/cont.)

	3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18
2A	2 851* 2 863 2 869 2 875 2 881 2 887* 2 896 2 917 2 926 2 932 2 941	3 416* 3 422 3 434 3 440 3 455	4 657* 4 672 4 690		5 481 5 490 5 496 5 502 5 523 5 547 5 559 5 604	6 526 6 532 6 547 6 553 6 559 6 565 6 574 6 673	8 822* 8 876 8 909 8 939	10 048 10 054	11 276 11 285 11 294		
2B	2 857 2 869 2 875 2 881 2 887* 2 896 2 902 2 908 2 914 2 920 2 929	3 401 3 407 3 416* 3 422 3 428 3 449	4 660 4 672 4 681 4 690 4 693		5 490 5 496 5 502 5 508 5 520 5 526 5 550 5 574 5 595 5 607 5 613 5 619	6 526 6 532 6 562 6 568 6 577 6 655 6 661 6 667	8 819 8 834 8 864	10 009 10 024	11 279 11 333 11 339		
2C	2 857 2 863 2 866 2 884 2 893 2 902 2 908 2 914 2 920 2 926 2 932	3 401 3 407 3 428 3 434 3 440 3 449 3 455	4 657* 4 660 4 681 4 693		5 481 5 487 5 508 5 514 5 520 5 526 5 550 5 562 5 574 5 586 5 604	6 535 6 541 6 547 6 553 6 562 6 568 6 577 6 586	8 819 8 834 8 882 8 939	10 009 10 024 10 054	11 276 11 333 11 372		
3	2 893 2 935		4 693		5 556	6 583 6 589	8 846 8 954	10 087	11 318 11 336 11 360	13 267 13 321	17 952
3A	2 854 2 860 2 869 2 875 2 881 2 887* 2 896 2 905 2 911* 2 923* 2 959	3 404 3 416* 3 422 3 431* 3 443 3 452	4 672 4 684 4 690		5 484 5 490 5 496 5 502 5 511 5 517 5 568 5 580 5 601 5 625	6 526 6 532 6 538 6 544 6 550 6 556 6 607 6 613 6 619 6 649	8 837 8 861 8 900 8 942	10 045 10 057	11 309 11 324 11 330		
3B	2 851 2 854 2 872 2 878 2 884* 2 902 2 908 2 914 2 968*	3 401 3 407 3 413 3 419 3 425 3 431* 3 437* 3 443	4 657 4 681		5 493 5 499 5 505 5 514 5 520 5 526 5 550 5 562 5 580 5 601	6 529 6 538 6 544 6 559 6 568 6 577 6 595 6 625 6 631	8 822 8 852 8 861 8 879 8 957	10 024 10 039	11 285 11 291 11 327 11 372		
3C	2 851 2 860 2 866* 2 878 2 905 2 950 2 974 2 980 2 986	3 404 3 410 3 419 3 425 3 452	4 684		5 484 5 514 5 562 5 568 5 586 5 637 5 643	6 550 6 556 6 595 6 658 6 664 6 670	8 837 8 852 8 894 8 915	10 039	11 291 11 303 11 324 11 378		

(voir suite/cont.)

*(suite/cont.)*

	3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18
4						6 565	8 873			13 300	17 904
4A	2 926* 2 953	3 437 3 491	4 672*		5 547 5 559	6 526 6 532 6 616	8 816 8 837 8 858	10 039 10 081	11 282 11 318		
4B	2 866 2 893	3 443			5 481 5 574 5 604	6 553 6 577 6 598		10 063	11 324		
5							8 870 8 885	10 012	11 312 11 327	13 354	17 949 17 967
5A	2 986	3 452			5 577 5 583	6 544 6 664	8 822 8 915		11 288		
5B	2 911 2 968	3 431 3 488			5 511 5 568 5 625	6 550 6 595	8 912	10 093			
5C	2 905	3 452			5 583	6 544	8 822				
5D	2 899 2 971	3 482			5 526 5 550	6 535 6 547	8 843	10 048			
6							8 840		11 381	13 291	17 943
6A	2 872 2 923 2 947 3 001	3 479	4 657* 4 675		5 484 5 580 5 601	6 607 6 613 6 658	8 891 8 906 8 948	10 006 10 051 10 081*	11 321 11 357		
6B	2 857 2 920	3 479 3 488			5 502 5 595 5 625	6 607 6 613 6 619	8 864 8 885	10 021 10 093	11 339 11 366		17 955
6C	2 881 2 956	3 473	4 651		5 550 5 580	6 544 6 631	8 834 8 918	10 015			
6D	2 866 2 884	3 416			5 490 5 520 5 568 5 574 5 631	6 550 6 568 6 577 6 595	8 882 8 957		11 309 11 372		
6E	2 854 2 872 2 917 3 001	3 443	4 657* 4 675		5 514 5 526 5 550	6 583 6 655 6 661	8 861* 8 906 8 909	10 036 10 051 10 084	11 357 11 363		
6F	2 926 2 941	3 434 3 440			5 496 5 508	6 526 6 667	8 864 8 939	10 060	11 279 11 366		
6G	2 869* 2 875* 2 890 2 896* 2 899 2 902* 2 911* 2 917* 2 938* 2 953 2 962 2 968* 2 971 2 977 2 983 2 989 2 995	3 413* 3 422* 3 431* 3 437 3 446 3 449* 3 464 3 482	4 651* 4 663* 4 669* 4 672* 4 690* 4 696*		5 481 5 487 5 493* 5 499* 5 505* 5 511* 5 517* 5 523 5 547 5 553 5 559 5 565 5 571 5 577 5 583 5 592 5 598 5 604	6 529 6 535 6 541 6 547 6 553 6 559 6 565 6 574 6 580 6 586 6 598 6 604 6 610 6 616 6 622 6 628 6 634 6 649	8 816 8 825 8 831 8 843 8 858 8 867 8 870* 8 873 8 888* 8 912* 8 960	10 018* 10 054* 10 063*	11 276* 11 282* 11 288 11 294* 11 300* 11 306 11 315 11 369	13 270 13 276	17 913

*(voir suite/cont.)*

(suite/cont.)

	3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18
					5 610 5 616 5 622 5 628* 5 634* 5 640*	6 652 6 673 6 682					
7					5 508	6 586	8 888		11 285	13 354	
7B	2 863 2 965	3 455			5 577 5 583	6 652	8 906	10 009			
7C	2 950	3 407			5 592	6 568 6 604	8 834	10 081	11 294		
7D	2 998				5 481			10 096			
7E	2 887	3 485			5 520	6 580 6 628	8 864		11 306		
7F	2 956	3 461			5 547 5 568	6 622	8 846 8 960				
9			4 696		5 583	6 553	8 846 8 852	10 018	11 339		
9B	2 860 2 905 2 929*	3 401* 3 419 3 425 3 476*	4 660		5 484 5 508 5 523 5 565	6 538 6 547 6 598 6 622	8 819 8 837 8 861 8 906	10 009 10 024 10 039	11 393		
9C	2 851	3 404 3 461	4 675		5 481	6 580	8 873	10 042	11 279 11 312		
9D	3 016	3 404			5 592	6 535	8 873		11 312		
10			4 696	5 454	5 604	6 553	8 819 8 834	10 006 10 012	11 333 11 390	13 285	17 910
10A	2 866 2 875 2 911 2 944 2 956 2 992	3 449 3 470		5 472 5 475	5 484 5 490 5 496 5 565 5 631	6 535 6 580 6 604	8 855 8 876	10 066	11 357 11 363 11 375		
10B	2 854 2 860	3 404 3 467 3 488	4 651 4 666 4 681 4 690 4 693	5 460 5 466	5 553 5 568 5 583	6 547 6 574 6 598	8 837 8 903 8 939				
10C	2 926 2 965	3 491	4 660 4 669	5 457	5 481 5 487 5 502 5 562 5 595	6 541 6 556 6 568	8 867				
10D	2 893 2 935	3 419 3 425 3 458	4 666 4 669 4 678	5 472 5 475	5 484 5 490 5 496 5 586 5 625	6 535 6 544 6 562	8 858 8 900				
10E	2 869 2 944 2 992	3 446 3 473	4 651 4 666 4 684	5 460	5 481 5 559 5 577	6 547 6 598	8 843 8 954		11 276		
10F	2 950		4 663	5 451	5 526	6 673	8 945	10 042			

(voir suite/cont.)

(suite/cont.)

	3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18
11B	2851 2878 3004 3019	3410 3428 3434 3443	4672	5451 5463 5469	5508 5514 5523 5571	6538 6550 6559 6565	8822 8885 8912	10045 10093	11288 11306	13312	17964
12		3440			5568			10054			17901
12A	2950				5604						
12C	2920 2980	3401 3464	4693	5460	5484 5490 5496 5502 5589 5613	6535 6571 6592 6622 6628	8816 8948 8957	10021 10039	11324		
12D		3407			5562	6673	8876	10015			
12E	2860 2956 2998	3461 3488	4681	5454 5475	5481 5487 5583 5595 5604	6547 6553 6598	8852 8873	10063 10090	11381 11393		
12F	2893 2956 2965 2998	3461 3488		5451 5475	5508 5556 5583 5604	6532 6553	8873 8894	10090	11297		
12G	2875 2956 2998	3461 3488			5484 5523 5559 5646	6526 6616					
12H	2956 2998	3461 3488		5451	5583						
12J	2860 2902 2926 2965	3419			5481 5496 5619	6535 6547	8954		11381 11384		
13										13318	17913
13A								10048			17967
13B								10048			17967
13C	2863 2869 2992	3413 3458 3473			5490 5514 5553 5571 5577	6541 6556 6562 6568 6580	8819 8834 8843 8939	10042	11327 11375	13309	
13D	2914 2983	3425 3467	4660	5460	5562	6622 6628 6673	8867 8912 8957	10084	11318		
13E	2851	3491	4651 4663		5481 5583 5604	6553 6577	8858		11303		17967
13F	2851 2956 2998	3446 3476	4651 4663	5454	5481 5583 5604	6547 6553	8831 8858 8864	10081	11321 11330		17967
13G	2872 2971 3016	3434 3470	4675*	5469 5475	5574	6586 6613	8822 8885 8900	10006 10021 10036	11369		

(voir suite/cont.)

(suite/cont.)

	3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18
13H	2 899 2 965	3 455 3 485	4 657	5 463 5 472	5 484 5 547	6 598	8 825 8 906	10 036 10 045	11 282 11 300	13 267	
13I	2 860 2 878 2 887	3 419	4 678 4 693	5 451 5 466	5 496 5 523	6 574	8 873	10 051			
13J	2 857 2 863 2 878 2 890 2 920	3 410 3 428 3 458	4 684 4 696	5 451 5 454	5 559 5 568 5 577	6 550 6 559 6 580	8 816 8 843	10 012 10 018 10 042	11 276		
13K	2 863 2 932 3 004 3 019	3 401 3 458 3 464	4 663 4 672	5 463	5 481 5 547 5 577 5 604	6 547 6 553 6 580	8 843 8 849 8 945	10 009 10 018 10 042 10 060	11 339 11 366	13 309	
13M	2 908 2 977	3 437 3 449	4 660 4 690	5 463	5 502	6 574 6 628	8 837 8 867 8 903	10 066	11 378		
13N	2 986	3 443		5 457	5 508	6 604	8 828	10 093			
14	2 851 2 878	3 446 3 461 3 479			5 526 5 604	6 580 6 628	8 822 8 855 8 870	10 045 10 087	11 360	13 264	17 946
14A	2 950	3 413	4 678*			6 547 6 553	8 816 8 894				
14B		3 488	4 684*			6 535 6 604 6 673	8 900 8 954				
14C	2 887	3 452	4 684*			6 541 6 586	8 885 8 912				
14D	2 950	3 407	4 693*		5 481	6 559 6 574	8 843 8 858				
14E		3 413				6 565 6 616	8 891 8 945				
14F		3 488				6 526 6 610	8 825 8 831				
14G	2 869 2 944		4 678*		5 481 5 550 5 580		8 876 8 957				
VAFI	2 860	3 404			5 499	6 538	8 852	10 057		13 261	
VCAR	2 950				5 580				11 315		
VEUR	2 998	3 413			5 640	6 580	8 957		11 378	13 264	
VMID	2 956				5 589		8 945		11 393		
VNAT	2 905	3 485			5 592	6 604	8 870	10 051		13 270 13 276	
VNCA		3 461	4 663		5 676			10 090		13 279	
VPAC	2 863					6 679	8 828			13 282	
VSAM	2 881				5 601			10 087		13 279	
VSEA	2 965	3 458			5 673	6 676	8 849		11 387	13 285	

(voir suite/cont.)

(suite/cont.)

	3	3.5	4.7	5.4 (Reg. 2)	5.6	6.6	9	10	11.3	13.3	18
W I	3 010		4 654 4 687		5 529 5 532 5 535 5 541	6 637 6 643	8 921 8 924 8 930 8 936	10 027 10 030 10 069 10 072 10 078	11 345 11 351	13 324 13 327 13 333 13 336 13 342 13 345 13 351	17 916 17 922 17 931
W II	3 007 3 013	3 494 3 497	4 654 4 687		5 529 5 538 5 544	6 637 6 640 6 646	8 927 8 933 8 936	10 027 10 033 10 075	11 342 11 348 11 354	13 330 13 339 13 348	17 919 17 925 17 934 17 940
W III	3 007		4 687			6 637	8 921 8 930	10 072 10 078	11 342 11 351	13 324 13 333 13 342 13 351	17 916 17 922 17 928 17 934 17 940
W IV	3 010				5 535 5 541	6 643	8 924	10 030 10 069	11 345	13 327 13 336 13 345	17 919 17 928 17 937
W V	3 013				5 532 5 538 5 544	6 640 6 646	8 927 8 933	10 033 10 075	11 348 11 354	13 330 13 339 13 348	17 925 17 931 17 937

## ARTICLE 2

### Frequency Allotment Plan (in numerical order of frequencies)

#### *General Notes:*

*Replace numbers 27/192, 27/193 and 27/194 by the following new texts:*

MOD 27/192 1. *Class of stations:* FA  
Aer2

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

*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.

MOD 27/193 2. A frequency allotted on a “day-time basis” may be used during the period  
Aer2 one hour after sunrise to one hour before sunset.

MOD 27/194 3. A “common channel” is a channel allotted in common to two or more areas  
Aer2 within interference distance of each other and its use is subject to agreement between the administrations concerned.

*After number 27/194 add the following new number:*

ADD 27/194A 4. The world-wide frequency allotments appearing in the tables at No. 27/189  
Aer2 and Nos. 27/195 to 27/207, except for carrier (reference) frequencies 3 023 kHz and 5 680 kHz, are reserved for assignment by administrations to stations operating under authority granted by the administration concerned, for the purpose of serving one or more aircraft operating agencies. Such assignments are to provide communications between an appropriate aeronautical station and an aircraft station anywhere in the world for exercising control 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 the operational area of an aircraft lies wholly within a RDARA or Sub-RDARA boundary, frequencies allotted to those RDARAs and Sub-RDARAs shall be used.

*Replace numbers 27/195 to 27/207 by the following new texts:*

MOD 27/195  
Aer 2bande/band/banda 2 850-3 025 kHz **3 MHz**

Fréquence kHz Frequency kHz Frecuencia kHz	Zone d'emploi autorisé** Authorized area of use** Zona de uso autorizado**										Observations** Remarks** Observaciones**
1	2										3
2851	M R	AFI 2A	3B	3C	9C	11B	13E	13F	14		CC 3B 3C CC 13E 13F C001/2A
2854	M R	SAT 3A	3B	6E	10B						CC 3A 3B
2857	R	2B	2C	6B	13J						CC 2B 2C
2860	R V	1B 3A VAFI	3C	9B	10B	12E	12J	13I			CC 3A 3C CC 12E 12J C001/1B
2863	R V	2A 2C VPAC	7B	13C	13J	13K					CC 2A 2C CC 13C 13J 13K
2866	R	2C	3C	4B	6D	10A					C001/3C
2869	M R	CEP 2A	2B	3A	6G	10E	13C	14G			CC 2A 2B 3A C009/6G
2872	M R	NAT 3B	6A	6E	13G						CC 6A 6E
2875	R	2A	2B	3A	6G	10A	12G				CC 2A 2B 3A C009/6G
2878	M R	AFI 3B	3C	11B	13I	13J	14				CC 3B 3C CC 13I 13J
2881	R V	1B 2A VSAM	2B	3A	6C						CC 2A 2B 3A C001/1B
2884	R	2C	3B	6D							C001/3B
2887	M R	CAR 2A	2B	3A	7E	13I	14C				CC 2A 2B 3A C001/2A 2B 3A
2890	R	1B	6G	13J							
2893	R	2C	3	4B	10D	12F					CC 2C 3
2896	R	2A	2B	3A	6G						CC 2A 2B 3A C009/6G
2899	M R	NAT 5D	6G	13H							
2902	R	2B	2C	3B	6G	12J					CC 2B 2C 3B C009/6G
2905	R V	3A 3C VNAT	5C	9B							CC 3A 3C
2908	R	2B	2C	3B	13M						CC 2B 2C 3B
2911	R	3A	5B	6G	10A						C001/3A C010/6G
2914	R	2B	2C	3B	13D						CC 2B 2C 3B
2917	R	2A	6E	6G							C010/6G
2920	R	2B	2C	6B	12C	13J					CC 2B 2C

\*\* Voir page 77 /See page 77 /Véase página 77.

(voir suite/cont.)

bande/*band*/banda 2 850-3 025 kHz 3 MHz  
(*suite/cont.*)

1	2	3
2923	R 3A 6A	C001/3A
2926	R 2A 2C 4A 6F 10C 12J	CC 2A 2C C001/4A
2929	R 2B 9B	C001/9B
2932	M NP R 2A 2C 13K	CC 2A 2C
2935	M SAT R 3 10D	
2938	R 2 6G	C009/6G
2941	R 2A 6F	
2944	M MID SAM R 10A 10E 14G	
2947	R 6A	
2950	R 2 3C 7C 10F 12A 14A 14D V VCAR	CC 2 3C CC 14A 14D
2953	R 4A 6G	
2956	R 6C 7F 10A 12E 12F 12G 12H 13F V VMID	CC 12E 12F 12G 12H
2959	R 3A	
2962	M NAT R 6G	
2965	R 1E 7B 10C 12F 12J 13H V VSEA	CC 12F 12J
2968	R 3B 5B 6G	C001/3B C009/6G
2971	M NAT R 5D 6G 13G	
2974	R 1D 3C	
2977	R 1C 6G 13M	
2980	R 1D 3C 12C	
2983	R 1C 6G 13D	
2986	R 3C 5A 13N	
2989	R 1D 6G	
2992	M MID R 10A 10E 13C	
2995	R 6G	
2998	M CWP R 7D 12E 12F 12G 12H 13F V VEUR	CC 12E 12F 12G 12H
3001	R 6A 6E	CC 6A 6E

(voir suite/cont.)

bande/band/banda 2 850-3 025 kHz **3 MHz**  
(suite/cont.)

1	2	3
3 004	M NCA R 11B 13K	
3 007	W MONDIALE WORLDWIDE MUNDIAL	C100/II III
3 010	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
3 013	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
3 016	M EA NAT R 9D 13G	
3 019	M NCA R 11B 13K	

MOD 27/196  
Aer 2

1	2	3
3 023	W MONDIALE WORLDWIDE MUNDIAL (R) et/and/y (OR)	Voir Partie II, Section II, article 3 See Part II, Section II, article 3 Véase Parte II, Sección II, artículo 3

MOD 27/197  
Aer 2bande/band/banda 3 400-3 500 kHz **3.5 MHz**

1	2	3
3 401	R 2B 2C 3B 9B 12C 13K	CC 2B 2C 3B C001/9B
3 404	R 3A 3C 9C 9D 10B V VAFI	CC 3A 3C CC 9C 9D
3 407	R 2B 2C 3B 7C 12D 14D	CC 2B 2C 3B
3 410	R 1D 3C 11B 13J	
3 413	M CEP R 3B 6G 13C 14A 14E V VEUR	CC 14A 14E C009/6G
3 416	R 1D 2A 2B 3A 6D	CC 2A 2B 3A C001/2A 2B 3A
3 419	M AFI R 3B 3C 9B 10D 12J 13I	CC 3B 3C
3 422	R 2A 2B 3A 6G	CC 2A 2B 3A C001/6G C004/6G
3 425	M AFI R 3B 3C 9B 10D 13D	CC 3B 3C

(voir suite/cont.)

bande/*band*/banda 3 400-3 500 kHz **3.5 MHz**  
(suite/*cont.*)

1	2	3
3428	R 2B 2C 11B 13J	CC 2B 2C
3431	R 3A 3B 5B 6G	CC 3A 3B C001/3A 3B C009/6G
3434	R 2A 2C 6F 11B 13G	CC 2A 2C
3437	R 3B 4A 6G 13M	C001/3B
3440	R 2A 2C 6F 12	CC 2A 2C
3443	R 3A 3B 4B 6E 11B 13N	CC 3A 3B
3446	R 1D 6G 10E 13F 14	
3449	R 2B 2C 6G 10A 13M	CC 2B 2C C001/6G C004/6G
3452	M SAT R 3A 3C 5A 5C 14C	CC 3A 3C CC 5A 5C
3455	M CAR CWP R 2A 2C 7B 13H	CC 2A 2C
3458	R 1B 10D 13C 13J 13K V VSEA	CC 13C 13J 13K C001/1B
3461	R 7F 9C 12E 12F 12G 12H 14 V VNCA	CC 12E 12F 12G 12H
3464	R 1C 6G 12C 13K	
3467	M AFI MID SP R 10B 13D	CC AFI MID
3470	M SEA R 1C 10A 13G	
3473	M MID R 1B 6C 10E 13C	C001/1B
3476	M INO NAT R 9B 13F	C001/9B
3479	M EUR SAM R 6A 6B 14	
3482	R 5D 6G	
3485	M EA SEA R 7E 13H V VNAT	CC EA SEA
3488	R 1B 5B 6B 10B 12E 12F 12G 12H 14B 14F	CC 12E 12F 12G 12H CC 14B 14F C001/1B
3491	M EA R 1E 4A 10C 13E	CC 1E 4A
3494	W MONDIALE WORLDWIDE MUNDIAL	C100/II
3497	W MONDIALE WORLDWIDE MUNDIAL	C100/II

(voir suite/*cont.*)

MOD 27/198  
Aer 2

bande/band/banda 4 650-4 700 kHz

4.7 MHz

1	2	3
4 651	R 1D 6C 6G 10B 10E 13E 13F	CC 13E 13F C001/6G
4 654	W MONDIALE WORLDWIDE MUNDIAL	C100/I II
4 657	M AFI CEP R 2A 2C 3B 6A 6E 13H	CC 2A 2C C001/2A 2C CC 6A 6E C001/6A 6E
4 660	R 2B 2C 9B 10C 13D 13M	CC 2B 2C CC 13D 13M
4 663	R 6G 10F 13E 13F 13K V VNCA	CC 13E 13F 13K C001/6G
4 666	M CWP R 1C 10B 10D 10E	CC 10B 10D 10E
4 669	M MID SAM R 6G 10C 10D	CC 10C 10D C001/6G
4 672	R 2A 2B 3A 4A 6G 11B 13K	CC 2A 2B 3A C001/4A C001/6G
4 675	M NAT R 6A 6E 9C 13G	CC 6A 6E C001/13G
4 678	M NCA R 10D 13I 14A 14G	CC 14A 14G C001/14A 14G
4 681	R 2B 2C 3B 10B 12E	CC 2B 2C 3B
4 684	R 3A 3C 10E 13J 14B 14C	CC 3A 3C CC 14B 14C C001/14B 14C
4 687	W MONDIALE WORLDWIDE MUNDIAL	C100/I II III
4 690	R 2A 2B 3A 6G 10B 13M	CC 2A 2B 3A C001/6G
4 693	R 2B 2C 3 10B 12C 13I 14D	CC 2B 2C 3 C001/14D
4 696	R 2 6G 9 10 13J	C001/6G

MOD 27/199  
Aer 2

bande/*band*/banda 5 450-5 480 kHz (Reg. 2)

5.4 MHz

1	2	3
5 451	R 10F 11B 12F 12H 13I 13J	CC 12F 12H CC 13I 13J
5 454	R 10 12E 13F 13J	
5 457	R 10C 13N	
5 460	R 10B 10E 12C 13D	
5 463	R 11B 13H 13K 13M	
5 466	R 10B 13I	
5 469	R 11B 13G	
5 472	R 10A 10D 13H	
5 475	R 10A 10D 12E 12F 13G	CC 12E 12F

MOD 27/200  
Aer 2

bande/*band*/banda 5 480-5 680 kHz

5.6 MHz

1	2	3
5 481	R 2A 2C 4B 6G 7D 9C 10C 10E 12E 12J 13E 13F 13K 14D 14G	CC 2A 2C CC 10C 10E CC 12E 12J CC 13E 13F CC 14D 14G
5 484	R 1B 3A 3C 6A 9B 10A 10D 12C 12G 13H	CC 3A 3C
5 487	R 2C 6G 10C 12E	
5 490	R 2A 2B 3A 6D 10A 10D 12C 13C	CC 2A 2B 3A
5 493	M AFI R 3B 6G	C002/6G
5 496	R 2A 2B 3A 6F 10A 10D 12C 12J 13I	CC 2A 2B 3A
5 499	R 3B 6G V VAFI	C002/6G
5 502	R 2A 2B 3A 6B 10C 12C 13M	CC 2A 2B 3A
5 505	R 3B 6G	C003/6G
5 508	R 2B 2C 6F 7 9B 11B 12F 13N	CC 2B 2C
5 511	R 3A 5B 6G	C002/6G
5 514	R 2C 3B 3C 6E 11B 13C	CC 3B 3C
5 517	R 3A 6G	C002/6G
5 520	M CAR R 2B 2C 3B 6D 7E	CC 2B 2C 3B
5 523	R 2A 6G 9B 11B 12G 13I	

(voir suite/cont.)

bande/*band*/banda 5 480-5 680 kHz

5.6 MHz

*(suite/cont.)*

1	2	3
5 526	M SAM R 2B 2C 3B 5D 6E 10F 14	CC 2B 2C 3B
5 529	W MONDIALE WORLDWIDE MUNDIAL	C100/I II
5 532	W MONDIALE WORLDWIDE MUNDIAL	C100/I V
5 535	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
5 538	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
5 541	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
5 544	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
5 547	M CEP R 2A 4A 6G 7F 13H 13K	
5 550	M CAR R 2B 2C 3B 5D 6C 6E 14G	CC 2B 2C 3B
5 553	R 6G 10B 13C	
5 556	R 2 3 12F	CC 2 3
5 559	M SP R 2A 4A 6G 10E 12G 13J	
5 562	R 2C 3B 3C 10C 12D 13D	CC 3B 3C
5 565	M SAT R 6G 9B 10A	
5 568	R 1B 3A 3C 5B 6D 7F 10B 12 13J	CC 3A 3C
5 571	R 6G 11B 13C	
5 574	M CEP R 2B 2C 4B 6D 13G	CC 2B 2C
5 577	R 1C 5A 6G 7B 10E 13C 13J 13K	CC 13C 13J 13K
5 580	R 3A 3B 6A 6C 14G V VCAR	CC 3A 3B
5 583	R 1E 5A 5C 6G 7B 9 10B 12E 12F 12H 13E 13F	CC 5A 5C CC 12E 12F 12H CC 13E 13F
5 586	R 2C 3C 10D	
5 589	R 12C V VMID	
5 592	R 6G 7C 9D V VNAT	
5 595	R 1C 2B 6B 10C 12E	
5 598	M NAT R 6G	
5 601	R 3A 3B 6A V VSAM	CC 3A 3B
5 604	R 2A 2C 4B 6G 10 12A 12E 12F 13E 13F 13K 14	CC 2A 2C CC 12E 12F CC 13E 13F

*(voir suite/cont.)*

bande/*band*/banda 5 480-5 680 kHz **5.6 MHz**  
(*suite/cont.*)

1	2	3
5 607	R 2B	
5 610	R 6G	
5 613	R 2B 12C	
5 616	M NAT R 6G	
5 619	R 2B 12J	
5 622	R 1D 6G	
5 625	R 3A 5B 6B 10D	
5 628	M NP R 1D 6G	C003/6G
5 631	R 6D 10A	
5 634	M INO R 6G	C002/6G
5 637	R 1D 3C	
5 640	R 6G V VEUR	C002/6G
5 643	M SP R 3C	
5 646	M NCA R 12G	
5 649	M NAT SEA	
5 652	M AFI CWP	
5 655	M EA SEA	CC EA SEA
5 658	M AFI MID	CC AFI MID
5 661	M CWP EUR	
5 664	M NCA	
5 667	M MID	
5 670	M EA	
5 673	V VSEA	
5 676	V VNCA	

MOD 27/201  
Aer 2

5 680	W MONDIALE WORLDWIDE MUNDIAL (R) et/ <i>and</i> / <i>y</i> (OR)	Voir Partie II, Section II, article 3 See Part II, Section II, article 3 Véase Parte II, Sección II, artículo 3
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MOD 27/202  
Aer 2

bande/band/banda 6 525-6 685 kHz

6.6 MHz

1	2	3
6 526	R 2A 2B 3A 4A 6F 12G 14F	CC 2A 2B 3A
6 529	R 3B 6G	
6 532	M CWP R 2A 2B 3A 4A 12F	CC 2A 2B 3A
6 535	M SAT R 2C 5D 6G 9D 10A 10D 12C 12J 14B	
6 538	R 3A 3B 9B 11B V VAFI	CC 3A 3B
6 541	R 2C 6G 10C 13C 14C	
6 544	R 1C 3A 3B 5A 5C 6C 10D	CC 3A 3B CC 5A 5C
6 547	R 2A 2C 5D 6G 9B 10B 10E 12E 12J 13F 13K 14A	CC 2A 2C CC 12E 12J
6 550	R 1B 3A 3C 5B 6D 11B 13J	CC 3A 3C
6 553	R 2A 2C 4B 6G 9 10 12E 12F 13E 13F 13K 14A	CC 2A 2C CC 12E 12F CC 13E 13F
6 556	M SEA R 1 3A 3C 10C 13C	CC 3A 3C
6 559	M AFI R 2A 3B 6G 11B 13J 14D	
6 562	M CWP R 2B 2C 10D 13C	CC 2B 2C
6 565	R 2A 4 6G 11B 14E	
6 568	R 2B 2C 3B 6D 7C 10C 13C	CC 2B 2C 3B
6 571	M EA R 12C	
6 574	M AFI R 2A 6G 10B 13I 13M 14D	
6 577	M CAR R 2B 2C 3B 4B 6D 13E	CC 2B 2C 3B
6 580	R 6G 7E 9C 10A 13C 13J 13K 14 V VEUR	CC 13C 13J 13K
6 583	R 2 3 6E	CC 2 3
6 586	M CAR R 2C 6G 7 13G 14C	
6 589	R 3	
6 592	M NCA R 12C	
6 595	R 1B 3B 3C 5B 6D	CC 3B 3C
6 598	M EUR R 4B 6G 9B 10B 10E 12E 13H	

(voir suite/cont.)

bande/band/banda 6 525-6 685 kHz

6.6 MHz

(suite/cont.)

1	2	3
6 601	R 2	
6 604	R 1D 6G 7C 10A 13N 14B V VNAT	
6 607	R 3A 6A 6B	
6 610	R 1D 6G 14F	
6 613	R 3A 6A 6B 13G	
6 616	R 4A 6G 12G 14E	
6 619	R 3A 6B	
6 622	M NAT R 6G 7F 9B 12C 13D	
6 625	M MID R 3B	
6 628	M NAT R 6G 7E 12C 13D 13M 14	CC 13D 13M
6 631	M MID R 3B 6C	
6 634	R 6G	
6 637	W MONDIALE WORLDWIDE MUNDIAL	C100/I II III
6 640	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
6 643	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
6 646	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
6 649	M SAM R 3A 6G	
6 652	R 6G 7B	
6 655	M NP R 2B 6E	
6 658	R 3C 6A	
6 661	M NP R 2B 6E	
6 664	R 3C 5A	
6 667	R 1E 2B 6F	
6 670	R 3C	
6 673	M AFI CEP R 2A 6G 10F 12D 13D 14B	
6 676	V VSEA	
6 679	V VPAC	
6 682	R 6G	

MOD 27/203  
Aer 2bande/*band*/banda 8 815-8 965 kHz **9 MHz**

1	2	3
8 816	R 4A 6G 12C 13J 14A	
8 819	R 2B 2C 9B 10 13C	CC 2B 2C
8 822	R 2A 3B 5A 5C 11B 13G 14	CC 5A 5C C005/2A
8 825	M NAT R 6G 13H 14F	
8 828	R 1D 13N V VPAC	
8 831	M NAT R 6G 13F 14F	
8 834	R 2B 2C 6C 7C 10 13C	CC 2B 2C
8 837	R 3A 3C 4A 9B 10B 13M	CC 3A 3C
8 840	R 1C 6	
8 843	M CEP R 5D 6G 10E 13C 13J 13K 14D	CC 13C 13J 13K
8 846	M CAR R 2 3 7F 9	CC 2 3
8 849	R 13K V VSEA	
8 852	R 3B 3C 9 12E V VAFI	CC 3B 3C
8 855	M SAM R 2 10A 14	
8 858	R 4A 6G 10D 13E 13F 14D	CC 13E 13F
8 861	M SAT R 3A 3B 6E 9B	CC 3A 3B C011/6E
8 864	M NAT R 2B 6B 6F 7E 13F	CC 6B 6F
8 867	M SP R 6G 10C 13D 13M	CC 13D 13M
8 870	R 5 6G 14 V VNAT	C004/6G
8 873	R 4 6G 9C 9D 12E 12F 13I	CC 9C 9D CC 12E 12F
8 876	R 2A 10A 12D 14G	
8 879	M INO NAT R 3B	
8 882	R 2C 6D	
8 885	R 5 6B 11B 13G 14C	
8 888	R 2 6G 7	C009/6G
8 891	M NAT R 6A 14E	

(voir suite/cont.)

bande/*band*/banda 8 815-8 965 kHz **9 MHz**  
(*suite/cont.*)

1	2	3
8 894	M AFI R 3C 12F 14A	
8 897	M EA	
8 900	R 3A 10D 13G 14B	
8 903	M AFI CWP R 10B 13M	
8 906	M NAT R 6A 6E 7B 9B 13H	CC 6A 6E
8 909	R 2A 6E	
8 912	R 5B 6G 11B 13D 14C	C004/6G
8 915	R 3C 5A	
8 918	M CAR MID R 6C	
8 921	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
8 924	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
8 927	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
8 930	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
8 933	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
8 936	W MONDIALE WORLDWIDE MUNDIAL	C100/I II
8 939	R 2A 2C 6F 10B 13C	CC 2A 2C
8 942	M SEA R 3A	
8 945	R 10F 13K 14E V VMID	
8 948	R 6A 12C	
8 951	M MID	
8 954	R 3 10E 12J 14B	
8 957	R 3B 6D 12C 13D 14G V VEUR	
8 960	R 6G 7F	

MOD 27/204  
Aer 2

bande/band/banda 10 005-10 100 kHz

10 MHz

1	2	3
10006	R 6A 10 13G	
10009	R 2B 2C 7B 9B 13K	CC 2B 2C
10012	R 5 10 13J	
10015	R 2 6C 12D	
10018	M MID R 6G 9 13J 13K	CC 13J 13K C003/6G
10021	R 1 6B 12C 13G	
10024	M SAM R 2B 2C 3B 9B	CC 2B 2C 3B
10027	W MONDIALE WORLDWIDE MUNDIAL	C100/I II
10030	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
10033	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
10036	R 1E 6E 13G 13H	CC 13G 13H
10039	R 3B 3C 4A 9B 12C	CC 3B 3C
10042	M EA R 9C 10F 13C 13J 13K	CC 13C 13J 13K
10045	R 2 3A 11B 13H 14	CC 2 3A
10048	M NP R 2A 5D 13A 13B	CC 13A 13B
10051	R 6A 6E 13I V VNAT	CC 6A 6E
10054	R 2A 2C 6G 12	CC 2A 2C C004/6G
10057	M CEP R 3A V VAFI	
10060	R 1D 6F 13K	
10063	R 4B 6G 12E	C004/6G
10066	M SEA R 1B 10A 13M	
10069	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
10072	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
10075	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
10078	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
10081	M CWP R 4A 6A 7C 13F	C006/6A
10084	M EUR SP R 6E 13D	
10087	R 3 14 V VSAM	

(voir suite/cont.)

bande/*band*/banda **10 005-10 100 kHz** **10 MHz**  
(suite/cont.)

1	2	3
10 090	R 12E 12F V VNCA	CC 12E 12F
10 093	R 5B 6B 11B 13N	
10 096	M NCA SAM R 7D	

MOD 27/205  
Aer 2bande/*band*/banda **11 275-11 400 kHz** **11.3 MHz**

1	2	3
11 276	R 2A 2C 6G 10E 13J	CC 2A 2C C002/6G
11 279	M NAT R 2B 6F 9C	
11 282	M CEP R 4A 6G 13H	C003/6G
11 285	R 2A 3B 7	CC 2A 3B
11 288	R 5A 6G 11B	
11 291	M SAT R 3B 3C	CC 3B 3C
11 294	R 2A 6G 7C	C002/6G
11 297	R 2 12F	
11 300	M AFI R 6G 13H	C002/6G
11 303	R 3C 13E	
11 306	R 6G 7E 11B	
11 309	M NAT R 3A 6D	
11 312	R 5 9C 9D	CC 9C 9D
11 315	R 6G V VCAR	
11 318	R 3 4A 13D	
11 321	R 6A 13F	
11 324	R 3A 3C 4B 12C	CC 3A 3C
11 327	M SP R 3B 5 13C	
11 330	M AFI NP R 3A 13F	
11 333	R 2B 2C 10	CC 2B 2C

(voir suite/cont.)

bande/*band*/banda 11 275-11 400 kHz

**11.3 MHz**  
(*suite/cont.*)

1	2	3
11 336	M NAT R 3	
11 339	R 2B 6B 9 13K	
11 342	W MONDIALE WORLDWIDE MUNDIAL	C100/II III
11 345	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
11 348	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
11 351	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
11 354	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
11 357	R 6A 6E 10A	CC 6A 6E
11 360	M SAM R 2 3 14	CC 2 3
11 363	R 1 6E 10A	
11 366	R 1C 6B 6F 13K	CC 6B 6F
11 369	R 6G 13G	
11 372	R 2C 3B 6D	
11 375	M MID R 10A 13C	
11 378	R 3C 13M V VEUR	
11 381	R 6 12E 12J	CC 12E 12J
11 384	M CWP R 1D 12J	
11 387	M CAR V VSEA	
11 390	R 2 10	
11 393	R 9B 12E V VMID	
11 396	M CAR EA SEA	CC EA SEA

MOD 27/206  
Aer 2

bande/band/banda 13 260-13 360 kHz 13.3 MHz

1	2	3
13 261	V VAFI	
13 264	R 14 V VEUR	
13 267	R 3 13H	
13 270	R 6G V VNAT	
13 273	M AFI	
13 276	R 6G V VNAT	
13 279	V VNCA VSAM	
13 282	V VPAC	
13 285	R 10 V VSEA	
13 288	M AFI EUR MID	CC AFI EUR MID
13 291	M NAT R 6	
13 294	M AFI	
13 297	M CAR EA SAM	CC CAR SAM
13 300	M CEP CWP NP SP R 4	CC CEP CWP NP SP
13 303	M EA NCA	CC EA NCA
13 306	M INO NAT	
13 309	M EA SEA R 13C 13K	CC EA SEA CC 13C 13K
13 312	M MID R 11B	
13 315	M NCA SAT	
13 318	M SEA R 13	
13 321	R 2 3	CC 2 3
13 324	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
13 327	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
13 330	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
13 333	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
13 336	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
13 339	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
13 342	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
13 345	W MONDIALE WORLDWIDE MUNDIAL	C100/I IV
13 348	W MONDIALE WORLDWIDE MUNDIAL	C100/II V

(voir suite/cont.)

bande/band/banda 13 260-13 360 kHz **13.3 MHz**  
(suite/cont.)

1	2	3
13 351	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
13 354	R 5 7	CC 5 7
13 357	M SAT R 2	

MOD 27/207  
Aer 2bande/band/banda 17 900-17 970 kHz **18 MHz**

1	2	3
17 901	R 12	
17 904	M CEP CWP NP SP R 4	CC CEP CWP NP SP
17 907	M CAR EA SAM SEA	CC CAR SAM CC EA SEA
17 910	R 10	
17 913	R 6G 13	
17 916	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
17 919	W MONDIALE WORLDWIDE MUNDIAL	C100/II IV
17 922	W MONDIALE WORLDWIDE MUNDIAL	C100/I III
17 925	W MONDIALE WORLDWIDE MUNDIAL	C100/II V
17 928	W MONDIALE WORLDWIDE MUNDIAL	C100/III IV
17 931	W MONDIALE WORLDWIDE MUNDIAL	C100/I V
17 934	W MONDIALE WORLDWIDE MUNDIAL	C100/II III
17 937	W MONDIALE WORLDWIDE MUNDIAL	C100/IV V
17 940	W MONDIALE WORLDWIDE MUNDIAL	C100/II III
17 943	R 6	
17 946	M NAT R 14	
17 949	R 5	
17 952	R 3	
17 955	M SAT R 6B	
17 958	M NCA	
17 961	M AFI EUR INO MID	CC AFI EUR INO MID
17 964	R 2 11B	
17 967	R 5 13A 13B 13E 13F	CC 13A 13B 13E 13F

**Explication des symboles et  
abréviations**

Colonne 2	M = ZLAMP R = ZLARN V = VOLMET W = mondiale
Colonne 3	CC = voie commune à
C001/...	Dans la zone indiquée après la barre oblique, utilisation diurne
C002/6G	Dans la zone 6G, utilisation seulement à l'est de 95° E
C003/6G	Dans la zone 6G, utilisation seulement à l'ouest de 95° E
C004/6G	Utilisation limitée à l'est de 110° E
C005/2A	Utilisation limitée au nord de 60° N
C006/6A	Utilisation limitée à l'est de 75° E
C007	Pas utilisé
C008	Pas utilisé
C009/6G	Dans la zone 6G, utilisation seulement à l'est de 110° E et au sud de 25° N
C010/6G	Dans la zone 6G, utilisation seulement à l'est de 118° E et au nord de 40° N
C011/6E	Dans la zone 6E, utilisation limitée au sud de 20° N
C100/...	La zone d'allotissement pour utilisation mondiale est indiquée à la suite du symbole. En ce qui concerne la procédure pour l'assignation des fréquences, voir le numéro 27/194A

**Explanation of symbols  
and abbreviations**

Column 2	M = MWARA R = RDARA V = VOLMET W = worldwide
Column 3	CC = common channel to
C001/...	Restricted to daytime only, in the area indicated after the slant stroke
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
C004/6G	Use limited to east of 110° E
C005/2A	Use limited to north of 60° N
C006/6A	Use limited to east of 75° E
C007	Not used
C008	Not used
C009/6G	In area 6G, use limited to east of 110° E and south of 25° N
C010/6G	In area 6G, use limited to east of 118° E and north of 40° N
C011/6E	In area 6E, use is limited to south of 20° N
C100/...	Worldwide Allotment Area is indicated after the symbol. For assignment procedure see No. 27/194A

**Explicación de los símbolos  
y abreviaturas**

Columna 2	M = ZRMP R = ZRRN V = VOLMET W = mundial
Columna 3	CC = canal común a
C001/...	En la zona indicada después del trazo oblicuo, utilización diurna
C002/6G	En la zona 6G, el funcionamiento está limitado al este de 95° E
C003/6G	En la zona 6G, el funcionamiento está limitado al oeste de 95° E
C004/6G	Uso limitado al este de 110° E
C005/2A	Uso limitado al norte de 60° N
C006/6A	Uso limitado al este de 75° E
C007	No ha sido utilizado
C008	No ha sido utilizado
C009/6G	En la zona 6G, el funcionamiento está limitado al este de 110° E y al sur de 25° N
C010/6G	En la zona 6G, el funcionamiento está limitado al este de 118° E y al norte de 40° N
C011/6E	En la zona 6E, uso limitado al sur de 20° N
C100/...	Se indica la zona de adjudicación para utilización mundial después del símbolo. En lo que se refiere al procedimiento para la asignación de las frecuencias, véase el número 27/194A

After number 27/207 add the following new article:

ADD

ARTICLE 3

**Frequencies for Common Use**

- ADD 27/208  
Aer2 1. The carrier (reference) frequencies 3 023 kHz and 5 680 kHz are intended for common use on a world-wide basis.
- ADD 27/209  
Aer2 2. The use of these frequencies in any part of the world is authorized:
- 2.1 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;
- 2.2 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 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.
- ADD 27/210  
Aer2 3. 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.
- ADD 27/211  
Aer2 4. Additional particulars regarding the use of these channels for the above purposes may be recommended by the meetings of ICAO.
- ADD 27/212  
Aer2 5. 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.

ADD 27/213 6. These channels may be used for A1 or A3 emissions, in accordance with  
Aer2 special arrangements. Such channels shall not be subdivided.

ADD 27/214 7. All stations participating directly in coordinated search and rescue operations  
Aer2 and using frequencies 3 023 kHz and 5 680 kHz shall transmit solely on the upper  
sideband except in the cases provided for in No. 27/50.

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## FINAL PROTOCOL \*

At the time of signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the undersigned delegates take note of the following statements made by signatory delegations:

### No. 1

#### *For the Democratic People's Republic of Korea:*

The delegation of the Democratic People's Republic of Korea to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) cannot agree to the description of the boundary in the sea adjacent to its country which is used in the definition of the NCA-MWARA in Document No. 165 discussed at the Plenary Meeting, since it does not reflect the actual situation.

The delegation of the Democratic People's Republic of Korea therefore considers that the question of the description of the boundary in the sea between the Democratic People's Republic of Korea and the People's Republic of China should be decided between the two countries.

### No. 2

#### *For the Yemen Arab Republic:*

The delegation of the Yemen Arab Republic to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) reserves its Government's rights in respect of MOD 27/9 of this Frequency Allotment Plan, as communication between aircraft on the ground in the Yemen Arab Republic and any station outside its territory is not allowed without prior permission from the authorities concerned.

### No. 3

#### *Republic of the Senegal:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Republic of the Senegal reaffirms its support for international cooperation in the field of telecommunications with due respect for the rights and interests of all Members. However, it reserves for its Government the right to take any action it may consider necessary to safeguard the interests of its telecommunications services should the reservations made or the measures taken by one or more Members jeopardize the efficient operation of these services.

### No. 4

#### *For the Republic of Venezuela:*

The Administration of Venezuela reserves the right to authorize or prohibit operation of the stations of aircraft having landed at airports on Venezuelan territory, in accordance with Appendix 27 Aer2 to the Radio Regulations, No. 27/9.

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\* *Note by the General Secretariat:* The texts of the Final Protocol are shown in the chronological order of their deposit. In the Table of Contents these texts are grouped in the alphabetical order of country names.

No. 5

*For the United Republic of Cameroon:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical (R) Service (Geneva, 1978), the delegation of the United Republic of Cameroon declares that the sovereignty of its State takes precedence over all other considerations in the case of application of any of the reservations formulated by other Members of the Union to the Final Acts of the above Conference.

In keeping with this policy, the delegation further reaffirms its position as expressed in the reservation formulated by the delegation at the Plenipotentiary Conference and contained in the Final Protocol to the International Telecommunication Convention (Malaga-Torremolinos, 1973), No. XXXII.

No. 6

*For the Argentine Republic:*

In signing the Final Acts, the delegation of the Argentine Republic declares that its Government does not accept any obligation in respect of Appendix 27 Aer2 governing the Aeronautical Mobile (R) Service or in respect of the related provisions and application procedures that may affect its telecommunication services.

The Argentine Republic will nevertheless observe the provisions of Appendix 27 Aer2 and the application procedures as far as possible while reserving the right to take any action it may consider necessary to safeguard its aeronautical radiocommunication services.

No. 7

*For Malaysia:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of Malaysia reserves the right of its Government to take whatever action it deems necessary to safeguard its interests should Members in any way fail to comply with the Recommendations and/or the Final Acts of the Conference or jeopardize its Aeronautical Mobile (R) Service.

No. 8

*For Mexico:*

I

In signing the Final Acts, the delegation of Mexico to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), reserves the right of its Government to take any measures it considers necessary in order to protect the interests of its services if the reservations entered or measures taken by another Member or Members are prejudicial to the proper operation of its telecommunication services.

II

The delegation of Mexico to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service reserves its Government's right to apply its own national communications legislation in respect of the amended definition in No. 27/9, in view of the deletion of the words "in flight".

No. 9

*For the Gabon Republic:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) the delegation of the Gabon Republic reserves its Government's right to accept or reject the consequences of the reservations entered at this Conference by other Governments when such reservations might jeopardize its telecommunication services.

No. 10

*For Libya (Socialist People's Libyan Arab Jamahiriya):*

The delegation of the Socialist People's Libyan Arab Jamahiriya reserves the right of its country to prevent, when appropriate, any aircraft from communicating with aeronautical stations while the aircraft is on land (see No. MOD 27/9).

No. 11

*For the Republic of the Ivory Coast:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Ivory Coast reserves its Government's right to take any action it may deem necessary to protect its interests:

1. with regard to any attitude adopted by Members of the Union which conflicts with the International Telecommunication Convention and the Radio Regulations;
2. with regard to any reservation entered by Members of the Union which is liable to infringe its rights derived from this Conference.

No. 12

*For the Islamic Republic of Mauritania:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Islamic Republic of Mauritania reserves its Government's right to take any measures it sees fit in order to ensure the proper operation of its Aeronautical Mobile (R) Service if any Administration does not abide by the provisions of the Final Acts and the Associated Plan or enters reservations or takes measures liable to infringe upon the sovereign rights of the Islamic Republic of Mauritania.

No. 13

*For the Republic of Afghanistan:*

I. The delegation of the Republic of Afghanistan to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) reserves the right of its Government to take any measures it may deem necessary to protect its interests if other countries fail to observe the provisions adopted by the Conference.

II. The deletion of the words "in flight" in the modified definition of 27/9 changes the operational use of the frequencies. The delegation of the Republic of Afghanistan reserves the right of its Government to enforce national communication regulations in this regard.

No. 14

*For the Republic of Panama:*

The delegation of the Republic of Panama to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) reserves its Government's right to apply Appendix 27 Aer2 and the associated provisions regulating the Aeronautical Mobile (R) Service to the extent that the national economy and national sovereignty are not thereby prejudiced.

No. 15

*For the Republic of Kenya:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Republic of Kenya reserves the right of its Government to authorize or prohibit the use of operational control communications for aircraft not in flight.

The Republic of Kenya further reaffirms its position in the reservation expressed by its delegation at the Plenipotentiary Conference, contained in Final Protocol No. XXXIII to the International Telecommunication Convention (Malaga-Torremolinos, 1973).

No. 16

*For the Federative Republic of Brazil:*

The Brazilian Administration reaffirms its support for international cooperation in the field of telecommunications with due respect for the rights and interests of all Members of the International Telecommunication Union. However, it reserves its right, with regard to the definition of "Family of Frequencies" contained in No. MOD 27/9 of Appendix 27 Aer2, to establish within Brazilian territory and through national rules and regulations the conditions for the use of the frequencies of this Frequency Allotment Plan (Rev.1978) by aircraft stations, in order to safeguard the interests of its telecommunications services.

No. 17

*For Cuba:*

The delegation of Cuba to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) hereby states on behalf of its Government that, in signing the Final Acts, it does not accept any obligation with regard to those provisions and procedures that may affect its telecommunication services, and reserves the right to take any measures it considers necessary.

No. 18

*For the Oriental Republic of Uruguay:*

The delegation of the Oriental Republic of Uruguay declares on behalf of its Government that signature of the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) does not imply any obligation with respect to Appendix 27 Aer2 (27/9 Rev. and associated provisions) regulating the Aeronautical Mobile (R) Service in any cases which affect the country's economy or sovereignty.

No. 19

*For the Republic of India:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Republic of India reserves the right of its Government to take such measures as may be necessary to safeguard its interests should any country make reservations and/or not accept the provisions of the Final Acts including the Associated Plan.

No. 20

*For the Kingdom of Saudi Arabia:*

The Kingdom of Saudi Arabia reserves the right to authorize or prohibit operation of HF communication stations by aircraft as in No. MOD 27/9 of the Frequency Allotment Plan (1978) while on the ground on Saudi Arabian territory.

No. 21

*For the Republic of Bolivia:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) the delegation of the Republic of Bolivia states:

1. that as far as possible it will apply the provisions of Appendix 27 Aer2 to the Radio Regulations;
2. that it reserves the right to take any action it may consider necessary to safeguard the interests of its aeronautical radiocommunication services.

No. 22

*For the Republic of Paraguay:*

The delegation of the Republic of Paraguay to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, (Geneva, 1978) states on behalf of its Government that, in signing these Final Acts, it does not accept any obligation in respect of Appendix 27 Aer2 governing the Aeronautical Mobile (R) Service or the related provisions and application procedures that may adversely affect its telecommunication services.

The Republic of Paraguay will nevertheless observe the provisions of Appendix 27 Aer2 and the application procedures as far as possible, while reserving the right to take any action it may consider necessary to safeguard its aeronautical radiocommunication services.

No. 23

*For Thailand:*

The delegation of Thailand reserves for its Government the right to take such action as it may consider necessary to safeguard its interests in regard to the provisions of the Final Acts of this Conference and in respect of reservations by any country which may jeopardize the telecommunication services of Thailand.

No. 24

*For the Republic of the Philippines:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Republic of the Philippines reaffirms its support for international economic cooperation in the field of telecommunications. It likewise reiterates its respect for the rights and interests of Members.

However, should any reservations made or measures taken by other Members jeopardize the interests and efficient operation of its telecommunication services, the Republic of the Philippines reserves the right to take such measures or actions as may be deemed necessary to safeguard and promote such interests.

No. 25

*For the Federal Republic of Nigeria:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) the delegation of the Federal Republic of Nigeria hereby declares that its Government reserves the right to take any action which it considers necessary to safeguard its interests at all times should certain Members not comply with the decisions of the Conference or should they fail in any other way to comply with the requirements of the Final Acts of the Conference or its Annexes or the protocols attached thereto, or should reservations by other countries endanger the telecommunications services of the Federal Republic of Nigeria.

No. 26

*For the Republic of Guinea:*

The delegation of the Republic of Guinea reserves its Government's right to take any action it may consider necessary to safeguard its interests should certain Members not abide by the provisions adopted by the World Administrative Radio Conference on the Aeronautical Mobile (R) Service or should reservations made by other countries jeopardize the proper functioning of its telecommunication services or entail an increase in its contributory share in Union expenses.

No. 27

*For the Republic of Singapore:*

The delegation of the Republic of Singapore reserves for its Government the right to take such action as it may consider necessary to safeguard its interests in regard to the provisions of the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) and in respect of reservations by any country which may jeopardize the telecommunication services of the Republic of Singapore.

No. 28

*For the Republic of Upper Volta:*

The delegation of the Republic of Upper Volta to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) reserves its Government's right to take any action it may consider necessary to safeguard its interests should the normal operation of its telecommunication services be affected by the behaviour or reservations of certain Administrations in applying the Final Acts of the present Conference.

No. 29

*Republic of Liberia:*

In signing the Final Acts of the World Administrative Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Republic of Liberia reserves the right of its Government to take any action it may consider necessary to safeguard the interests of its telecommunications services, should the reservations made or the measures taken by another Member or Members jeopardize the efficient operation of these services.

No. 30

*For the Republic of Indonesia:*

The delegation of the Republic of Indonesia to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) reserves the right of its Government to take:

1. any action it deems necessary to safeguard its interests should Members in any way fail to comply with the requirements in the Final Acts of the Conference or should reservations by other Members jeopardize its Aeronautical Mobile Telecommunication Services;
2. further action in accordance with the Constitution and Laws of the Republic of Indonesia.

No. 31

*For the Republic of Colombia:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Republic of Colombia states that, with a view to safeguarding its country's telecommunication services, the sovereignty of Colombia may not be infringed in any circumstances by any of the provisions adopted by the Conference or by any of the reservations entered by other Members of the Union.

Moreover, it reserves the right to take any action it may consider necessary to safeguard and enforce its sovereign rights in accordance with the constitution and law of the country.

It also reserves its Government's right to authorize or prohibit the operation of stations of aircraft landed at the airports of the Republic of Colombia in accordance with Appendix 27 Aer2 (No. MOD 27/9) to the Radio Regulations.

No. 32

*For Spain:*

I

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service the delegation of Spain reserves its Government's right to take any action it may consider necessary to safeguard its telecommunication services should they be affected by the reservations entered by other Members.

II

In signing the Final Acts of the present Conference, the delegation of Spain reserves its Government's rights with regard to the application of No. MOD 27/9 of Appendix 27 Aer2.

No. 33

*For the Democratic Republic of Sao Tome and Principe:*

The delegation of the Democratic Republic of Sao Tome and Principe, in signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), reserves its Government's right to accept or reject the consequences of the reservations made at this Conference by other Governments where such reservations might jeopardize its telecommunications services. In any case, it reaffirms its respect for the rights and interest of the Members of the Union.

No. 34

*For Norway:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the Norwegian delegation states that the delineation of MWARA areas in no way affects Norway's exclusive right to provide Air Traffic Control and Flight Information Service and to establish associated facilities in the regions of the Kingdom of Norway falling within the NCA-MWARA.

No. 35

*For the Islamic Republic of Pakistan:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Islamic Republic of Pakistan reserves the rights of its Government to permit an aircraft station on the ground in its territory to communicate with an aeronautical station located outside the territory of the Islamic Republic of Pakistan on the frequencies defined in MOD 27/9 of Appendix 27 Aer2 to the Radio Regulations.

No. 36

*For the United Republic of Tanzania:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the United Republic of Tanzania reserves the right of its Government to take any action it deems necessary to safeguard its interests in the event that Members fail in any way to comply with these provisions, or should these provisions and procedures jeopardize its telecommunication services.

No. 37

*For the Republic of Guatemala:*

The delegation of the Republic of Guatemala to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) reserves its Government's right with regard to No. MOD 27/9 of Appendix 27 Aer2 to the Radio Regulations, and concerning the reservations, provisions and procedures whose application may affect its radiocommunication services.

Nevertheless, in the interest of international cooperation, it reaffirms its intention to observe the provisions contained in the said Regulations so far as possible.

No. 38

*For the Algerian Democratic and Popular Republic, the Kingdom of Saudi Arabia, the State of Bahrain, the People's Republic of Bangladesh, the State of Kuwait, Libya (Socialist People's Libyan Arab Jamahiriya), the Kingdom of Morocco, the Islamic Republic of Mauritania, the Islamic Republic of Pakistan, the State of Qatar, the Syrian Arab Republic, the Yemen Arab Republic, and the People's Democratic Republic of Yemen:*

The delegations of the above-mentioned countries declare that the signature and possible subsequent ratification by their respective Governments of the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) do not in any way imply the recognition of Israel.

No. 39

*For Chile:*

In signing the Final Acts, the delegation of the Republic of Chile declares that its Government accepts no obligation with respect to Appendix 27 Aer2 governing the Aeronautical Mobile (R) Service or the associated provisions or application procedures which may affect its telecommunication services.

Nevertheless, the Republic of Chile will observe the provisions of Appendix 27 Aer2 and the application procedures so far as possible, while reserving the right to adopt such measures as it sees fit to safeguard its aeronautical radiocommunications.

No. 40

*For Ecuador:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Republic of Ecuador reserves its Government's right to accept or refuse any obligation arising from those provisions and procedures of the Final Acts of the said Conference or from the reservations entered by any other country that may prejudice the proper operation of its telecommunication services, and to take any action that may be necessary to safeguard the country's interests with regard to the Aeronautical Mobile Service.

No. 41

*For the Algerian Democratic and Popular Republic:*

The delegation of the Algerian Democratic and Popular Republic to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978) reserves its Government's right to take any action it may consider necessary to safeguard its interests with respect to any provision of the Final Acts of the said Conference that might prejudice the proper operation of its telecommunication services.

No. 42

*For the People's Republic of Bangladesh:*

In signing the Final Acts, the delegation of the People's Republic of Bangladesh reserves the right of its Government to take any action it may deem necessary to safeguard its interest while adhering to the provisions of MOD 27/9 of Appendix 27 Aer2 to the Radio Regulations.

The delegation further reaffirms the position expressed in Final Protocol No. XVII of the International Telecommunication Convention (Malaga-Torremolinos, 1973).

No. 43

*For the Syrian Arab Republic:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, (Geneva, 1978), the delegation of the Syrian Arab Republic, while reaffirming its support for international cooperation in the field of telecommunications, reserves its Government's right to take any action it may consider necessary to authorize or prohibit the operation of aircraft stations on the ground in the Syrian Arab Republic in order to safeguard the interests of its telecommunication services.

No. 44

*For Ethiopia:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service, (Geneva, 1978) the delegation of Ethiopia reserves the right of its Government to take any action needed to safeguard its interests if any country fails to abide by the provisions of the Final Acts and the associated Plan.

No. 45

*For the Federal Republic of Germany, Denmark, Greece, Norway, Sweden and the Confederation of Switzerland:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegations mentioned above wish to state the following :

Commencing in 1976, very powerful pulse transmissions from HF stations operating within the territory of the U.S.S.R. have been causing continued harmful interference over large areas on frequencies in the HF bands, including those allocated to the Aeronautical Mobile (R) Service, and will, if not terminated, be liable to cause harmful interference on frequencies in the new Plan.

The above delegations refer to Article 35 in the Convention and to Resolution No. Aer2 of the Radio Regulations, and express their great concern about this prolonged violation of the said provisions.

Their Administrations reserve the right to take appropriate measures to protect the Aeronautical Mobile (R) Service, and other radio services, if this harmful interference continues.

No. 46

*For the Republic of Korea:*

The delegation of the Republic of Korea reserves for its Government the right to take such action as it may deem necessary to safeguard its interests in relation to the provisions of the Final Acts of this Conference and with regard to reservations by any country which may jeopardize the telecommunication services of the Republic of Korea.

No. 47

*For the Democratic People's Republic of Korea:*

The delegation of the Democratic People's Republic of Korea to the World Administrative Radio Conference on the Aeronautical Mobile (R) Service cannot agree to the description of the boundary in the Western Sea adjacent to its country in Sub-RDARA 6B, 6F and 6G discussed at the Plenary Meeting and because it does not reflect our position.

The delegation of the Democratic People's Republic of Korea therefore considers that the description of the boundary in the sea between the Democratic People's Republic of Korea and the People's Republic of China should be decided between the two countries later.

## No. 48

*For the People's Republic of China:*

## I

Appendix 27 Aer2 to the Radio Regulations fails to explicitly include in RDARA Sub-Area 6G the region defined by coordinates 32°30'N 124°E, 32°30'N 126°50'E, 26°N 125°E, 25°N 123°E, which encompasses China's territory Diaoyu Dao and other islands. The Chinese Delegation cannot agree to this omission which affects China's sovereignty and interests and the flight operations of its domestic air services in the region. The Chinese authorities concerned will continue to take measures to ensure the smooth operation of their flight services in the above-mentioned region.

## II

In the maps of the MWARA, RDARA and VOLMET Areas attached to Appendix 27 Aer2 to the Radio Regulations, the delineation of the boundary line between the People's Republic of China and India does not conform to China's national boundary; the Chinese Delegation deems that it should be corrected to conform to China's national boundary.

## No. 49

*For the Union of Soviet Socialist Republics:*

In connection with the statement made by the delegates of the Federal Republic of Germany, Denmark, Greece, Norway, Sweden and Switzerland and contained in Final Protocol No. 45, the delegation of the U.S.S.R. wishes to make the following statement:

In the Soviet Union the research on radio-wave propagation is being conducted by using the radio installations in the HF range and it might perhaps (according to the statements of Administrations of certain States) cause some short-term interference to individual services. Similar signals have been recorded in the Soviet Union by the receiving apparatus and monitoring service from the operation of installations of other countries.

With a view to reducing possible interference with the Aeronautical and Maritime Mobile Services operating in the HF range from the above-mentioned research operation conducted in the Soviet Union, a number of technical and organizational measures have been taken.

At present radio monitoring services confirm the efficiency of the measures taken.

In carrying out these studies, the Administration of the Soviet Union takes due account of the provisions of the International Telecommunication Convention and the Radio Regulations.

## No. 50

*For the Republic of India:*

The Indian delegation has noted the following statement incorporated on the maps of MWARA, RDARA and VOLMET Areas attached to Appendix 27 Aer2 to the Radio Regulations: "The mention of the name of a country or of a geographical area 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 geographical area, or official recognition of these borders". However, in view of paragraph 2 of the Final Protocol No. 48 of the People's Republic of China, the Indian delegation would like to point out that the Republic of India does not accept the claims of the People's Republic of China in regard to the boundary line between China and India and there is no need for any correction to the maps as mentioned in the said Final Protocol of the People's Republic of China.

No. 51

*For Japan:*

Referring to 27/76 of Appendix 27 Aer2 to the ITU Radio Regulations and to paragraph 1 of the reservation made by the Chinese delegation (Final Protocol No. 48) which was distributed on 2 March 1978, the Japanese delegation is, under instructions from its Government, obliged to state as follows:

The Senkaku Islands, referred to as the Diaoyu Dao and other islands in the reservation made by the Chinese delegation in the above-mentioned Protocol, are an integral part of Japanese territory and therefore the Chinese allegation that these islands are Chinese territory is totally groundless.

No. 52

*For the Republic of Korea:*

In connection with paragraph 1 of Final Protocol No. 48, the delegation of the Republic of Korea states its position as follows:

1. the Republic of Korea delegation does not associate the RDARA boundaries with territorial boundaries;
2. the Republic of Korea delegation reserves the right of its Government to safeguard its national interests as well as aeronautical and flight operations in the area.

No. 53

*For the Yemen Arab Republic:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the Yemen Arab Republic reserves the right of its Government to:

1. consider the text of No. ADD 27/8A as applying to communications between aeronautical stations and aircraft in flight;
2. to prohibit communication between any aircraft on the ground in the Yemen Arab Republic and any station outside its territory.

No. 54

*For the People's Democratic Republic of Yemen:*

In signing the Final Acts of the World Administrative Radio Conference on the Aeronautical Mobile (R) Service (Geneva, 1978), the delegation of the People's Democratic Republic of Yemen reserves the right of its Government to:

1. consider the texts of ADD 27/8A and MOD 27/9 of Appendix 27 Aer2 as applying to communications between aircraft stations in flight and appropriate aeronautical stations only;
2. authorize or forbid aircraft stations on the ground to communicate with aeronautical stations or any other telecommunication station located outside the territory of the People's Democratic Republic of Yemen.

No. 55

*For the Kingdom of Saudi Arabia:*

The delegation of the Kingdom of Saudi Arabia reserves the right of its Government to authorize or prohibit the operation of HF communication stations by aircraft as in No. ADD 27/8A (and associated Note) of Appendix 27 Aer2 while on the ground in Saudi Arabian territory.

No. 56

*For Iran:*

With respect to 27/9 of Appendix 27 Aer2 the Delegation of Iran, while reaffirming its permanent support of international cooperation in the field of telecommunications, reserves the right of its Government to take any necessary action to authorize or prohibit operations of aircraft stations landed at airports anywhere within the territory of Iran to safeguard the interests of its services concerned.

*(The signatures follow)*

*(The signatures following the Final Protocol are the same as those  
which follow the revision of the Radio Regulations  
on pages 2 to 5).*

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RESOLUTION No. Aer2 – 1

**Relating to the Use of Frequencies 3 023 kHz and 5 680 kHz  
Common to the Aeronautical Mobile (R) and (OR) Services**

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

*having noted*

that some anomalies appeared to exist in the conditions prescribed in Appendix 26 to the Radio Regulations, Geneva, 1959, for the use of the frequencies [3 023.5] kHz and 5 680 kHz, as contained in Article 2 of the Frequency Allotment Plan, column 3, clauses 2 *a*) and 2 *b*) and having taken steps to remove these anomalies;

*considering*

*a*) that the coordination of search and rescue operations at the scene of a disaster would be improved if the use of the frequencies 3 023 (previously 3 023.5) kHz and 5 680 kHz, in such operations, were extended to include communications between mobile stations and participating land stations;

*b*) that it would be in the general interests of the aeronautical mobile service if the same provisions relating to the use of the frequencies 3 023 (previously 3 023.5) kHz and 5 680 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 3 023 kHz and 5 680 kHz specified in Appendix 27 Aer2 (Part II, Section II, Article 3).

RESOLUTION No. Aer2 – 2

**Relating to the Unauthorized Use of Frequencies  
in the Bands Allocated to the Aeronautical Mobile (R) Service**

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

*considering*

- a) that monitoring observations of the use of the frequencies in the bands between 2 850 and 17 970 kHz allocated exclusively to the aeronautical mobile (R) service show that a number of frequencies in these bands are still being used by stations of services other than the aeronautical mobile (R) service, notably by high-powered broadcasting stations, some of which are operating in contravention of No. 422 of the Radio Regulations;
- b) that these stations are causing harmful interference to the aeronautical mobile (R) service and that a considerable number of emissions, the sources of which could not be positively identified, have been observed in these bands;
- c) that radio is the sole means of communication available to the aeronautical mobile (R) service and that this service is a safety service;

*considering, in particular*

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

*resolves to urge administrations*

- 1. to ensure that stations of services other than the aeronautical mobile (R) service refrain from using frequencies allocated to this service other than under the conditions specified in Nos. 115 and 415 of the Radio Regulations;
- 2.
  - a) to make every effort to identify and locate the source of any unauthorized emission capable of causing harmful interference to the aeronautical mobile (R) service, thereby endangering this safety service;
  - b) and to communicate their findings to the IFRB;
- 3. to participate in the monitoring programmes that the IFRB may organize pursuant to this Resolution;
- 4. to request their governments to enact such legislation as is necessary to prevent stations located on board aircraft operating in contravention of No. 422 of the Radio Regulations;

*requests the IFRB*

- 1. to continue to organize monitoring programmes in the bands exclusively allocated to the aeronautical mobile (R) service with a view to eliminating the emissions of out-of-band stations which cause, or are likely to cause, harmful interference to the aeronautical mobile (R) service;
- 2. to take steps to eliminate the emissions of out-of-band stations which cause, or are likely to cause, harmful interference to the aeronautical mobile (R) service;
- 3. to seek, as appropriate, the 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. Aer2 — 3

**Relating to the Implementation of the New Arrangement  
Applicable to Bands Allocated Exclusively to  
the Aeronautical Mobile (R) Service between  
2 850 and 17 970 kHz**

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

*considering*

- a) that the use of each of the frequency bands between 2 850 and 17 970 kHz allocated exclusively to the aeronautical mobile (R) service by the Administrative Radio Conference, Geneva, 1959, was modified by the Extraordinary Administrative Radio Conference, Geneva, 1966;
- b) that the 1966 Conference resolved that administrations shall effect, as soon as possible, a progressive conversion of their radiocommunications in the aeronautical mobile (R) service from double-sideband to single-sideband operation, in consequence of which the use of the above bands has been further modified by the present Conference to provide for SSB techniques;
- c) that a considerable number of frequency assignments of both aircraft and aeronautical stations will be transferred from existing frequencies to the new frequencies and channels designated by the present Conference;
- d) 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;
- e) that the transfer of assignments should be made with the least possible disruption of the service rendered by each station;
- f) that the transfer of assignments should be made so as to avoid harmful interference between the stations involved during the implementation period;
- g) that the Final Acts of the present Conference will enter into force on 1 September 1979;
- h) that the new Frequency Allotment Plan contained in Appendix 27 Aer2 will enter into force on 1 February 1983;

*recognizing*

- a) that the aeronautical mobile (R) service is primarily a safety service;
- b) that some frequencies have been allotted for world-wide use;
- c) that the implementation of the decisions made by the present Conference relating to the new arrangement of the frequency bands allocated to the aeronautical mobile (R) service between 2 850 and 17 970 kHz should follow an orderly procedure for the transfer of existing services from the old to the new assignments;

*resolves*

1. that between the entry into force of the Final Acts of this Conference on 1 September 1979 and the entry into force of the new Frequency Allotment Plan contained in Appendix 27 Aer2 on 1 February 1983, channel utilization for any new SSB operation shall be in accordance with the following provisions:
  - 1.1 the carrier (reference) frequency of the single-sideband channel in the upper half of the previous double-sideband channel shall be the same as the carrier (reference) frequency of that channel;

- 1.2 the carrier (reference) frequency of the single-sideband channel in the lower half of the previous double-sideband channel shall be 3 kHz lower than the carrier (reference) frequency of that channel;
- 1.3 that, prior to 1 February 1983, aeronautical and aircraft stations fitted with single-sideband equipment may employ either half of the previous double-sideband channel (the single-sideband carrier (reference) frequency being that in 1.1 and 1.2 above);
- 1.4 channels in the new Plan may be used by any administration provided that no harmful interference occurs to users of channels in the present Plan. For the operational use of the channels concerned administrations should take into account the provisions of No. 27/20 of Appendix 27 Aer2 to the Radio Regulations;
2. that on 1 February 1983, the frequencies appearing in Appendix 27 to the Radio Regulations, shall be replaced by the frequencies appearing in Part II, Section II, Article 2, Appendix 27 Aer2;
3. that administrations take all the necessary measures with a view to converting to single-sideband operation as soon as possible by not permitting the installation of new double-sideband equipment as from 1 April 1981. Aircraft and aeronautical stations shall be capable of single-sideband operation at the earliest possible date; furthermore, they shall discontinue double-sideband emissions as early as possible, and, in any event, not later than 1 February 1983;
4. that, until 1 February 1983, aeronautical and aircraft stations equipped for single-sideband operation shall also be equipped to transmit class A3H emissions where required to be compatible with reception by double-sideband equipment;
5. that, unless otherwise specified in the Final Acts of the present Conference, the use of classes of emissions A2H, A3J, A7J and A9J only shall be authorized as of 1 February 1983. Double-sideband operations may, however, be continued for domestic use until 1 February 1987, provided this operation is conducted in accordance with Nos. 667 and 674 of the Radio Regulations and that no harmful interference is caused to the international aeronautical mobile (R) service operating in the single-sideband mode. Administrations requiring such an extension of the period of full implementation of single-sideband operations are, nevertheless, urged to cease double-sideband operations as soon as possible.

RESOLUTION No. Aer2 — 4

**Relating to the Treatment of Notices Concerning Frequency  
Assignments to Aeronautical Stations in the Bands Allocated  
Exclusively to the Aeronautical Mobile (R) Service  
between 2 850 and 17 970 kHz**

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

*considering*

- a) that the Final Acts of the present Conference will enter into force on 1 September 1979;
- b) that the new Frequency Allotment Plan contained in Appendix 27 Aer2 will enter into force at 00.01 hours GMT on 1 February 1983;

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

d) that it will therefore be necessary to provide an interim procedure to facilitate transition from the existing Frequency Allotment Plan to the new Frequency Allotment Plan;

*resolves*

1. that during the interim period between the date of entry into force of 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 in accordance with 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 Aer2 (Part I, Section IIA, paragraph 5) is afforded to the allotments in the existing Plan. In so doing, the Board shall assume that the frequency will be used in accordance with the sharing conditions between areas specified in Appendix 27 Aer2, Part I, Section IIB, paragraph 4;

1.4 all such assignments mentioned in paragraph 1.3 having received a favourable finding shall be recorded in the Master International Frequency Register;

1.5 the date to be entered in Column 2a or 2b of the Master International Frequency Register shall be as follows:

- a) if the finding is favourable with respect to Nos. 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 new Frequency Allotment Plan but not in conformity with the present Frequency Allotment Plan) the date of receipt of the notice by the IFRB shall be entered in Column 2b;

1.6 any assignment which is in accordance with the new Frequency Allotment Plan shall be so indicated by the insertion by the IFRB of an appropriate symbol in the Remarks Column of the Master International Frequency Register;

2. that on the date of the entry into force of the new Frequency Allotment Plan, the IFRB shall examine those frequency assignments to aeronautical stations in the aeronautical mobile (R) service in the bands allocated exclusively to that service between 2 850 and 17 970 kHz which are contained in the Master International Frequency Register from the point of view of their conformity with the new Frequency Allotment Plan, following the relevant parts of the procedure described in Nos. 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 emissions (A3) already appearing in the Master Register on the date of the entry into force of the new Frequency Allotment Plan shall retain the date recorded in Column 2a or 2b, as appropriate, until 1 February 1983. A date in Column 2a for a frequency assignment using double-sideband emissions (A3) shall be transferred to Column 2b on 2 February 1983. On 1 January 1987 the IFRB shall review the entries and, in consultation with the administrations concerned, cancel those entries which are no longer in use, retaining the others for information only, without a date in Column 2b;

- 2.2 assignments found favourable with respect to Nos. **553A** to **557** shall have the date of 5 March 1978 entered in Column 2a;
- 2.3 assignments found favourable with respect to Nos. **553A** and **558** shall have the date of 5 March 1978 entered in Column 2b;
- 2.4 all other assignments shall have the date of 6 March 1978 entered in Column 2b;
3. that, on the date of the entry into force of the new Frequency Allotment Plan, the allotments contained therein shall replace in the Master International Frequency Register the allotments appearing in the existing Frequency Allotment Plan;

*invites*

administrations to notify to the IFRB as soon as possible the cancellation of frequency assignments released as a consequence of bringing into use the allotments in the new Plan.

RESOLUTION No. Aer2 — 5

**Relating to the Implementation of the Frequency  
Allotment Plan in the Bands Allocated  
Exclusively to the Aeronautical Mobile (R) Service  
Between 2 850 and 17 970 kHz**

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

*considering*

- a) that the bands allocated exclusively to the aeronautical mobile (R) service between 2 850 and 17 970 kHz by the Administrative Radio Conference, Geneva, 1959, were modified by the Extraordinary Administrative Radio Conference, Geneva, 1966;
- b) that the Extraordinary Administrative Radio Conference, Geneva, 1966, established procedures to be followed by administrations relating to the implementation of the modifications;
- c) that the necessary arrangements were made for the IFRB to carry out these procedures;

*recognizing*

- a) that the aeronautical mobile (R) service is primarily a safety service;
- b) that the present Conference has further modified the said bands to provide for single-sideband techniques;
- c) that there is a need for all administrations to implement the modifications made by 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, not later than ninety days before the entry into force of the new Plan, administrations shall notify the IFRB of the modifications necessary to bring the assignments existing in the Master Register into conformity with this Plan;
2. 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:
  - 2.1 within thirty days from 1 February 1983, the IFRB will send relevant extracts from the Master Register to the administrations concerned advising them that, in accordance with the terms of the present Resolution, the assignments in question are to be transferred to the appropriate frequencies within a period of one hundred and eighty days after the dispatch of the extracts;
  - 2.2 if an administration fails to notify the IFRB of the transfer within the prescribed period, the original entry will be retained in the Master Register without a date in Column 2 and with a suitable remark in the Remarks Column. The administrations will be advised of this action;
3. that, if an administration so desires, the IFRB will provide it with all necessary assistance. In so doing, the IFRB will apply the provisions of Nos. 629 to 633 of the Radio Regulations.

RESOLUTION No. Aer2 — 6

**Relating to the Use of Frequency Bands, higher than the HF Bands, in  
the Aeronautical Mobile (R) Service and the Aeronautical  
Mobile-Satellite (R) Service for Communication  
and for Meteorological Broadcasts**

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 with and for meteorological broadcasts to aircraft in flight;

*resolves*

that administrations, taking into account the relevant economic and technical factors, consider to the maximum extent possible meeting their requirements for communication and for meteorological broadcasts by frequencies in frequency bands, higher than the HF bands, which are allocated to the aeronautical mobile (R) service and the aeronautical mobile-satellite (R) service.



RESOLUTION No. Aer2 — 7

**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 Frequency 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) 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 aeronautical mobile (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 distances 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 the 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 aeronautical mobile (R) bands;
2. to make as great a use as possible of antennae of appropriate directivity and efficiency in order to minimize the 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 Aer2 and in the light of the propagation data available, to ensure that the most appropriate frequencies are 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 data having a bearing on technical and operating standards, so as to facilitate re-examination of the Plan;
6. to establish, through regional arrangements, the best method of providing the communications required 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 Plan.

RESOLUTION No. Aer2 — 8

**Relating to the Abrogation of various Resolutions and a  
Recommendation of the Extraordinary Administrative Radio  
Conference, Geneva, 1966, and a Resolution of the  
Administrative Radio Conference, Geneva, 1959**

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

*considering*

a) that the following Resolutions and Recommendation of the Extraordinary Administrative Radio Conference, Geneva, 1966, were superseded as indicated:

Resolution No. Aer 1 relating to the use of frequencies 3 023.5 and 5 680 kHz common to the aeronautical mobile (R) and (OR) services, by Resolution No. Aer2 — 1.

Resolution No. Aer 2 relating to the use of frequencies in the HF bands allocated exclusively to the aeronautical mobile (R) service, by Resolution No. Aer2 — 2;

Resolution No. Aer 4 relating to the use of VHF for communication in the aeronautical mobile (R) service, and Resolution No. Aer 5 relating to the use of VHF for meteorological broadcasts in the aeronautical mobile (R) service, by Resolution No. Aer2 — 6;

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 2 850 and 17 970 kHz, by Resolution No. Aer2 — 4;

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, by Recommendation No. Aer2 — 1;

b) that Resolution No. 14 of the Administrative Radio Conference, Geneva, 1959, relating to the use of frequencies of the aeronautical mobile (R) service, was replaced by Resolution No. Aer2 — 7;

c) that Resolution No. Aer 3 of the Extraordinary Administrative Radio Conference, Geneva, 1966, relating to the introduction of single sideband techniques in the HF bands allocated to the aeronautical mobile (R) service is now obsolete;

*resolves*

that all the said Resolutions and the Recommendation are abrogated.

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RECOMMENDATION No. Aer2 – 1

**Relating to the Development of Techniques which  
would help to reduce Congestion in the High Frequency Bands  
Allocated to the Aeronautical Mobile (R) Service**

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

*considering*

- a) that several administrations are actively engaged in the development of communication techniques the wider use of which, in the aeronautical mobile (R) service, would help to reduce congestion in the high frequency bands allocated to that service; such developments include the use of higher frequencies with remotely controlled stations, directional antennae, space radiocommunication techniques and automatic data transmission;
- b) that knowledge of these developments would be useful to other administrations in considering the application of these techniques to their aeronautical mobile (R) communication services;
- c) that the International Civil Aviation Organization (ICAO) is actively engaged in coordinating the operational development of such techniques;

*recommends*

administrations engaged in the development of techniques which would help to reduce congestion in the HF bands to inform the IFRB periodically of the progress achieved;

*instructs*

the IFRB to circulate periodically the information so obtained to administrations and to the ICAO.

RECOMMENDATION No. Aer2 – 2

**Relating to the Efficient Use of  
Aeronautical Mobile (R) World-Wide Frequencies**

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

*considering*

that the Conference has allotted a limited number of world-wide frequencies for exercising control over regularity of flight and for safety of aircraft;

*recommends to administrations*

1. that the number of HF aeronautical stations on the world-wide channels should be kept to a minimum consistent with the economic and efficient use of frequencies;
2. that, if possible and practicable, one such station should serve aircraft operating agencies in adjacent countries and there should not normally be more than one station per country.

RECOMMENDATION No. Aer2 — 3

**Relating to Cooperation in the Efficient Use  
of World-Wide Frequencies in the Aeronautical Mobile (R) Service**

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

*considering*

- a) the need to make the most efficient use of world-wide frequencies in the aeronautical mobile (R) service;
- b) that a plan has been adopted for the allotment by areas of world-wide frequencies in the aeronautical mobile (R) service;
- c) the desirability of coordination between administrations within the areas to which the Allotment Plan applies;
- d) the right of an administration to select and notify to the IFRB for recording in the Master International Frequency Register any frequency assignment in a channel allotted to the area in which its country is located;
- e) the role played by the IFRB in regulatory procedures under Article 9 of the Radio Regulations;
- f) the role played by ICAO in the field of international aeronautical operations;

*invites*

1. administrations within a world-wide allotment area, as they consider it appropriate, and the International Civil Aviation Organization, to seek the advice of the IFRB in determining the best choice of frequencies from a technical viewpoint in order to make the most efficient use of aeronautical mobile (R) world-wide frequencies;
2. administrations within a world-wide allotment area, as they consider it appropriate, to coordinate mutually the use of these frequencies from the viewpoint of aeronautical operations and, in this connection, to bear in mind the benefit that could be gained by obtaining the advice of ICAO in this process;
3. the IFRB to assist any administration or group of administrations in a world-wide allotment area wishing to coordinate their requirements for world-wide frequencies and to continue its cooperation with ICAO for this purpose;

*requests*

the Secretary-General to bring this Recommendation to the attention of the International Civil Aviation Organization.

RECOMMENDATION No. Aer2 – 4

**Relating to the Transition from the Present to  
the New Frequency Allotment Plan in the  
Bands Allocated Exclusively to the  
Aeronautical Mobile (R) Service between  
2 850 and 17 970 kHz**

The World Administrative Radio Conference on the Aeronautical Mobile (R) Service, 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 Aer2 will enter into force at 00.01 hours GMT on 1 February 1983;
- c) that some administrations may wish to implement certain provisions of the new Frequency Allotment Plan in advance of the latter date when this may be done without causing harmful interference to stations working in accordance with the present Frequency Allotment Plan;
- d) that, following the Extraordinary Administrative Radio Conference, Geneva, 1966, the International Civil Aviation Organization (ICAO), under the provisions of No. 27/20 of Appendix 27 and within the spirit and framework of Resolution No. Aer 6 of that Conference, developed a transition programme for the aeronautical mobile (R) service to convert the Frequency Allotment Plan in Appendix 26 to that in Appendix 27;
- e) that the ICAO transition programme was subsequently provided to the International Frequency Registration Board for distribution to ITU Member administrations;
- f) that it will be useful again to adopt a programme to facilitate transition from the existing to the new Frequency Allotment Plan;

*recommends*

1. that the International Civil Aviation Organization be invited to develop a transition programme, within the framework of Appendix 27 Aer2, for the operational use by aeronautical stations of the frequencies contained in the Frequency Allotment Plan except for those RDARAs which are not involved in international operations;
2. that the International Civil Aviation Organization be invited to forward the transition programme for the new Frequency Allotment Plan to the International Frequency Registration Board for distribution to administrations;
3. that administrations implement the provisions of the transition programme in coordination with ICAO and in conformity with the principles set forth in No. 27/20;

*requests*

the Secretary-General to bring this Recommendation to the attention of the International Civil Aviation Organization.

RECOMMENDATION No. Aer2 — 5

**Relating to the Inclusion of the Band  
21 924-22 000 kHz in the Frequency  
Allotment Plan for the Aeronautical Mobile (R)  
Service (Appendix 27 Aer2 to the Radio Regulations)**

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

*considering*

- a) that there is a need to add a further frequency band to Appendix 27 Aer2, to provide world-wide frequencies suitable for long-range communications and to reduce congestion in the bands currently used;
- b) that there is a suitable band at 21 924-22 000 kHz at present allocated to the aeronautical fixed and aeronautical mobile (R) services;
- c) that if the band were to be allocated exclusively to the aeronautical mobile (R) service it could be incorporated into Appendix 27 Aer2;
- d) that the decision to re-allocate the band could be taken by the World Administrative Radio Conference, 1979;
- e) that the decision to incorporate a plan for the band into Appendix 27 Aer2 could be taken by the World Administrative Radio Conference, 1979;

*has established*

a plan for the band 21 924-22 000 kHz with the relevant associated provisions for modifying the procedures of Appendix 27 Aer2 and related Radio Regulations (see *Annex*);

*recommends*

1. that the World Administrative Radio Conference, 1979, should consider the allocation of the band 21 924-22 000 kHz exclusively to the aeronautical mobile (R) service to meet the requirements mentioned in considering *a)* above;
2. that, if the World Administrative Radio Conference, 1979 decides on such a re-allocation, it should include the plan for this band with the associated provisions in Appendix 27 Aer2 as an integral part thereof, to come into force on 1 February, 1983; and should make the necessary consequential changes to the Radio Regulations;

*urges administrations*

to submit proposals to this effect to the World Administrative Radio Conference, 1979.

## ANNEX TO RECOMMENDATION No. Aer2 – 5

Outline of changes to be made to  
Appendix 27 Aer2 and related Radio Regulations

## A. APPENDIX 27 Aer2

Table of Contents *Part II. In the title, replace 17 970 kHz by 22 000 kHz.*

*No. 27/10 Replace 17 970 kHz by 22 000 kHz.*

*No. 27/16 Add the following new frequencies to the Table of Frequencies:*

**kHz 21 924 - 22 000**

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	
25 channels	

*No. 27/31A In the title preceding the number 27/31A, replace 13 MHz and 18 MHz by between 13 MHz and 22 MHz;*

*in the text, replace 13 MHz and 18 MHz by 13 MHz, 18 MHz and 22 MHz;*

*No. 27/31B In the second line, replace 18 MHz by the 18 MHz and 22 MHz bands;*

*In the fourth line, after 18 MHz add and 22 MHz.*

*Part II In the title replace 17 970 kHz by 22 000 kHz.*

*No. 27/189 Add a new column for the new 22 MHz band to the Table as follows:*

Areas	Band (MHz)
	22
	kHz
W I	21 940
	21 946
	21 952
	21 958
	21 967
	21 973
	21 979
	21 988
	21 997
W II	21 964
	21 985

Areas	Band (MHz)
	22
	kHz
W III	21 949
	21 970
W IV	21 955
	21 976
	21 991
W V	21 943
	21 961
	21 982
	21 994

*Immediately after No. 27/207, add a new Table for the new 22 MHz band as follows:*

ADD 27/207A

bande/band/banda 21 924-22 000

22 MHz

1	2				3
21 940	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 943	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/V
21 946	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 949	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/III
21 952	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 955	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/IV
21 958	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 961	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/V
21 964	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/II
21 967	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 970	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/III
21 973	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 976	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/IV
21 979	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 982	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/V
21 985	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/II
21 988	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I
21 991	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/IV
21 994	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/V
21 997	W	MONDIALE	WORLDWIDE	MUNDIAL	C100/I

## B. RADIO REGULATIONS

## Article 5

*Modify the Table of Frequency Allocations as follows:*

MOD

kHz  
21 870-22 000

Region 1	Region 2	Region 3
21 870- <del>22 000</del> 21 924	AERONAUTICAL FIXED <del>AERONAUTICAL MOBILE (R)</del>	
21 924-22 000	<del>AERONAUTICAL FIXED</del> AERONAUTICAL MOBILE (R)	

Article 7  
No. 7378 431

Section II  
*Replace 18 030 kHz by 22 000 kHz.*

Article 9  
No. 4351 552

Section II  
*Replace 17 970 kHz by 22 000 kHz.*

Article 9  
No. 4421 589

Section III  
*Replace 17 970 kHz by 22 000 kHz.*

RECOMMENDATION No. Aer2 — 6

**Relating to the Concordance of the French,  
English and Spanish Texts of No. 429  
of the Radio Regulations**

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

*considering*

- a) that doubts have been expressed concerning the concordance of the expressions “régularité de la navigation aérienne” in French, “regularity of flight” in English and “regularidad de la navegación aérea” in Spanish;
- b) that this phrase originates from the Convention on International Civil Aviation, Chicago, 1944, drafted in English;
- c) that it is essential that the three texts be equivalent in form and content;
- d) that its terms of reference do not include the revision of No. 429 of the Radio Regulations;

*recommends*

that the World Administrative Radio Conference, 1979, should endeavour to overcome this apparent lack of concordance in the texts of No. 429 of the Radio Regulations.

RECOMMENDATION No. Aer2 — 7

**Relating to No. 27/123  
of Appendix 27 Aer2 — Sub-Area 5B**

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

*considering*

- a) the discussions which took place on the proposed modification of No. 27/123 of Appendix 27 Aer2; and
- b) that the interested administrations have agreed to continue consultations between themselves on the matter of Sub-Area 5B;

*recommends*

1. that consultations should be carried out by the interested administrations in order to arrive at a satisfactory solution;
2. that the administrations concerned would report on the results of their consultation to the World Administrative Radio Conference, 1979, in order to enable the Conference to arrive at a definitive solution on No. 27/123.

RECOMMENDATION No. Aer2 — 8

**To the World Administrative Radio Conference, 1979, Relating  
to the Inapplicability of Resolution No. 13  
to the Aeronautical Mobile (R) Service**

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

*considering*

- a) that Resolution No. 13, Geneva, 1959, expressed the opinion that the aeronautical mobile service plans contained in the then Appendix 26 to the Radio Regulations would have to be reviewed;
- b) that Resolution No. 13 also stated that an Extraordinary Administrative Radio Conference should be convened to review Appendix 26 and the associated Radio Regulations and to complete its work before the next Ordinary Administrative Radio Conference;
- c) that administrative radio conferences of the aeronautical mobile service were held in 1964, 1966, and 1978 and the plans were reviewed;
- d) that no further Administrative Radio Conferences are to be convened before the World Administrative Radio Conference, 1979;

*recommends*

that, in so far as the aeronautical mobile (R) service is concerned, the World Administrative Radio Conference, 1979, should abrogate Resolution No. 13;

*invites administrations*

to consider whether Resolution No. 13 could be abrogated and to submit proposals to this effect to the World Administrative Radio Conference, 1979.

RECOMMENDATION No. Aer2 — 9

**Relating to Public Correspondence with Aircraft**

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

*considering*

- a) that Recommendation No. 19 (Geneva, 1959) gave an initial indication of interest in public correspondence with aircraft;
- b) that some administrations have expressed requirements for long-distance public correspondence with aircraft;

- c) that provisions of No. 432 of the Radio Regulations do not permit public correspondence in the exclusive aeronautical mobile bands, unless permitted by special aeronautical regulations;
- d) that appropriate satellite systems for this purpose are not yet operational;

*recommends*

1. that administrations should give due consideration to the technical, operational and administrative aspects of public correspondence with aircraft in order to permit orderly implementation at the appropriate time;
2. that administrations should make proposals on this subject to the next competent World Administrative Radio Conference;

*requests the Secretary-General*

to bring this Recommendation to the attention of the World Administrative Radio Conference, 1979.

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