

# TRACTATENBLAD

VAN HET

KONINKRIJK DER NEDERLANDEN

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JAARGANG 1979 Nr. 136

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A. TITEL

*Radioreglement behorende bij het Internationaal Verdrag  
betreffende de Verreberichtgeving van Genève van  
21 december 1959, met bijlagen, Aanvullend  
Radioreglement en Aanvullend Protocol;  
Genève, 21 december 1959*

B. TEKST

De Engelse tekst van het Reglement, cum annexis, is geplaatst in *Trb.* 1961, 115. Zie ook de rubrieken J van *Trb.* 1964, 106, *Trb.* 1967, 137, *Trb.* 1968, 135, *Trb.* 1972, 79, *Trb.* 1975, 56 en *Trb.* 1978, 183, alsmede rubriek J hieronder.

D. PARLEMENT

Zie *Trb.* 1978, 7 en 183.

De in rubriek J hieronder afgedrukte Slotakten behoeven ingevolge artikel 62, eerste lid, letter a, van de Grondwet, juncto artikel 16 van de Telegraaf- en Telefoonwet 1904 (*Stb.* 7) niet de goedkeuring der Staten-Generaal alvorens voor het Koninkrijk der Nederlanden in werking te kunnen treden.

G. INWERKINGTREDING

Zie *Trb.* 1961, 115.

## J. GEGEVENS

Zie *Trb.* 1961, 115, *Trb.* 1964, 106, *Trb.* 1967, 137, *Trb.* 1968, 135, *Trb.* 1972, 79, *Trb.* 1975, 56 en *Trb.* 1978, 7 en 183.

De volgende Staten hebben de Secretaris-Generaal van de Internationale Telecommunicatie-Unie in kennis gesteld van de goedkeuring van de op 13 februari 1977 tot stand gekomen aanvulling van het onderhavige Reglement:

Liechtenstein .....	31 mei 1977
Frankrijk .....	6 januari 1978
de Oekraïne .....	21 maart 1978
Witrusland .....	28 maart 1978
Maleisië .....	8 juni 1978
Denemarken .....	22 september 1978
Zwitserland .....	4 oktober 1978
Senegal .....	6 december 1978
Korea .....	7 december 1978
Canada .....	8 december 1978
Ierland .....	14 december 1978
het Koninkrijk der Nederlanden (voor het gehele Koninkrijk) .....	28 december 1978
Hongarije .....	21 maart 1979
India .....	31 maart 1977

Tijdens een van 6 februari tot 5 maart 1978 te Genève gehouden Wereld-administratieve Radioconferentie voor de luchtvaart mobiele dienst zijn op 5 maart 1978 Slotakten ondertekend, welke de herziening van een aantal bepalingen van het onderhavige Reglement bevatten. De herziene bepalingen zijn ingevolge het gestelde in de zesde alinea van de Slotakten op 1 september 1979 in werking getreden en het Frequentietoewijzingsplan zal van kracht worden op 1 februari 1983.

De Engelse tekst <sup>1)</sup> van de Slotakten en de daarbij behorende Bijlagen en resoluties luidt als volgt:

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<sup>1)</sup> De Franse tekst is niet afgedrukt.

# Final acts

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

### 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.

**For the Republic of Afghanistan:**

ABDUL-RAZEQ NAQARAR

**For the Algerian Democratic and Popular Republic:**

N. BOUHIRED  
M. BENCHEMAM  
M. AIT BENHAMOU

**For the Federal Republic of Germany:**

R. BINZ  
K. SPINDLER

**For the People's Republic of Angola:**

JOSÉ GUALBERTO DE MATOS

**For the Kingdom of Saudi Arabia:**

IBRAHIM AHMED OBAID  
ABDULRAHMAN A. DAGHISTANI  
SAEED ABDULLA AL-FARHA AL-GHAMDI  
HAIDAR ABDULLAH HUSSEIN  
HAMID MOHAMMED OMAIRY

**For the Argentine Republic:**

MARCELO OTERO MOSTEIRIN

**For Australia:**

P. D. BARNES  
KEITH H. KING

**For the State of Bahrain:**

YOUSIF AHMED SULMAN

**For the People's Republic of Bangladesh:**

A. M. AHSANULLAH  
S. A. MOTALIB

**For Belgium:**

THEYS A. V. G.  
GODART H. F. J.

**For the Byelorussian Soviet Socialist Republic:**

P. AFANASIEV

**For the Republic of Bolivia:**

CLOVIS VELAZQUEZ ALQUIZALETH

**For the Federative Republic of Brazil:**

PAULO RICARDO HERMANO BALDUINO

**For the People's Republic of Bulgaria:**

IVAN IGNATOV

**For the United Republic of Cameroon:**

VICTOR I. N. VEGA  
JEAN ESSESSE-DIKONGUE

**For Canada:**

E. D. DuCHARME

**For Chile:**

JAIME LAGOS

**For the People's Republic of China:**

WANG NAI-TIEN

**For the Republic of Colombia:**ORLANDO GALLO SUÁREZ  
ALIRIO GUTIÉRREZ DÍAZ**For the Republic of Korea:**SHINYONG LHO  
CHANG SOO KO  
JEONG JAI IM  
HYUN DUK KIM  
JONG SOUNG KIM**For the Republic of the Ivory Coast:**

GNONSOA KOMOANGNAN JEAN

**For Cuba:**

FRANCISCO RODRIGUEZ ACOSTA

**For Denmark:**P. V. LARSEN  
V. O. BENDTSEN  
E. BIRCH**For the United Arab Emirates:**ALI SALIM AL-OWAIS  
HALIM J. FANOUS**For Ecuador:**

CESAR LARA

**For Spain:**MANUEL VALBUENA GRANADOS  
LUIS GARCIA-CEREZO  
JOSÉ L. BARRANCO ALVAREZ**For the United States of America:**BETTY C. DILLON  
CARLTON A. KEYS**For Ethiopia:**TESFATSION SEBHATU  
MITIKU AYANA**For Finland:**T. HAHKIO  
J. KARJALAINEN**For France:**CHEF MAURICE  
DHENIN CHRISTIAN-JACK**For the Gabon Republic:**

ASSOKO-ALLOGO-ANDRE

**For Greece:**ANDRÉ S. METAXAS  
C. HAGER  
G. STAMATOPOULOS  
N. BENMAYOR**For the Republic of Guatemala:**OLMEDO AHSAR VASQUEZ TOLEDO  
EDUARDO RIVERA PÉREZ**For the Republic of Guinea:**

DIALLO MAMADOU SALIOU

**For the Republic of Upper Volta:**

KABA YOUSOUF

**For the Hungarian People's Republic:**

Dr. HORVÁTH LAJOS

**For the Republic of India:**T. V. SRIRANGAN  
Dr. S. C. MAJUMDAR  
M. D. JOSHI  
BISWAPATI CHAUDHURI**For the Republic of Indonesia:**TH. A. PRATOMO  
F. M. JASIN**For Iran:**

A. HAKIMIAN

**For Ireland:**

O'NEILL DANIEL J.

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**For Italy:**

PETTI A.

**For Japan:**

KIKKAWA KYUSO  
FUJIOKA MASAYOSHI

**For the Republic of Kenya:**

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FAISAL MANSOUR AL TAHOO  
AHMAD AL-HASAWI  
SAMI KHALED AL-AMER

**For the Republic of Liberia:**

SAMUEL H. BUTLER, SR

**For the Socialist People's Libyan  
Arab Jamahiriya:**

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**For Malaysia:**

K. P. RAMANATHAN MENON

**For the Kingdom of Morocco:**

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**For Mauritius:**

J. SOOBARAH

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**For Mexico:**

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**For New Zealand:**

ROBERT JOHN BUNDLE  
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MUSHTAQ AHMAD

**For the Republic of Panama:**

ISMAEL GARCÍA GRIMALDO  
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**For Papua New Guinea:**

G. H. RAILTON  
S. KULUPI  
C. R. EMERY

**For the Republic of Paraguay:**

ING. MIGUEL HORACIO GINI ESPINOLA  
HECTOR RAUL VEGA ALMIRON

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A. R. VISSER

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CARREON CEFERINO S.  
SAN JUAN HERACLIO L.  
MARASIGAN RICARDO B.

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HALINA SMOLEŃSKA

**For Portugal:**

ADRIANO DE CARVALHO  
DOMINGOS FRANCO

**For the State of Qatar:**

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**For the Syrian Arab Republic:**

HAITHAM HABBAB  
HAYAN MAHFOUZ

**For the German Democratic Republic:**

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

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**For the Ukrainian Soviet  
Socialist Republic:**

V. SAVANTCHUK

**For the Socialist Republic of Roumania:**

CONSTANTIN CEAUȘESCU

**For the United Kingdom of Great Britain  
and Northern Ireland:**

D. E. BAPTISTE  
G. W. NORTH

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

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DEOLINDO COSTA

**For the Republic of the Senegal:**

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AMADOU BALLA DIAGNE

**For the Republic of Singapore:**

WAN SENG KONG

**For Sweden:**

KRISTER BJÖRNSJÖ

**For the Confederation of Switzerland:**

H. BLASER  
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ALCAZAR N. V.  
BELLORIN J. R.

**For the Yemen Arab Republic:**

AHMED HASSAN ELZAGGAR

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

OMER ABDULLA YAFAI

**For the Socialist Federal Republic of Yugoslavia:**

DULOVIĆ LJUBOMIR

ANNEX 1<sup>1)</sup>**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.

1)

## 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	Modification
ADD	Addition

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

(MOD)



## ARTICLE 9

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

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

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

*Regulation No. 557 is amended as follows:*

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

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

ADD 557A            (2A) A notice which is not in conformity with the provisions of No. 553A shall  
Aer2            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            (3) In the case of a notice in conformity with the provisions of Nos. 553A to  
Aer2            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            (3) The aeronautical carrier (reference) frequencies 3 023 kHz and 5 680 kHz  
Aer2            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          § 3A. The aeronautical carrier (reference) frequency 3 023 kHz may be used for  
Aer2            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          § 15A. The aeronautical carrier (reference) frequency 5 680 kHz may be used for  
Aer2            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.

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## 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.	
	. . . . . <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 <i>h) l) r)</i> 50 <i>h) l) r)</i>
MOD	c) Aircraft stations	200*	100* <i>r)</i>
	. . . . . <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 <i>r)</i> 50 <i>r)</i>
MOD	c) Aircraft stations	200*	100* <i>r)</i>

## 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.

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## ANNEX 2

## Revision of Appendix 27 to the Radio Regulations

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

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\* 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.

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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

<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 1.1 The frequency separation between carrier (reference) frequencies shall be  
Aer2 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 1.2 For radiotelephone emissions the audio frequencies will be limited to between  
Aer2 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 *Note: For aircraft and aeronautical station transmitter types first installed before 1 February 1983,  
Aer2 the audio frequencies will be limited to 3 000 Hz.*

ADD 27/11B 1.3 On account of the possibility of interference, a given channel should not be  
Aer2 used in the same allotment area for radiotelephony and data transmissions.

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

MOD 27/12 1.4 The use of channels derived from the frequencies indicated in No. 27/16 for  
Aer2 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 1.5 To preclude the possibility of interference, adjacent channels in the list of  
Aer2 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 1.6 The arrangements contemplated in Nos. 27/12 and 27/14 should be made  
Aer2 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 The list of carrier (reference) frequencies allotted in the bands allocated  
Aer2 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 <sup>1</sup> To calculate the assigned frequency from a carrier (reference) frequency given in the table, reference  
Aer2 should be made to Nos. 27/72, 27/72B and 27/73.

kHz				
2850-3 025	4 650-4 700	6 525-6 685	10 005-10 100	13 260-13 360
2851 2938	4651 4675	6 526 6607	10006 10054	13261 13312
2854 2941	4654 4678	6 529 6610	10009 10057	13264 13315
2857 2944	4657 4681	6 532 6613	10012 10060	13267 13318
2860 2947	4660 4684	6 535 6616	10015 10063	13270 13321
2863 2950	4663 4687	6 538 6619	10018 10066	13273 13324
2866 2953	4666 4690	6 541 6622	10021 10069	13276 13327
2869 2956	4669 4693	6 544 6625	10024 10072	13279 13330
2872 2959	4672 4696	6 547 6628	10027 10075	13282 13333
2875 2962		6 550 6631	10030 10078	13285 13336
2878 2965		6 553 6634	10033 10081	13288 13339
2881 2968	5450-5480	6 556 6637	10036 10084	13291 13342
2884 2971		6 559 6640	10039 10087	13294 13345
2887 2974	Region 2	6 562 6643	10042 10090	13297 13348
2890 2977		6 565 6646	10045 10093	13300 13351
2893 2980	5451 5466	6 568 6649	10048 10096	13303 13354
2896 2983	5454 5469	6 571 6652	10051	13306 13357
2899 2986	5457 5472	6 574 6655		13309
2902 2989	5460 5475	6 577 6658		
2905 2992	5463	6 580 6661	11 275-11 400	17 900-17 970
2908 2995		6 583 6664		
2911 2998		6 586 6667		
2914 3001	5480-5680	6 589 6670	11 276 11 339	
2917 3004		6 592 6673	11 279 11 342	17 901 17 937
2920 3007		6 595 6676	11 282 11 345	17 904 17 940
2923 3010	5481 5580	6 598 6679	11 285 11 348	17 907 17 943
2926 3013	5484 5583	6 601 6682	11 288 11 351	17 910 17 946
2929 3016	5487 5586		11 291 11 354	17 913 17 949
2932 3019	5490 5589		11 294 11 357	17 916 17 952
2935	5493 5592	8 815-8 965	11 297 11 360	17 919 17 955
	5496 5595		11 300 11 363	17 922 17 958
	5499 5598		11 303 11 366	17 925 17 961
	5502 5601		11 306 11 369	17 928 17 964
	5505 5604	8 816 8 891	11 309 11 372	17 931 17 967
	5508 5607	8 819 8 894	11 312 11 375	17 934
	5511 5610	8 822 8 897	11 315 11 378	
	5514 5613	8 825 8 900	11 318 11 381	
	5517 5616	8 828 8 903	11 321 11 384	
	5520 5619	8 831 8 906	11 324 11 387	
	5523 5622	8 834 8 909	11 327 11 390	
	5526 5625	8 837 8 912	11 330 11 393	
	5529 5628	8 840 8 915	11 333 11 396	
	5532 5631	8 843 8 918	11 336	
	5535 5634	8 846 8 921		
	5538 5637	8 849 8 924		
	5541 5640	8 852 8 927		
	5544 5643	8 855 8 930		
	5547 5646	8 858 8 933		
	5550 5649	8 861 8 936		
	5553 5652	8 864 8 939		
	5556 5655	8 867 8 942		
	5559 5658	8 870 8 945		
	5562 5661	8 873 8 948		
	5565 5664	8 876 8 951		
	5568 5667	8 879 8 954		
	5571 5670	8 882 8 957		
	5574 5673	8 885 8 960		
	5577 5676	8 888		
	5680 (R) and (OR)			

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

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

- MOD 27/20 4. The International Civil Aviation Organization (ICAO) coordinates radiocom-  
Aer2 munications of the aeronautical mobile (R) service with international aeronautical opera-  
tions and this Organization should be consulted in all appropriate cases in the opera-  
tional use of the frequencies in the Plan.

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

- MOD 27/23 7. The coordination described in No. 27/20 shall be effected where appropriate  
Aer2 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 1. *General provisions*  
Aer2

- ADD 27/24A 1.1 *Service range*  
Aer2

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.

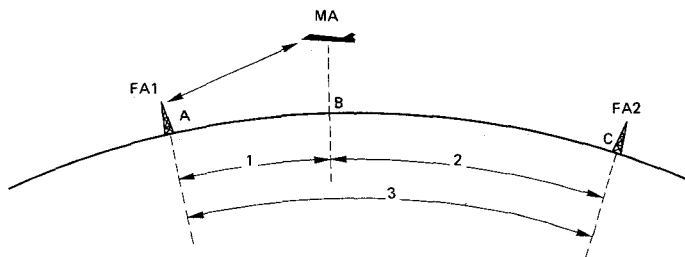
- ADD 27/24B 1.2 *Interference range*  
Aer2

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 1.3 *Repetition distance*  
Aer2

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 1.4 Figure 1 illustrates the use of the concept of interference range in frequency  
Aer2 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  
Aer2 4.2.1 The revised Frequency Allotment Plan for the 13 MHz and 18 MHz bands is based on daytime protection only. This results in the following sharing possibilities:
- ADD 27/31B  
Aer2 4.2.2 for the 13 MHz band, the repetition factor is at least 3 whilst for the 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  
Aer2 4.2.3 the sharing takes into account the likely locations of the aeronautical 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  
Aer2 5.1 Take the appropriate MWARA, RDARA or VOLMET area map associated with this Appendix and select the transparency for the frequency order and sharing conditions under consideration.
- MOD 27/33  
Aer2 5.2 The equal area projections (Lambert) are applicable in the polar areas north of 60°N and south of 60°S; and the Mercator projections are applicable between 60°N and 60°S.
- MOD 27/34  
Aer2 5.3 Place the centre of the transparency (i.e. the intersection of the axis of symmetry and the latitude line) over the boundary of the area (use the reception area boundary in the case of VOLMET) at the point on the boundary nearest to the potentially interfering transmitter or at the location of the interfering transmitter. Note the latitude of the selected point and use the interference range contour corresponding to this latitude.
- MOD 27/35  
Aer2 5.4 A transmitter located at any point outside the contour will result, as defined in No. 27/24B, in a protection ratio of better than 15 dB.
- MOD 27/36  
Aer2 5.5 A transmitter located at any point inside the contour will result in a protection ratio of less than 15 dB. However, if the transmitter is located inside the contour but the propagation path traverses an auroral zone, it is assumed that the signal attenuation within this zone will result in a protection ratio of better than 15 dB.

.....  
 (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  
Aer21.2.2 *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 2.4 It is recognized that the power employed by aircraft transmitters may, in  
Aer2 practice, exceed the limits specified in No. 27/54. However, the use of such increased power (which normally should not exceed 600 W  $P_p$ ) 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 1.1 *Definitions of carrier modes:*  
Aer2

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 2.1 In a single-sideband transmission, the mean power of any emission supplied to  
Aer2 the antenna transmission line of an aeronautical or aircraft station on any discrete frequency, shall be less than the mean power ( $P_m$ ) of the transmitter in accordance with the 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
$2 < \Delta < 6$	25
$6 < \Delta < 10$	35
$10 < \Delta$	Aircraft stations: 40 Aeronautical stations: $43 + 10 \log_{10} (P_m)$ (watts)

*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 specifications contained in No. 27/66C.  
Aer2

- ADD 27/66B 2.3 In a single-sideband transmission, the peak envelope power ( $P_p$ ) of an  
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
$1.5 < \Delta < 4.5$	30
$4.5 < \Delta < 7.5$	38
$7.5 < \Delta$	Aircraft stations: 43 Aeronautical stations: *

\* 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.

De tekst van het bij de Slotakten behorende plan is niet afgedrukt.  
Het plan is nedergelegd bij de Centrale Directie der PTT.

## 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*

- a) 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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De volgende Staten hebben de Secretaris-Generaal van de Internationale Telecommunicatie-Unie in kennis gesteld van de goedkeuring van de herziening d.d. 5 maart 1978 van het onderhavige Reglement:

Qatar .....	juiste datum niet bekend
Frankrijk .....	12 februari 1979
Paraguay .....	9 maart 1979
Canada .....	20 juni 1979
het Koninkrijk der Nederlanden .....	31 augustus 1979
(voor het gehele Koninkrijk)	

Uitgegeven de *tweede* oktober 1979.

*De Minister van Buitenlandse Zaken,*  
C. A. VAN DER KLAAUW