Documents of the Extraordinary Administrative Radio Conference for the preparation of a revised allotment plan for the aeronautical mobile (R) service (2nd session) (EARC-66)

(Geneva, 1966)

To reduce download time, the ITU Library and Archives Service has divided the conference documents into sections.

- This PDF includes Document DT No. 1 - 53.
- The complete set of conference documents includes Document No. 1 - 239, DT No. 1-53.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT II/1-E
16 March 1966
Original : French, English, Spanish.

COMMITTEE 7

NOTE FOR THE DRAFTING COMMITTEE

1. Organization of the work of the Editorial Committee

The Editorial Committee proposes the following organization :

1.1 To enable it to carry out its work expeditiously, the Editorial Committee considers it necessary to ask the Chairmen of the other committees to send it the texts as soon as they are approved in committee.

1.2 Each document is to be submitted to the Secretariat of the Editorial Committee in the form in which it has been approved, in triplicate, in English, Spanish and French, bearing the signature of the Chairman of the relevant Committee.

1.3 The texts submitted for first reading to the Plenary Assembly are to be drawn up on the basis of the existing lay-out and numbering of the Radio Regulations (Geneva, 1959).

Annex 1 shows how, in the texts submitted to the Editorial Committee, the references and indications should refer to the various numbers. These indications will be placed in the margin, to the left of the text, in the following manner :

Symbol	English	Spanish	French
MOD SUP ADD	Modification Suppression Addition	Modificación Supresión Adición	Modification Suppression Addition

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

(MOD)

will be used.

1.4 The texts are to be submitted for registration to the Secretariat of the Editorial Committee, Room 2.

2. Presentation to the Plenary Meeting of the documents reviewed by the Editorial Committee

The Editorial Committee proposes that two successive readings be submitted to the Plenary Meeting. The first reading will be submitted in the form of blue documents, the second one as pink documents.

Chairman of Committee 7
P. BOUCHIER

Annex : 1

A N N E X

LAY-OUT OF TEXTS SUBMITTED TO THE EDITORIAL COMMITTEE

Former reference Source: Committee No. ...

Title (MOD) . . . . . .
. . . . . .

87 SUP

87a ADD . . . . . .
. . . . . .
. . . . . .

88 MOD . . . . . .
. . . . . .
. . . . . .

90 ADD . . . . . .
. . . . . .
. . . . . .

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No.DT/II-2-E
17 March 1966
Original: English

COMMITTEE 5

REQUIREMENTS FOR HIGH FREQUENCIES FOR AERONAUTICAL MOBILE (R) SERVICE COMMUNICATIONS

In pursuance of the decisions taken by Committee 5, on 16 March 1966, a study has been made of the expected requirements for high frequencies for the Aeronautical Mobile (R) service communications on the basis of the Report of the I.F.R.B. to the Conference on the Statistical Analyses of the International as well as Regional and Domestic Flights, as brought up to date by Document No. II/20-E. The results of this study are presented in the form of two tables, TABLE 1 and TABLE 2, annexed herewith.

TABLE 1

Table 1 presents the compilation of requirements for high frequencies for Major World Air Routes Operations. The formula used, as agreed by Committee 5 on 16 March 1966, for calculating the expected peak number (N) of aircraft, that would require communication in any one hour, is the following:

$$N = \frac{KL}{7 \times 24 \times V}$$

where

K = 2.4

L = Total mileage flown within the ZA

V = 400 knots.

From the value of N, thus obtained, the expected requirement for the families of frequencies is calculated on the assumption that, in Major World Air Routes Areas, one high frequency family could serve a maximum of 12 aircraft in one hour.

This table shows each of the Zones of Analysis, with the corresponding approximate MWARAs or other area identification, the expected peak number (N) of aircraft that would require communication in any one hour, the number of overflights over each of the Z.A. and the number of high frequency families required. The number of cases where an aircraft has overflown an

entire Z.A., without a stop in it, is not taken into account for the calculation of N or of the required number of frequency families. Since the Table 1 has been compiled on the basis of the data furnished to the I.F.R.B. in pursuance of Resolution No. 11 of the first session of the Aeronautical E.A.R.C., the VOLMET broadcast frequency requirements are not included in it.

TABLE 2

Table 2 presents the compilation of the requirements of high frequencies for Regional and Domestic Air Routes Operations. The formula used for calculating the expected number of aircraft, requiring HF Service, in a particular RDARA, at peak hour, as as follows:

$$N = \frac{Ta}{3000}$$

where

Ta = Annual total hours flown by HF-equipped aircraft during which high frequency communication was required.

From the value of N, thus obtained, the number of high frequency families, required for Regional and Domestic Air Routes Operations is calculated on the assumption that, one high frequency family could serve a maximum of 10 aircraft in one hour.

This table shows each of the RDARAs, the expected peak number (N) of aircraft that would require communication in any one hour in each RDARA (Table No. 2 - Summary by RDARAs - Section VI of the Report of the I.F.R.B. refers), the number of high frequency families required and an approximate estimation of the number of families allotted in Appendix 26 to the Radio Regulations for RDARA operations.

In compiling this table necessary adjustments have been made in the value of N so as to take into account the operations where the reported area is other than a RDARA or a sub-RDARA.

Annexes: 2

A N N E X 1

TABLE 1

AREA			N	Number of families of frequencies required (N/12)	Number of times when the ZA is OVERFLOWN
Zone of Analysis	MWARA	Other remarks on the identification of the area			
A	NAT	ARCTIC ROUTES	-		(20)
B		URS	Less than 1		-
C	NAT & NP	(ARCTIC ROUTES & (NORTH AMERICAN (CONTINENT	37	3	(34)
D	EU		140	12	(5)
E	NSA 1		23	2	(13)
F	NSA 2		31	3	(5)
G	ME		23	2	(14)
H	FE 2		24	2	-
I	FE 1		25	2	(14)
J	CWP		61	5	(4)
K	NP	SEA ROUTES	11	1	(51)
L	SP		7	1	(6)
M	CEP		6	1	(13)
N		CAR - ICAO PLAN	78	7	(1)
O	NAT	CENTRAL ROUTES	141	12	(95)
P	NAT	SOUTHERN ROUTES	-	-	(42)
Q	SA		17	1	(4)
R	NSAM 1		9	1	(1)
S	NSAM 2		9	1	(6)
T		E. ANTARCTIC AREA	-	-	-
U		W. ANTARCTIC AREA	-	-	-
		TOTAL		56	(328)

A N N E X 2

TABLE 2

RDARA	$N = \frac{Ta}{3000}$	Number of families of frequencies required (N/10)	Approximate estimate of number of families of frequencies allotted for RDARA operations in APPENDIX 26 to the Radio Regulations
1	140	14	10
2	1756	176	7
3	657	66	12
4	16	1	4
5	38	4	5
6	365	36	16
7	31	3	13
8	0	-	1
9	120	12	14
10	400	40	9
11	51	5	11
12	242	24	12
13	397	40	17
	TOTAL	420	131

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-3-E(Rev.)
18 March 1966
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COMMITTEE 4

DISCUSSION PAPER

"POWER"

The text which follows is offered as a discussion paper to assist the Committee in its consideration of the subject of Power to prepare a replacement for Para.C, Section II, Part I of Appendix 26 (Page 15).

The paper is based on the relevant portion of the proposals by Canada in Document No.II/4, Pages 6, 7 and 8 and embodies those amendments presented in the Committee at its fourth meeting on Thursday 17 March on which there appeared, at that time, to be a measure of agreement.

Power

Unless otherwise specified in Part II of this Appendix, the maximum peak envelope powers supplied to the antenna transmission line have the values indicated in the table below; the corresponding peak radiated powers being equal to two-thirds of these values.

Class of Emission	Stations	Maximum Peak Envelope Power
A1 F1	Aeronautical Stations Aircraft Stations	1.5 kW 75 W
A3 A3H (100% modulated)	Aeronautical Stations Aircraft Stations	6 kW 300 W
Other classes of emission	Aeronautical Stations Aircraft Stations	6 kW 75 W

It is assumed that the maximum peak powers specified above for aeronautical stations using A1, F1, A3 and A3H emissions will produce the mean radiated power of 1 kW (unmodulated) used as a basis for the Interference Range Contours.

Aeronautical stations serving MWARA's may exceed the power limits specified above in order to provide satisfactory communication with aircraft. In each such case, the administration having jurisdiction over the aeronautical station shall ensure :

a) that co-ordination is effected with the administrations concerned when there is any possibility of interference;

b) that harmful interference is not caused to stations using frequencies in accordance with the applicable provisions of the Allotment Plan;

c) that in other MWARA's or RDARA's allotted the same frequency(ies) the specified protection ratios within the boundaries of those areas shall be maintained;

d) that the directional characteristics of the antenna are such as to minimize radiation in unnecessary directions, particularly into other MWARA's or RDARA's which have been allotted the same frequency(ies);

e) that full details of the assignment(s) shall be notified to the I.F.R.B. including the transmitting antenna characteristics.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-3-E
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COMMITTEE 4

DISCUSSION PAPER

"POWER"

The text which follows is offered as a discussion paper to assist the Committee in its consideration of the subject of Power to prepare a replacement for Para.C, Section II, Part I of Appendix 26 (Page 15).

The paper is based on the relevant portion of the proposals by Canada in Document No.II/4, Pages 6, 7 and 8 and embodies those amendments presented in the Committee at its fourth meeting on Thursday 17 March on which there appeared, at that time, to be a measure of agreement.

Power

Unless otherwise specified in Part II of this Appendix, the maximum peak envelope powers supplied to the antenna transmission line have the values indicated in the table below; the corresponding effective radiated powers being equal to two-thirds of these values.

Class of Emission	Stations	Maximum Peak Envelope Power
A1 F1	Aeronautical Stations Aircraft Stations	1.5 kW 75 W
A3 A3H (100% modulated)	Aeronautical Stations Aircraft Stations	6 kW 300 W
Other classes of emission	Aeronautical Stations Aircraft Stations	1.5 kW)multiplied 75 W)by a conversion factor (Note 1)

Note 1 : For the conversion factor to be applied in the case of classes of emissions other than A1, F1, A3 and A3H reference must be made to the relevant Regulations resulting from C.C.I.R. Recommendation No.326, Geneva, 1963.

The maximum peak envelope powers specified above for aeronautical stations will produce the effective radiated power of 1 kW (unmodulated) used as a basis for the Interference Range Contours. Aeronautical stations serving MWARA's may exceed the power limits specified above in order to provide satisfactory communication with aircraft. In each such case, the administration having jurisdiction over the aeronautical station shall ensure :

a) that co-ordination is effected with the administrations concerned when there is any possibility of interference;

b) that harmful interference is not caused to stations using frequencies in accordance with the applicable provisions of the Allotment Plan;

c) that in other MWARA's or RDARA's allotted the same frequency(ies) the specified protection ratios within the boundaries of those areas shall be maintained;

d) that the directional characteristics of the antenna are such as to minimize radiation in unnecessary directions, particularly into other MWARA's or RDARA's which have been allotted the same frequency(ies);

e) that full details of the assignment(s) shall be notified to the I.F.R.B. including the transmitting antenna characteristics.

AERONAUTICAL CONFERENCE

Geneva, 1966

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17 March 1966
Original: English

COMMITTEE 4

DRAFT

FIRST REPORT OF COMMITTEE 4 (TECHNICAL)

Interference Range Contours (Appendix 26, page 9 and following)

Following a study of proposals by Administrations to the Conference and of the Report of the First Session, Committee 4 unanimously agreed the texts which appear in the Annex attached hereto.

With respect to paragraph numbered 18.1 and entitled "Method of Use", however, the Committee agreed that the text can be finalized only after further study of a proposal to include VOLMET area maps (Document No. II/10, page 21).

J.T. PENWARDEN
Chairman

Annex: 1

A N N E X

B. Interference Range Contours

14. Definition of Contours

14.1 The transparencies inserted in the pocket at the end of this Appendix show contours which indicate the minimum acceptable distance separating two ground aeronautical stations each having an effective radiated power of 1.0 kW (unmodulated) for the frequencies stated and for producing a protection ratio of 15 db of desired signal to interfering signal on the same frequency at an aircraft operating at the limit of the service range of the desired ground transmitter. This limit is generally assumed to be at the boundary of the area concerned and the service range is not included in the contour.

14.2 Two types of transparencies are provided for use respectively with the Mercator projection world maps and the Gnomonic projection for the polar areas. The Mercator projection transparencies encompass the area between latitude 60° North and 60° South. The Gnomonic projection transparencies encompass the areas north of latitude 30° North and south of latitude 30° South. The Gnomonic projection overlaps the Mercator projection between latitudes 30°-60° North and 30°-60° South. This overlap is included to provide continuity between transparencies of the two projections.

15. Type of Maps Used

15.1 These transparencies 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 scale or any other projection. The world and polar maps accompanying this Appendix, depicting RDARA and MWARA boundaries, are to the correct scale and the transparencies carrying the interference range contours can be directly used on these maps.

16. Change of Scale or Projection

16.1 Should any other scale or projection be desired, then, new interference range contours can be drawn to fit the new scales or projections, by using the co-ordinates given in the tables shown below.

16.2 When new transparencies are constructed, the intersection of the vertical line of symmetry, i.e., the meridian of longitude and the horizontal line of latitude should be at 00° latitude for the 00° contour, 20°N for the 20° contour, 40°N for 40° contour, etc.

16.3 The co-ordinates shown in the above-mentioned tables are given with reference to the 180° meridian taken as the axis of symmetry for the construction of the contours.

17. Sharing Conditions Between Areas

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

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

17.2 The additional contours for day included for 3 Mc/s, 3.5 Mc/s and 4.7 Mc/s are for determining daylight sharing possibilities.

18. Method of Use

18.1 Take the MWARA or the RDARA maps accompanying this Appendix and select the transparency for the frequency order and sharing conditions under consideration.

18.2 The Gnomonic projections are applicable in the polar areas north of 60° North and south of 60° South; and the Mercator projections are applicable between 60° North and 60° South.

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

18.4 A transmitter located at any point outside the contour will result, as defined in paragraph 14.1 above, in a protection ratio of better than 15 db.

18.5 Any transmitter at a point inside the contour will result in a protection ratio of less than 15 db.

18.6 Mercator projection: For the Northern Hemisphere, the contours should be used in their natural position as published, but for the Southern Hemisphere, the transparency should be inverted. This point should be carefully observed when following the boundaries of the areas which involve the transition of the equator.

18.7 Gnomonic projection: For either the north or south polar areas, the transparency should be positioned so that the north-south line (terminated with an arrow) is parallel to the meridian of longitude, with the arrow pointing towards the pole.

19. Data for Tracing Interference Contours*)

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*) Chairman's note:

The Tables, Gnomonic projections and additional interference range contours for the Polar Areas appearing on pages 25 to 43 inclusive and pages 75 to 97 inclusive of Document No. II/2, without modification, are being printed separately.

In view of the volume and nature of this material, this procedure is being proposed to save time, money and effort and to minimize the risk of introducing errors by repeated retyping and reproduction.

AERONAUTICAL CONFERENCE

Geneva 1966

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Original : English

COMMITTEE 4

DRAFT

SECOND REPORT OF COMMITTEE 4 (TECHNICAL)

Use of 3023.5 kc/s and 5680 kc/s
(pages 38 and 41 of Appendix 26)

Following a study of proposals by Administrations to the Conference and of the Report of the First Session, Committee 4 unanimously agreed the texts which appear in the Annex attached hereto.

J.T. PENWARDEN
Chairman

Annex : 1

ANNEX

Frequency kc/s	Authorized area of use	Remarks
3023.5	World-wide	Authorized for world-wide use for the (R) and (CR) services as follows : 1) aboard aircraft for : a) communications with approach and aerodrome control; b) communication with an aeronautical station when other frequencies of the station are either unavailable or unknown; 2) at aeronautical stations for aerodrome and approach control under the following conditions : a) with power limited to a value of not more than 20 watts in the antenna circuit; b) special attention must be given in each case to the type of antenna used in order to avoid harmful interference; c) the power of aeronautical stations which use this frequency in the conditions mentioned above may be increased to the extent necessary to meet certain operational requirements, subject to the co-ordination between the Administrations directly concerned and those whose services may be adversely affected.

Frequency kc/s	Authorized area of use	Remarks
3023.5 (contd.)	World-wide (contd.)	3) for intercommunication between mobile stations engaged in co-ordinated search and rescue operations including communication between these stations and participating land stations; 4) the specific application of this frequency for the above purposes may be decided at regional aeronautical conferences; 5) this channel may be used for A1 or A3 emissions, in accordance with special arrangements. It shall not be sub-divided.

Frequency kc/s	Authorized area of use	Remarks
5680	World-wide	Authorized for world-wide use for the (R) and (OR) services as follows : 1) aboard aircraft for : a) communications with approach and aerodrome control; b) communication with an aeronautical station when other frequencies of the station are either unavailable or unknown; 2) at aeronautical stations for aerodrome and approach control under the following conditions : a) with power limited to a value of not more than 20 watts in the antenna circuit; b) special attention must be given in each case to the type of antenna used in order to avoid harmful interference; c) the power of aeronautical stations which use this frequency in the conditions mentioned above may be increased to the extent necessary to meet certain operational requirements, subject to co-ordination between the administrations directly concerned and those whose services may be adversely affected.

Frequency kc/s	Authorized area of use	Remarks
5680 (contd.)	World-wide (contd.)	3) for intercommunication between mobile stations engaged in co-ordinated search and rescue operations including communication between these stations and participating land stations; 4) the specific application of this frequency for the above purposes may be decided at regional aeronautical conferences; 5) this channel may be used for A1 or A3 emissions, in accordance with special arrangements. It shall not be subdivided.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No.DT/II-6-E
18 March 1966
Original : English

COMMITTEE 4

DRAFT

THIRD REPORT OF COMMITTEE 4 (TECHNICAL)

Use of frequencies 2973 kc/s and 3495.5 kc/s

(pages 37 and 39 of Appendix 26)

Following a study of proposals by Administrations to the Conference and of the Report of the First Session, Committee 4 unanimously agreed that all the special conditions applying to these two frequencies should be deleted from Column 3 (Remarks) and the frequencies thus released for unrestricted allotment.

In this connection the Chairman consulted with the observer of I.C.A.O., who confirmed that he could find no evidence in any I.C.A.O. regional plans, concerning the use of these frequencies, which would preclude the deletion of the provisions to which reference is made above.

Accordingly, Committee 4 invites the attention of Committee 6 (PLAN) and Committee 7 (Editorial) to the above action.

J.T. PENWARDEN
Chairman

AERONAUTICAL CONFERENCE

Geneva 1966

Document No. DT/II-7-E
18 March 1966
Original: English

COMMITTEE 5

MEMORANDUM SUBMITTED BY THE REPRESENTATIVE OF I.C.A.O. CONCERNING FREQUENCIES FOR METEOROLOGICAL BROADCAST TO AIRCRAFT IN FLIGHT (VOLMET) IN SOUTH EAST ASIA

In July 1965 the I.C.A.O. Representative, Far East and Pacific Office, circulated a proposal to States concerned regarding the replacement of the present frequencies used for the VOLMET broadcast plan for South East Asia by another family.

The results of the above consultation and the action suggested are explained in the attached copy of a letter from the I.C.A.O. Representative to States concerned, which is submitted for information in connection with the discussion of the question of provisions for VOLMET broadcasts in Committee 5.

Annex: 1

A N N E X

R10/5.1 0114 24 January 1966

Subject: COM/MET - HF RTF SEA
VOLMET Broadcasts
Action Req'd: As in para. 7

Sir,

I have the honour to refer to my letter of 21 July 1965, wherein I proposed the replacement of the existing SEA VOLMET frequencies (2924, 6529.5 and 10048 kc/s) by a new family of frequencies (3411.5, 5634 and 11337.5 kc/s).

2. Replies from all the Contracting States situated in RDARA-6 have been received, and I am pleased to tell you that, excepting Japan, which has not yet given its concurrence to the use of 11337.5 kc/s, all of them have stated that the replacement frequencies are not in use in the sub-RDARAs under their jurisdiction, and that they have no objection to their being used for the SEA VOLMET broadcasts.

3. Before taking further action, with a view to ascertaining the extent to which the replacement frequencies are free from interference, I asked a few SEA stations to monitor the three frequencies and let me have their reports. Monitoring reports received so far indicate that, in the major part of the SEA Region, the replacement frequencies will be able to provide better service than the existing frequencies. Since one of the reports had given the source of interference on 3411.5 kc/s, I have referred the matter to the States concerned, and I expect that the interference will be cleared by the time action is completed for taking the frequencies into use.

4. It would appear from the foregoing that the matter is now ripe for initiating a formal proposal for amendment of the SEA Regional Plan. However, considering that this matter will be discussed by the forthcoming second session of the Aeronautical Extraordinary Administrative Radio Conference, commencing in March 1966, in the light of COSP II Rec 5/3 (Doc. 8329, COSP II, paragraph 5.10 refers), I suggest that further action should await the results of the E.A.R.C.

5. The action so far taken in this matter should facilitate discussions at the E.A.R.C., and simplify the selection of an appropriate high frequency family for SEA VOLMET broadcasts. In order to assist the E.A.R.C. in finding a quick solution, I suggest that the I.C.A.O. Contracting States of RDARA-6 may wish to brief their delegations participating in the Conference to propose the family comprising 3411.5, 5634 and 11337.5 kc/s for allotment to SEA VOLMET broadcasts.

6. In this connection, I would like to invite your attention to one aspect of the proposed frequency complement. Views may be expressed at the E.A.R.C. to the effect that 5634 kc/s is somewhat low and a frequency in the 6.6 Mc/s should be preferred. If so, I suggest that 6582 kc/s (now allotted to the whole of RDARA-6) should be considered. I did not include this frequency in my proposal in my letter of 21 July 1965 due to the fact that the frequency is now being used, purely on a tentative basis, for the interim HF ATS speech network comprising Hong Kong, Manila, Saigon and Taipei stations. It is expected that by the time action leading to the use of the frequencies is completed the interim speech network may have been decommissioned. For this reason, selection of 6582 kc/s in lieu of 5634 kc/s would appear to be suitable.

7. Summarising, I suggest that your Government brief your delegation attending the second session of the E.A.R.C.:

a) to propose 3411.5, 5634 and 11337.5 kc/s for SEA VOLMET broadcasts, and

b) should a need be expressed for a frequency in the 6.6 Mc/s band, 6582 kc/s be proposed in lieu of 5634 kc/s.

8. Should you have any comments on the foregoing, I would be pleased to receive them.

I have the honour to be,

Sir,

Your obedient servant,

(signed) P.C. ARMOUR
Regional Representative

AERONAUTICAL CONFERENCE

Geneva, 1966

Document N° DT/II-8-E
21 March 1966
Original : French

COMMITTEE 5

LIST OF COUNTRIES LOCATED IN THE RDARAS*) SUB-ZONES

*) The symbols indicating the names of countries are those contained in Pages 85 to 88 inclusive of the Report of the First Session.

Sous-ZLARN Sub-RDARA Sub-ZRRN	Pays (Symboles) Countries (Symbols) Países (Símbolos)
1B	BEL D G HOL IRL ISL LUX
1C	AUT BLR(W) D-D DNK FNL HNG NOR POL S TCH UKR(W)
1D	ALB ARS(N) BUL CVA CYP EGY(N) GRC I IRQ(W) ISR JOR LBN LBY(N) MLT ONJ ROU SMR SYR TUN(N) TUR YUG
1E	ALG(N) AND AZR E F GIB I(Sardaigne) MCO MDR MRC(N) POR SUI TUN
2A	BLR FNL URS
2B	URS
2C	BLR UKR URS
3A	URS
3B	URS
3C	MNG URS
4A	ALG AOE CNR LBY MLI(N) MRC MTN NGR TCD TUN
4B	CAF CME COG CPV CTI DAH GAB GHA GMB GNE GNP GUI HVO LBR MLI(S) MTN(S) NGR(S) NIG SEN SRL STP TCD(S) TGO

Sous-ZLARN Sub-RDARA Sub-ZRRN	Pays (Symboles) Countries (Symbols) Países (Símbolos)
5A	ADN ARS EGY IRQ ISR JOR KWT LBN ONJ SYR YEM
5B	AFG IND(W) IRN PAK(W) TUR(E)
5C	ADN(E) ARS(E) GLP IND(W) MLD
5D	EGY(S-E) ETH SDN SMF SOM
6A	BRM IND(N) NPL PAK(W)
6B	CHN HKG IWA J KOR KRE MAC MCS RYU
6C	CAR GIL GUM HWL INS MLA MRA MRL TMP WAK
6D	BRM BRU CBG INS LAO MLA PHL SNG THA VTN
6E	CLN IND(S) MLD
6F	BRM BRU CBG CHN HKG INS J(E) KOR KRE LAO MAC MLA PHL RYU SNG THA VTN
7A	ASC MRN SHN TRC
7B	AGL BDI CGO RRW
7C	KEN SEY TGK UGA ZAN
7D	COM MAU MDG MOZ REU
7E	AFS BAS BCH MWI RHS

Sous-ZLARN Sub-RDARA Sub-ZRRN	Pays (Symboles) Countries (Symbols) Países (Símbolos)
8A	ICO KER ROD
9A	AUS INS
9B	AUS FJI GIL NCL NGU NHB PAP PHX SLM SMA SMO TKL TON WAL
9C	CHR CKH CKN JAR OCE PLM PTC
9D	AUS NZL
9E	AUS
10A	ALS CAN
10B	CAN USA(N)
10C	CAN USA(N)
10D	CAN GRL USA(N)
10E	CAN GRL USA(N) SPM

Sous-ZLARN Sub-RDARA Sub-ZRRN	Pays (Symboles) Countries (Symbols) Países (Símbolos)
11B	CAN(S) MEX(N) USA
11C	CAN(S) MEX(N) USA
11D	BAH CAN(S) CUB(Habana) USA
11E	CAN(S) USA
11F	CAN(S) USA
11G	BAH CUB(Habana) USA
11H	MEX(N) USA
12A	HWA JON MDW
12C	CUB(W) GTM HNB HND(W) MEX SLV(W) SWN USA(S)
12D	ATN BAH CLM(N) CUB DOM GDL HNB HTI IOB JMC MEX(E) MRT PNR(Panama) PNZ PTR SWN TRD USA(South Florida) VEN(N) VIR
12E	CTR GTM HNB HND MEX(E) NCG PNR PNZ SLV SWN
12F	B(N-W) CLM EQA PNR(Panama) PNZ VEN(W)
12G	ATN B CLM(E) GUB IOB TRD VEN
12H	B(N) CLM(E) GUB GUF SUR VEN(S)
12J	ATN BAH BER CLM(N) CTR CUB DOM GDL GTM HNB HND HTI IOB JMC MEX MRT NCG PNR PNZ PTR SLV SWN TRD USA(S) VEN(N) VIR

Sous-ZLARN Sub-RDARA Sub-ZRRN	Pays (Symboles) Countries (Symbols) Países (Símbolos)
13C	B(W) BOL(W) CHL(N) PRU
13D	ARG(N) B(W) BOL CHL(N-E) PRG(N) PRU(S)
13E	BOL(S-W) CHL(N) PRU(S)
13F	CHL
13G	ARG(N) B(S) BOL(S) FLK PRG(W) URG(W)
13H	ARG FLK URG(S-W)
13I	ARG(N-E) B(S-W) BOL(S-E) PRG URG
13J	B BOL(E) CLM(S) PRG(E) PRU(N-E)
13K	B(E)
13L	ARG(N-E) B(S) PRG(E) URG(N-E)

AERONAUTICAL CONFERENCE

Geneva 1966

Document No. DT/II-9-E (Rev)
24 March 1966
Original: English

COMMITTEE 5

MWARA BOUNDARIES

REPORT OF COMMITTEE 5B

1. The text which follows was prepared pursuant to the decision of Committee 5 taken at its fifth meeting regarding the establishment of MWARA boundaries. The map showing the proposed MWARA boundaries is annexed herewith. A separate map showing the zones of analysis (ZA) on the same scale will be distributed in Committee 5.

2. The boundary descriptions which follow cover the areas to which frequencies are to be allotted under the Frequency Allotment Plan of the Conference.

These areas are shown graphically on the map attached to Document No. DT/II-9, as modified. If there is any difference between the areas as shown on the maps and as described, the written description is to be considered correct.

The mention of the name of a country or of a territory in the descriptions or on the maps of this Plan, and the tracing of borders on the latter, do not imply, on the part of the I.T.U., any position with respect to the political status of such a country or territory, or official recognition of these borders.

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

3. Description of the Major World Air Route Area (MWARA) boundaries

Major World Air Route Area - CARIBBEAN

(MWARA - CAR)

From the point 20° N - 120° W through the points 35° N - 120° W, 35° N - 85° W, 43° N - 74° W, 40° N - 60° W, 00° - 48° W, 00° - 80° W, to the point 20° N - 120° W.

Note: Only one family of frequencies allotted to this area is available for extension to the mid-point of the air route between Mexico City and Tahiti.

Major World Air Route Area - CENTRAL EAST PACIFIC

(MWARA - CEP)

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

Major World Air Route Area - CENTRAL WEST PACIFIC

(MWARA - CWP)

No change from Appendix 26.

Major World Air Route Area - EUROPE

(MWARA - EU)

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

Major World Air Route Area - FAR EAST

(MWARA - FE)

From the point 24° N - 88° E through the points 35° N - 132° E, 37° N - 143° E, 35° N - 143° E, 10° N - 126° E, 07° S - 105° E, to the point 24° N - 88° E.

Major World Air Route Area - MIDDLE EAST

(MWARA - ME)

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

Major World Air Route Area - NORTH ATLANTIC-1

(MWARA - NA-1)

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

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

Major World Air Route Area - NORTH ATLANTIC-2

(MWARA - NA-2)

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

Major World Air Route Area - NORTH ATLANTIC-3

(MWARA - NA-3)

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

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

Major World Air Route Area - NORTH PACIFIC

(MWARA - NP)

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

Major World Air Route Area - NORTH - SOUTH AFRICA-1

(MWARA - NSA-1)

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

Major World Air Route Area - NORTH - SOUTH AFRICA-2

(MWARA - NSA-2)

From the point 00° - 24° E through the points 37° N - 07° E, 37° N - 36° E, 30° N - 35° E, 10° N - 52° E, 22° S - 60° E, 30° S - 34° E, 30° S - 24° E, to the point 00° - 24° E.

Note: Only one family of frequencies allotted to this area is available for extension through Cocos Island to Western Australia.

Major World Air Route Area - SOUTH ATLANTIC

(MWARA - SA)

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

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

Major World Air Route Area - SOUTH AMERICA-1

(MWARA - SAM-1)

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

Major World Air Route Area - SOUTH AMERICA-2

(MWARA - SAM-2)

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

Major World Air Route Area - SOUTH EAST ASIA

(MWARA - SEA)

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

Major World Air Route Area - SOUTH PACIFIC

(MWARA - SP)

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

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Geneva 1966

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22 March, 1966
Original : English

COMMITTEE 5

MWARA BOUNDARIES

REPORT OF COMMITTEE 5B

1. The text which follows was prepared pursuant to the decision of Committee 5 taken at its fifth meeting regarding the establishment of MWARA boundaries. The map showing the proposed MWARA boundaries is annexed herewith. A separate map showing the zones of analysis (ZA) on the same scale will be distributed in Committee 5.

2. The boundary descriptions which follow cover the areas to which frequencies are to be allotted under the frequency allotment Plan of the Conference.

These areas are shown graphically on the map attached hereto. If there is any difference between the areas as shown on the maps and as described, the written description is to be considered correct.

In the description of the Major World Air Route Areas (MWARA's) all lines between points not otherwise specified are defined as great circles.

3. Description of the Major World Air Route Area (MWARA) Boundaries

Major World Air Route Area - CARIBBEAN

(MWARA - CAR)

From the point 20° N - 120° W through the points 35° N - 120° W, 35° N - 85° W, 43° N - 74° W, 40° N - 60° W, 00° - 48° W, 00° - 80° W, to the point 20° N - 120° W.

Note: Only one family of frequencies allotted to this area is available for extension to the mid-point of the air route between Mexico City and Tahiti.

Major World Air Route Area - CENTRAL EAST PACIFIC

(MWARA - CEP)

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

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

Major World Air Route Area - NORTH PACIFIC

(MWARA - NP)

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

Major World Air Route Area - NORTH - SOUTH AFRICA-1

(MWARA - NSA-1)

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

Major World Air Route Area - NORTH - SOUTH AFRICA-2

(MWARA - NSA-2)

From the point 00° - 24° E through the points 37° N - 07° E, 37° N - 36° E, 30° N - 35° E, 10° N - 52° E, 22° S - 60° E, 30° S - 34° E, 30° S - 24° E, to the point 00° - 24° E.

Note: Only one family of frequencies allotted to this area is available for extension through Cocos Island to Western Australia.

Major World Air Route Area- SOUTH ATLANTIC

(MWARA - SA)

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

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

Major World Air Route Area - SOUTH AMERICA-1

(MWARA - SAM-1)

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

Major World Air Route Area - SOUTH AMERICA-2

(MWARA - SAM-2)

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

Major World Air Route Area - SOUTH EAST ASIA-1

(MWARA - SEA-1)

From the point 29° N - 86° E through the points 15° N - 105° E, 00° - 135° E, 00° - 168° E, 35° S - 150° E, 35° S - 116° E, 08° N - 75° E, to the point 29° N - 86° E.

Major World Air Route Area - SOUTH EAST ASIA-2

(MWARA - SEA-2)

From the point 24° N - 88° E through the points 37° N - 143° E, 35° N - 143° E, 10° N - 126° E, 07° S - 105° E, to the point 24° N - 88° E.

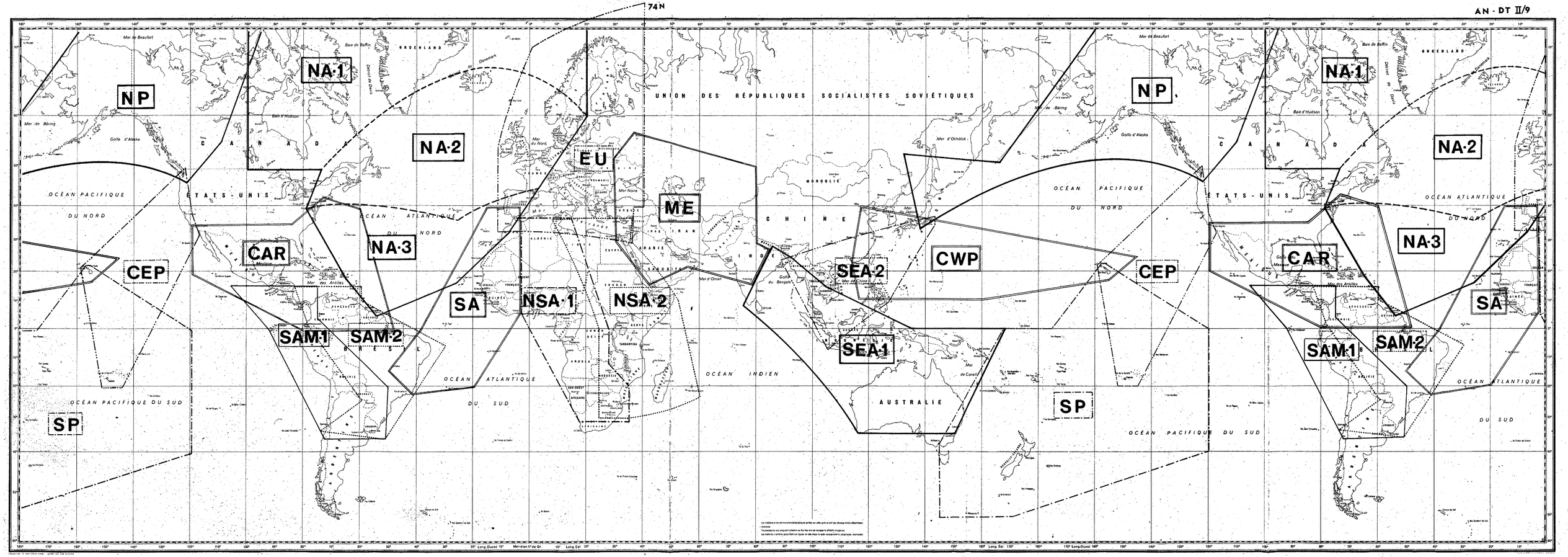
Major World Air Route Area - SOUTH PACIFIC

(MWARA - SP)

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

Note: The family of frequencies allotted to this area is available for extension to the mid-point of the air route between Tahiti and Mexico City.

Annex: 1


74N
NP
NA-1
NA-2
NA-3
EU
ME
CAR
CEP
SA
NSA-1
NSA-2
SAM-1
SAM-2
SP
SEA-1
SEA-2
CWP
UNION DES RÉPUBLIQUES SOCIALISTES SOVIÉTIQUES
CANADA
ÉTATS-UNIS
GROENLAND
OCÉAN PACIFIQUE DU NORD
OCÉAN ATLANTIQUE DU NORD
OCÉAN ATLANTIQUE DU SUD
OCÉAN PACIFIQUE DU SUD
OCÉAN INDIEN
CHINE
INDE
AUSTRALIE
BRESIL
Mer de Beaufort
Mer de Béring
Golfe d'Alaska
Baie de Baffin
Baie d'Hudson
Détroit de Davis
Mer du Nord
Mer Noire
Mer d'Okhotsk
Mer Jaune
Mer de Chine
Mer d'Oman
Golfe du Bengale
Mer des Antilles
Mer de Corail
Golfe du Mexique
Long Ouest 10°
Méridien 0° de Gr
10° Long Est 20°
Long Est 170°
170° Long Ouest 160°

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT II/10-E
22 March 1966
Original : English

COMMITTEE 4

DRAFT

FOURTH REPORT OF COMMITTEE 4 (TECHNICAL)

Classes of Emission and Power

(page 15 of Appendix 26)

Following a study of proposals by Administrations to the Conference and of the Report of the First Session, Committee 4 unanimously agreed the texts which appear in the Annex attached hereto.

Committee 4 recalls that the text of sub-paragraph 2.3 c) cannot be finalized until a decision has been taken on the proposal also to use VOLMET areas (Document No. II/10 page 23).

J.T. PENWARDEN
Chairman

Annex : 1

A N N E X

MOD

C. Classes of Emission and Power

ADD 1. Classes of emission

In the Aeronautical Mobile (R) Service the use of emissions such as listed below is permissible, provided that such use;

- complies with the applicable provisions of Chapter I, paras 4.5 and 6;
- does not cause harmful interference to other users of the frequency.

ADD 1.1 Telephony - Amplitude modulated

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

ADD 1.2 Telegraphy (including automatic data transmissions)

ADD 1.2.1 Amplitude modulation

- without the use of a modulating frequency (by on-off keying) (A1)
- on-off keying of an amplitude-modulating audio frequency or audio frequencies, or by the on-off keying of the modulated emission (A2)
- multichannel voice frequency telegraphy, single sideband, reduced carrier (A7A)
- multichannel voice frequency telegraphy, single sideband, full carrier (A7H)
- multichannel voice frequency telegraphy, single sideband, suppressed carrier (A7J)

ADD 1.2.2 Frequency modulation

- frequency shift keying without the use of a modulating audio frequency, one of two frequencies being emitted at any instant. (F1)

- by the on-off keying of a frequency modulating audio frequency or by the on-off keying of a frequency-modulated emission (F2)

ADD 1.3 Facsimile

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

MOD 2. Power

MOD 2.1 Unless otherwise specified in Part II of this Appendix, the maximum peak envelope powers supplied to the antenna transmission line have the 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
MOD	A1 F1 F2	Aeronautical Stations Aircraft Stations	1.5 kW 75 W
MOD	A3 A3H (100% modulated)	Aeronautical Stations Aircraft Stations	6 kW 300 W
ADD	A3A A3J A3B A2 A7A A7H A7J A4	Aeronautical Stations Aircraft Stations	6 kW 300 W

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

ADD 2.3 Aeronautical stations serving MWARA's may exceed the power limits specified above in order to provide satisfactory communication with aircraft. In each such case, the administration having jurisdiction over the aeronautical station shall ensure:

a) that co-ordination is effected with the administrations concerned when there is any possibility of harmful interference;

b) that harmful interference is not caused to stations using frequencies in accordance with the applicable provisions of the Allotment Plan;

c) that in other MWARA's or RDARA's allotted the same frequency(ies) the specified protection ratios within the boundaries of those areas shall be maintained;

d) that the directional characteristics of the antenna are such as to minimize radiation in unnecessary directions, particularly into other MWARA's or RDARA's which have been allotted the same frequency(ies);

e) that, in accordance with the Radio Regulations, full details of the assignment(s) shall be notified to the I.F.R.B. including the transmitting antenna characteristics.

ADD 2.4 It is recognized that the power employed by aircraft transmitters may, in practice, exceed the limits specified above. However, the use of such increased power shall not cause harmful interference to stations using frequencies in accordance with the technical principles on which the Allotment Plan is based.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-11-E
22 March 1966
Original: English

COMMITTEE 4

FIRST REPORT OF WORKING GROUP 4A
TO COMMITTEE 4

THEORETICAL EVALUATION OF HIGH FREQUENCY
COMPLEMENTS FOR THE AERONAUTICAL
MOBILE (R) SERVICE

Appended hereto is the Report of Working Group 4A on the above subject which is submitted for the consideration of Committee 4.

Participating in the work of the Group were the Delegates of Australia, the Republic of South Africa, France, the Union of Soviet Socialist Republics and the United States of America. Mr. J.A. Gracie, member of the I.F.R.B. kindly assisted the Group.

The Report was unanimously agreed by the Group.

George W. HAYDON
Chairman

Appendix: 1

APPENDIX

THEORETICAL EVALUATION OF HIGH FREQUENCY COMPLEMENTS FOR THE AERONAUTICAL MOBILE (R) SERVICE

1. Committee 4 commends to the Chairman of Committees 5 and 6, for their guidance and benefit in statistical analysis and frequency planning, NBS Report No. 9141, entitled "Theoretical Evaluation of Band 7 Frequency Complements for the Aeronautical Mobile (R) Service".

2. This report, recently made available, in limited quantity in English only, to heads of delegations at this Conference, presents numerical criteria by which the relative merits of various families of frequencies may be evaluated on a theoretical basis in meeting the requirements of route areas and of individual routes within such areas.

3. The Report is directed primarily at the solution of MWARA problems and data samples were based on a minimum distance of 500 km along Major World Air Routes out to 60% of the flight distance between the terminals of each segment.

4. During discussions in Committee 4, there appeared to be correlation shown between theoretical optimum frequency complements and the complements presently in use on the limited number of MWARAs and routes examined.

5. The Report appears to have particular application in demonstrating:

   a) the comparative circuit reliability of 3, 4 or 5 frequency families; and

   b) the wide flexibility available to frequency planners in changing one frequency or another within a family to avoid interference problems without detracting from overall circuit reliability.

6. Committee 4 recommends that the Report be regarded as a working tool to supplement the practical experience upon which the existing plan is built, rather than the basis upon which to build a new plan, and that it be applied in the following manner:

   6.1 In Major World Air Route Areas (MWARAs)

      6.1.1 The data in this Report be used for numerical comparison of:

         (a) the reliability of communication depending upon the selection of frequencies for each family;

(b) the reliability of communication depending upon the number of frequencies in each family.

6.1.2 Whenever necessary, frequency planners should use the wide range of choice as indicated in the Report in the selection of families of frequencies. The minimum number of frequencies to provide the required figure of merit should be selected.

6.1.3 This required figure of merit could be established by noting the theoretical reliability of frequency complements which are considered to be operating satisfactorily in the established MWARAs. The minimum of these values could represent an initial interim figure of merit to be equalled or exceeded in the development of a frequency plan. In the early planning it is expected that this figure would be about 28 to 30.

6.1.4 For established MWARAs, the data in the Report be applied directly unless some circuits in the area differ substantially from those used in the Report.

6.1.5 If established MWARAs are modified, the figure of merit for the revised MWARA be approximated by noting whether ground stations considered in the evaluation for established MWARAs have been added or removed from the modified MWARA. If a new location is added, the figure of merit for the frequency family under consideration may be increased or decreased in accordance with the figure of merit associated with the new location. If a station is removed the effect is vice versa.

6.1.6 If new MWARAs are formed, figures of merit for these MWARAs be approximated by noting figures of merit for circuits of comparable length and latitudes and combining these for the new MWARA. The North Polar Area and the Caribbean Area are considered in appendices to the Report.

6.2 In Regional and Domestic Air Route Areas (RDARAs)

6.2.1 The information contained in the Report can be applied directly to the solution of RDARA frequency family selection problems if the three following criteria are met simultaneously:

(a) the RDARA should correspond geographically with a route segment of a Major World Air Route on which data has been presented in the Report;

(b) the high frequency skywave communication requirement in the RDARA should be negligible for distances of less than 500 km;

(c) the maximum distance over which high frequency communication is required in the RDARA should approximate to the distance shown in Column 3 of the Annex to the present paper alongside the corresponding MWARA route segment.

6.2.2 Should the RDARA requirement differ from those specified above (for example, should the distance over which communication is required be appreciably shorter than those assumed for the corresponding route segment) further guidance on the application of the data to the solution of RDARA problems may be obtained from Appendices to the Report. Committee 4 is giving further consideration to this question.

7. Finally, Committee 4 recognizes that a theoretical evaluation of frequency complements should not dominate frequency planning where extensive operational experience is available, especially if operational requirements differ significantly from the assumptions used in the Report.

Annex: 1

Annex

Table of maximum communication distances considered in NBS 9141

MWARA	Route Segment	Maximum Distance - km
CEP	SFO - HNL	3000
CWP	TYO - HNL	4000
	HNL - AWK	3000
	AWK - MNL	3000
EU	LIS - OSL	2000
FE-1	SYD - DRW	2000
	DRW - SIN	3000
	SIN - BKK	1000
	BKK - CCU	1000
FE-2	DRW - MNL	2000
	MNL - HKG	1000
	HKG - BKK	1500
ME	ROM - ANK	1500
	ANK - THR	1500
	THR - KHI	1500
	KHI - CCU	1500
NA	NYC - YQX	1500
	YQX - SNN	3000
NP	SEA - CDB	2000
	CDB - TYO	3000
NSA-1	JNB - LEO	2000
	LEO - ACC	1500
	ACC - DKR	1500
	DKR - ALG	2000
NSA-2	JNB - NBO	2000
	NBO - KRT	1500
	KRT - CAI	1000
	CAI - ROM	1500
NSAM-1	SCL - LIM	1500
	LIM - BLB	1500
	BLB - MEX	1500
NSAM-2	BUE - CCS	4000
SA	MVD - RIO	1500
	RIO - DKR	3000
	DKR - PAR	3000
SP	AKL - PPG	2000
	PPG - HNL	3000

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24 March 1966
Original : English

COMMITTEE 5

REPORT OF SUB-GROUP 5E

The Sub-Group met at 3.00 p.m. on 21 March 1966. The following Administrations were represented :

Australia (Commonwealth of)	(Mr. A.C. BOAL)
Singapore	(Mr. S.K. WAN)
China	(Mr. H.W. TIEN)
India (Republic of)	(Mr. S.C. BOSE)
Japan	(Messrs. T. FURUYA & A. CHIBA)
New Zealand	(Mr. G.L. BUDD)
French Overseas Territories	(Mr. M. CHEF)

After taking into consideration Resolution No. 4 of the First Session of the Aeronautical E.A.R.C., Documents Nos. II/11, II/18 and II/37 and the proposals put forward during the meeting of the Sub-Group by the Delegates of Japan, New Zealand and French Overseas Territories, the Sub-Group 5E makes the following proposals :

Sub-Area 6A

No change.

Sub-Area 6B

No change.

Sub-Area 6C

Amend the delineation to read as follows :

"From the point 20° N 130° E through the point 04° N 130° E to 04° N 118° E. Thence along the border between North Borneo and Indonesian Borneo to the point 03° N 109° E and through the points 03° N 106° E,

10° S 106° E, 10° S 141° E, 00° 141° E, 00° 160° E, 03° 30' N 160° E, 03° 30' N 170° W, 10° N 170° W, 20° N 176° W to 20° N 130° E."

Sub-Area 6D

No change.

Sub-Area 6E

No change.

Sub-Area 6F

No change.

Sub-Area 8A

No change.

Sub-Area 9A

Amend delineation to read as follows:

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

Sub-Area 9B

Amend the delineation to read as follows :

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

Sub-Area 9C

Amend the delineation to read as follows:

"From the South Pole along the 170° W meridian to 03° 30' N. Then through the point 03° 30' N 120° W and along the 120° W meridian to the South Pole."

Sub-Area 9D

Amend the delineation to read as follows :

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

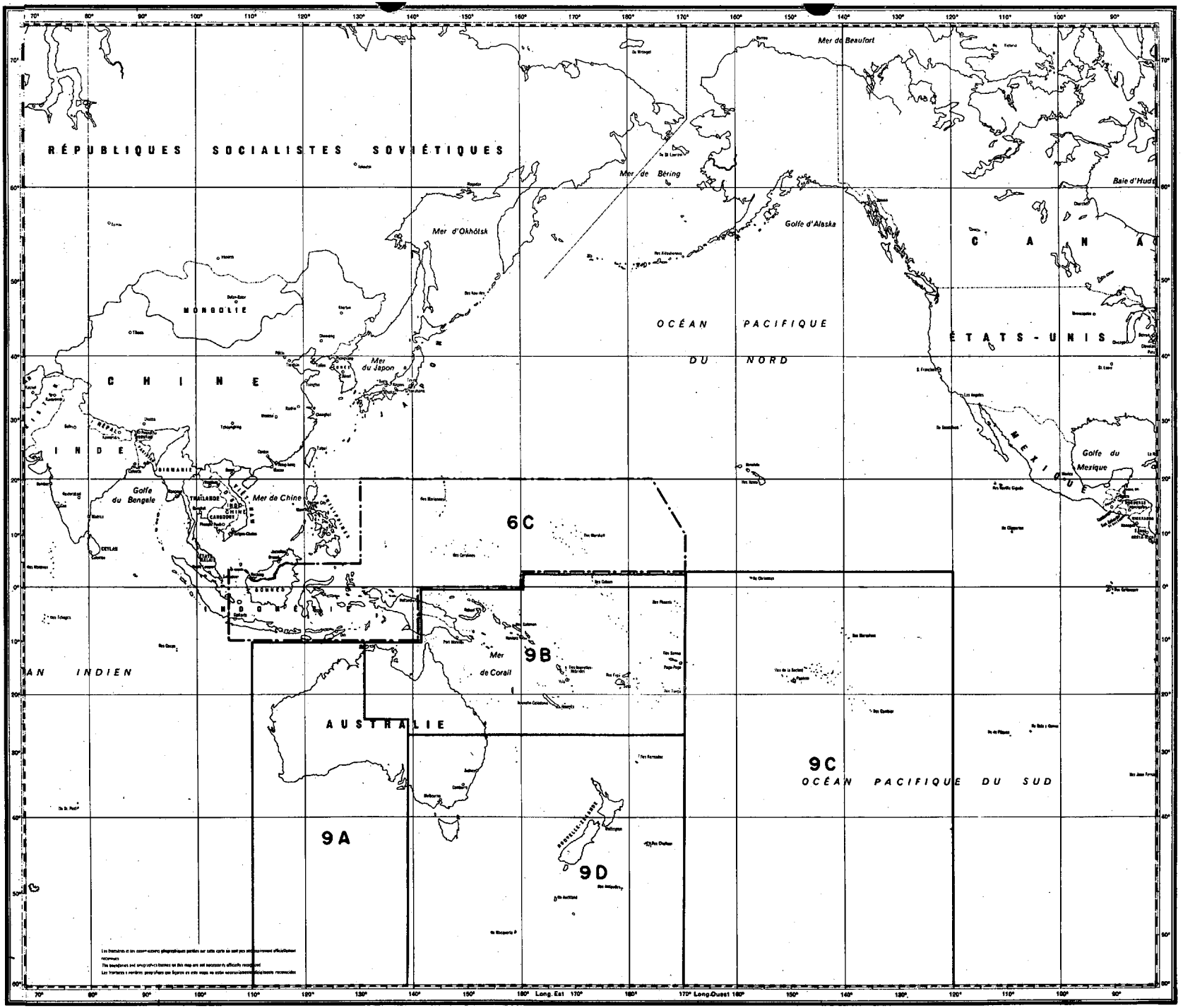
Sub-Area 9E

Delete the Sub-Area 9E.

A map showing the proposed changes is annexed herewith.

Rapporteur:
A. BOAL

Annex : 1


RÉPUBLIQUES SOCIALISTES SOVIÉTIQUES
Mer de Beaufort
Mer de Béring
Baie d'Hudson
Golfe d'Alaska
Mer d'Okhôtsk
C A N A
MONGOLIE
OCÉAN PACIFIQUE
DU NORD
ÉTATS-UNIS
C H I N E
Mer du Japon
I N D E
Golfe du Bengale
Mer de Chine
Golfe du Mexique
6C
9B
Mer de Corail
AN INDIEN
AUSTRALIE
9C
OCÉAN PACIFIQUE DU SUD
9A
9D
Long. Est
Long. Ouest

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-13-E
23 March 1966
Original : French

COMMITTEE V

PROPOSED FREQUENCY ALLOTMENTS IN THE MWARAs

In accordance with the decisions taken at the 4th Meeting of Committee V (cf. Document No. 74, point 2.8), I hereby submit my proposals concerning the expression of frequency requirements for the MWARAs.

The statements made by the I.C.A.O. representative and the observer for I.A.T.A. are annexed to this document.

M. CHEF
Chairman

Annexes : 3

ANNEXE 1 - ANNEX 1 - ANEXO 1

ZLAMP - MWARA - ZRMP

ZONE - AREA - ZONA			N	Nombre de familles de fréquences nécessaires (N/12) Required number of frequency families (N/12) Número de familias de frecuencias necesarias	Elements de réduction Reduction elements Elementos de reducción	Allotissement Appendice 26 Allotment in Appendix 26 Adjudicación Apéndice 26		Conditions d'utilisation Plan régional O.A.C.I. Operational conditions I.C.A.O. Regional Plan Condiciones de utilización Plan regional O.A.C.I.	Proposition (Nombre de familles) Proposal (Number of families) Proposición (Número de familias)	Remarques Remarks Observaciones
d'Analyse of analysis de análisis	ZLAMP MWARA ZRMP	Observations relatives à l'identification de la zone Remarks on area identification Observaciones de identificación de la zona				Nombre de familles Number of families Número de familias	Nombre de fréquences Number of frequencies Número de frecuencias			
1	2	3	4	5	6	7	8	9	10	11
A	NAT	Lignes Arctiques Arctic Lines Rutas árticas		0 3 survols par jour 3 flights a day 3 vuelos por día			néant nil ninguna	2868 5626,5 8913,5 13 324,5	1 famille NAT étendue 1 extended NAT family familia extendida	(famille D) (family D) (familia D)
B		URS	1	0			néant nil ninguna		néant nil ninguna	

1	2	3	4	5	6	7	8	9	10	11
C	NAT & NP	Lignes Arctiques et Amérique du Nord Arctic and North American Lines Rutas árticas y América del Norte	37	3			néant nil ninguna	2868 5626,5 8913,5 13 324,5 Résolute case Resolute box Cuadro Resolute 36 Churchill case Churchill box Cuadro Churchill 144 Winnipeg case Winnipeg box Cuadro Winnipeg 218	1 famille NAT étendue 1 extended NAT family familia ampliada	(famille D) (family D) (familia D)
D	EU	Europe Europa	140	12	N = 24 VHF = 50% VOLMET	2	13	Réseau A 2910 Network A 4689,5 Red A 6582 8871 11 299,5 Réseau B 3467,5 Network B 5551,5 Red B 6567 8930,5 11 299,5	A	N Londres/ Istanbul London/ Istanbul Londres/ Estambul S Londres/ Istanbul (ZLARN 1) London/ Istanbul (RDARA 1) Londres/ Estambul (ZRRN)

1	2	3	4	5	6	7	8	9	10	11
								A1 3453,5 4668,5 5649 8837 13 314,5		(ZLARN 1) (ZLARN 1) (ZLARN 1) (ZLARN 1) (ZLARN 1)
E	NSA1		23	2	combinaison SA VHF 10%	1	5	3411,5 5521,5 8820 13 304,5	1	Réseau 2 et 4
F	NSA2		31	3	N = 15	1	5	2966 5506,5 8956 13 334,5	2	Réseau 3 et 5
G	ME		23	2	N = 12	2	8	3404,5 5604 8845,5 13 334,5	2	Réseau MID/1 (W)
								3446,5 6627 10 021 13 334,5		Réseau MID/2 (E)
H	FE2		24	2		1	5	2987 5671,5 8930,5 13 324,5 17 966,5	2	Réseau SEA 1 (W)

1	2	3	4	5	6	7	8	9	10	11
								2868 5611,5 8837(ZLARN 6F) 13284,5 17966,5		Réseau SEA 2 (E)
I	FE1		25	2	K = 1,5	1	6	2987 5671,5 8871 13324,5 17966,5	1	Réseau SEA 3 (S)
J	CWP		61	5	VHF 15% VOLMET	1	5	2966 5506,5 5536,5(ZLARN 6C) 8862,5 13354,5 17906,5	2	Réseau 1 Réseau 2
K	NP	Lignes Maritimes	11	1		1	5	2987 5521,5 8939 13274,5 17906,5 Point Barrow case 63	1	
L	SP		7	1		1	5	2945 5641,5 8845,5 13344,5 17946,5	1	

1	2	3	4	5	6	7	8	9	10	11
M	CEP		6	1		2	17	3467,5 5551,5 5604 8879,5 8930,5 13304,5 17926,5 ZLAMP/ZLARN	1	2 stations
N	CAR	Plan O.A.C.I.	78	7	N = 20 VHF = 5%	0	0	2966 NSAM 2 6537 12 D 8837 12 D 13344,5 NSAM 2 17936,5 12	3 (13 fré- quences)	Réseau C (centre)
								2966 NSAM 2 5566,5 NSAM 2 8871 NSAM 2 13344,5 NSAM 2		Réseau E (Est)
								2966 NSAM 2 5499 12 D 8837 12 D 13344,5 NSAM 2		Réseau S (Sud)
								2952 12 J 5619 12 J 10021 12 J 13294,5 12 17916,5 NSAM1-2		Réseau W (Ouest)

1	2	3	4	5	6	7	8	9	10	11
O	NAT	Lignes centrales	141	12	N = 24 K = 2	4	17	2931 5611,5 8947,5	4	Réseau A (Sud)
P	-	Lignes Australes	-	-	(Doc 55 IRL) VHF = 5% VOLMET			13324,5 2987 5671,5 8888 13284,5 2945 5641,5 8862,5 13354,5 2868 5626,5 8913,5 13324,5 17966,5	(voir également zone analyse C)	Réseau B (centre) Réseau C (centre) Réseau D (Nord) avec lignes arctiques
Q	SA		17	1	N = 15	2	10	3432,5 6612 8879,5 13274,5 17946,5	1	Réseau AFI 1 (Ouest) Réseau SAT
R	NSAMI		9	1		1	6	2889 4696,5 6664,5 8820 13314,5 17916,5	1	Réseaux SAM NW et SW

1	2	3	4	5	6	7	8	9	10	11
S	NSAM2		9	1		2	12	2910 5581,5 8845,5 13344,5 17916,5	1*	Réseaux SAM NE-C et SE * compte tenu création
T		Antarctique E	0						0	ZLAMP CAR
U		Antarctique W	0						0	
									Total 26	

ANNEX 2

STATEMENT BY THE I.C.A.O. REPRESENTATIVE

The I.C.A.O. representatives have studied the document prepared by the Chairman of Committee 5, and have come to the following conclusions:

It is obvious that in many cases the results of the statistics in terms of family of frequencies required exceed existing usage of frequencies for international air operations and/or known or foreseen requirements. This is apparent from the comparison between the information given for "number of families of frequencies required" and the information supplied with respect to frequency utilization according to I.C.A.O. Regional Plans. In general, I.C.A.O. regional meetings have not found it excessively difficult to find the necessary frequencies to satisfy the operational requirements for air/ground communications. It is therefore equally apparent that, with respect to several MWARA's, factors of reduction can be applied to the families of frequencies required according to the statistics.

The elements of reduction that could be applied in several instances are difficult to determine accurately since they vary greatly in different areas. Some of the elements of reduction that could be applied are indicated in the present document. They are based on what appear to be, in the time available for a detailed analysis, reasonable assumptions.

With respect to the proposed number of families of frequencies in the penultimate column of the table in Document DT/13 these appear to cover requirements of international civil aviation for air/ground communications on the basis of presently known operational requirements which, in some instances, also cover foreseen requirements for the next five years.

ANNEX 3

STATEMENT BY THE I.A.T.A. OBSERVER

The Observers of I.A.T.A. have studied the document prepared by the Chairman of Committee 5 and the comments on this document presented by the I.C.A.O. representatives, and offer the following observations.

1. I.A.T.A. agrees with the observations made by the I.C.A.O. representatives with respect to the frequency utilization according to the I.C.A.O. Regional Plans. From time to time in some I.C.A.O. regional meetings there was a need to add to the frequency complement of MWARA families available to the allotment area in question and no difficulty was experienced in finding such additional frequencies, in some cases families, within the technical principles of the current allotment plan. It should also be observed, however, that during the last five years several I.C.A.O. regional meetings found it desirable to reduce the actual MWARA frequency assignments to various stations, particularly with respect to the higher orders, in order to increase communication efficiency for stations where more than one family of frequencies had to be guarded, such simplifications being justified by the reduced loading on the channels in question. In this respect it should also be observed that part of the proposals for re-alignment of MWARA boundaries are directed towards such simplification of actual assignments of frequencies.

2. With respect to the number of flights which can be handled on a frequency family, I.A.T.A. believes that at this stage in the development of the world wide international aeromobile service it is not possible to develop a realistic principle applying to all areas, as the operational circumstances pertaining to the usage of HF frequencies vary too much from region to region. The following points, however, might explain some of the discrepancies between the requirements as presented in DT/II-2 and the actual frequency usage in the MWARAs.

2.1 In an air route area like the North Atlantic the channel occupancy per aircraft per hour has been significantly reduced during the last five years due to the following factors:

a) As experience in the operation of modern types of aircraft increased, it was found that less direct, in-flight operational support was needed which significantly reduced the number and the length of messages transmitted by the airlines' operational control offices to the aircraft.

b) By I.C.A.O. regional agreement the average length of the messages associated with routine position reporting were significantly reduced.

c) Improvements in the VOLMET service greatly reduced the need for the "request/reply" and the "company-initiated" methods of obtaining weather information in flight.

2.2 The impact of VHF coverage has been very significant along a number of the major world air routes. As an example, at a recent I.A.T.A. meeting, it was estimated that for jet operations on various international air routes from the Middle East into South East Asia, e.g. Beirut-Singapore, for jet aircraft at least 85% of the air/ground contacts in the en route phases of the flights, were conducted on VHF. The actual percentage varies from route segment to route segment and, to some extent from aircraft operator to aircraft operator, depending upon the extent of the VHF coverage, the nature of the VHF coverage with respect to the specific communications functions of the channels, and the operating practices of the aircraft operator. Apart from the reduction in loading on the lower order of families due to VHF coverage, there has also been a very significant reduction in the relative traffic loading on the higher orders; with the great improvements in the fixed telecommunications services available to the airlines, the need to communicate on a routine basis over long distances in the aeromobile service in these areas has been considerably reduced. The unloading of the higher order of frequencies made it possible for the operators at the various ground stations to serve a greater number of aircraft more efficiently on the medium order of frequencies on which the bulk of the present routine communications traffic is handled.

Naturally, the above observations do not mean that in the foreseeable future there would be no need for the HF service in these areas. In fact, the availability of the HF service also over the longer distances today is as important to the air operations as it ever was although the relative loading may have been reduced.

3. In conclusion, I.A.T.A. believes that the method proposed by the Chairman of Committee 5 in Document DT/II-13 to rationalize the requirements for frequency allotments to the major world air route areas provides, in principle, a realistic approach.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-14-E
24 March 1966
Original : French

COMMITTEE 5

FIRST REPORT BY WORKING PARTY 5C
TO COMMITTEE 5

REVISION OF PART II, ARTICLE 2, OF APPENDIX 26 TO THE RADIO REGULATIONS, PAGES 19 - 25 (I.T.U. REGION 1), AND ANNEXED MAP 2

The First Report by Working Party 5C on this question is attached hereto. It is submitted for consideration by Committee 5.

The delegates of Algeria, Federal Republic of Germany, Saudi Arabia, Bulgaria, Cameroon, Ethiopia, Ghana, Hungary, Nigeria, Poland, Roumania, Czechoslovakia and the U.S.S.R. took part in the Working Party's proceedings. A representative of the I.F.R.B. also participated in the work.

The Working Party's final report will be submitted to Committee 5 as soon as it has been approved by the members of the Working Party.

M. ABDEL WAHAB
Chairman of Working Party 5C

Annex : 1

A N N E X

ARTICLE 2

DESCRIPTION OF THE REGIONAL AND DOMESTIC AIR ROUTE AREA (RDARA) BOUNDARIES

Regional and domestic air route area - 1 (RDARA - 1)

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 U.A.R. to Alexandria, thence to Cairo, and eastward along the 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, Czechoslovakia and Poland; along the U.S.S.R. Baltic Sea coast, to the border between Finland and the U.S.S.R. Then to the point 70°N 32°E, and along the 32°E meridian to the North Pole.

Sub-Area 1A.

From the point 65°N 26°W, and through the points 40°N 50°W, 40°N, 13°W, 60°N 13°W, 60°N 26°W, to the point 65°N 26°W.

Sub-Area 1B.

Sub-Area 1C.

Sub-Area 1D.

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, 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 U.A.R. 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 South Coast of the Black Sea. Thence west 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.

Sub-Area 1E.

Regional and domestic air route area - 2

(RDARA - 2)

From the North Pole along the 32°E meridian to the 70°N parallel. Then along the border between 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 boundary between the U.S.S.R. and Poland. Thence along the border between the U.S.S.R. and the following countries: Poland, Czechoslovakia, 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 the 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-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.

Sub-Area 2A.

From the North Pole along the 32°E meridian to 70°N. Then along the border between 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.

Sub-Area 2B.

From the point 55°N 88°E and through the point 55°N 60°E, to the point 47°N 53°E. Thence along the east coast of the Caspian Sea to the Iranian coast. Thence east along the southern border of the U.S.S.R. to the intersection of the Mongolia-China-U.S.S.R. borders at approximately 49°N 88°E; thence along the 88°E meridian to 55°N.

Sub-Area 2C.

From the point 55°N 60°E, to Moscow, to 55°N 20°E. Thence south along the boundary between the U.S.S.R. and Poland. Thence along the border between the U.S.S.R. and the following countries: Poland, Czechoslovakia, 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 borders of 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.

Regional and domestic air route area - 3

(RDARA - 3)

From the North Pole to the point 55°N 60°E, thence along the 55°N parallel to 88°E. Then along the 88°E meridian to the intersection of the Mongolia-China-U.S.S.R. borders at approximately 49°N 88°E. Then along the border between Mongolia and China, and U.S.S.R. and China, to the coast. Between the territorial waters of U.S.S.R. and Japan to the point 43°N 147°E and through the point 50°N 164°E, to 65°N 170°W. Then along the 170°W meridian to the North Pole.

Sub-Area 3A

From the North Pole along the 60°E meridian to 55°N. Then along the 55°N parallel to 88°E. Then through the point 60°N 88°E to 60°N 110°E, and along the 110°E meridian to the North Pole.

Sub-Area 3B.

From the North Pole along the 110°E meridian to 60°N 110°E, and through the points 60°N 147°E, 43°N 147°E, 50°N 164°E, to 65°N 170°W. Then along the 170°W meridian to the North Pole.

Sub-Area 3C.

From the point 60°N 88°E to the intersection of Mongolia-China-U.S.S.R. borders at approximately 49°N 88°E. Along the border between Mongolia and China, and U.S.S.R. and China, to the coast. Between the territorial waters of U.S.S.R. and Japan to the point 43°N 147°E. Then through the point 60°N 147°E to the point 60°N 88°E.

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 northern border of the Democratic Republic of the Congo, (excluding Cabinda Territory) to the border between the Republic of the Congo (Brazzaville), the Central African Republic and the Republic of the Sudan. Thence north along the western border of the Sudan. Along the western border of the U.A.R., 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.

Sub-Area 4A.

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 Fort-Lamy. Then along the Fort-Lamy parallel to 12°N 22°E. Thence north along the western border of the Sudan, and along the western border of the U.A.R. 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.

Sub-Area 4B.

From the point 21°N 31°W through the points 10°N 20°W, 05°S 20°W, to 05°S 12°E. Thence along the southern border of the Republic of the Congo

(Brazzaville) and the Central African Republic to the junction between the Democratic Republic of the Congo, the Sudan and the Central African Republic.

Along the western border of the Sudan to the point 12°N 22°E. Thence along the Fort-Lamy parallel to the Nigerian border. Then west along this border to Zinder. From Zinder through Gao to close the sub-area at 21°N 31°W.

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 U.A.R. on the North African coast excluding Cyprus. Southwards along the western boundary of the U.A.R., and the Sudan to the border of Kenya. Thence east along the northern border of Kenya, and then south along the border between Kenya and Somaliland, to the East African coast at 02°S 41°E. Then through the point 02°S 73°E to the boundary 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.

Sub-Area 5A.

From the point 37°N 40°E, along the border between Turkey and the Syrian Arab Republic to the Mediterranean coast. Thence to the common border of Libya and the U.A.R. on the North African coast, excluding Cyprus. Southward, along the western boundary of the U.A.R. and east along the common border of the U.A.R. and the Sudan to 24°N 37°E. Then through the points 12°N 44°E, 12°N 49°E, to the point 30°N 49°E. Thence along the border between Iran and Iraq, and the border between Iraq and Turkey to 37°N 40°E.

Sub-Area 5B.

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 Iraq, and along the border between 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 Afghanistan-Pakistan border and west along the southern boundary 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.

Sub-Area 5C

From the point 30°N 49°E, and through the points 12°N 49°E, 13°N 54°E, 02°S 54°E, 02°S 73°E, to Bombay. Then to 24°N 60°E. Then along the middle of the Persian Gulf to 30°N 49°E.

Sub-Area 5D

From the junction point of the U.A.R., Libya and the Sudan southwards 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 Somaliland to the east African coast, at the point 02°S 42°E. Then through the points 02°S 54°E, 13°N 54°E, 12°N 49°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 U.A.R. to close the sub-area.

Regional and Domestic Air Route Area - 6

(RDARA - 6)

(See Working Party 5E - Region 3 - I.T.U.)

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 northern border of the Democratic Republic of the Congo, including Cabinda territory, along the border between Uganda, and Sudan, and between Kenya and the following countries : Sudan, Ethiopia and Somalia to the point 02°S 42°E. Then to 02°S 60°E, and along the 60°E meridian to the South Pole.

Sub-Area 7A

From the South Pole along the 20°W meridian to 05°S. Then through the points 05°S 10°E, 40°S 10°E, to 40°S 60°E. Then along the 60°E meridian to the South Pole.

Sub-Area 7B

From the point 05°S 10°E to 05°S 12°E. Thence along the northern border of the Democratic Republic of the Congo, including Cabimda Territory, to the junction of the borders of Uganda, Democratic Republic of the Congo and Sudan. Thence south along the eastern and southern border of the Democratic Republic of the Congo, including the Kingdom of Burundi and the Republic of Rwanda, and along the eastern and southern border of Angola to the coast of the South Atlantic. Thence to the point 17°S 10°E, and then to close the sub-area at 05°S 10°E.

Sub-Area 7C

From the junction of the borders of Uganda, Democratic Republic of the Congo and Sudan along the western border of Uganda and Tanzania, and then along the southern border of Tanzania to the coast. Thence through the points 11°S 41°E, 11°S 60°E, 02°S 60°E, to 02°S 41°E. Thence to the east coast of Africa. Then north along the border between Kenya and Uganda. Then west along the northern borders of Kenya and Uganda to close the sub-area at the junction of the borders of the Democratic Republic of the Congo, Sudan and Uganda.

Sub-area 7D

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

Sub-area 7E

From the point 17°S 10°E, and through the points 40°S 10°E, 40°S 33°E, to 27°S 33°E. Thence along the west border of Mozambique to Lake Nyasa. Thence along the border between Zambia and Tanzania and along the borders between the Democratic Republic of the Congo and Zambia, between the Democratic Republic of the Congo and Rhodesia and between Angola and Rhodesia, and Angola and the Republic of South Africa to the point 17°S 10°E.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT II/15-E
23 March 1966
Original : Spanish

COMMITTEE 5

REPORT OF WORKING PARTY 5D

Under the terms of reference of Committee 5, Working Party 5D met to revise the geographical boundaries of the regional and domestic air route areas (RDARAs) in I.T.U. Region 2. The Working Party comprised delegates of:

Argentina
Brazil
Colombia
Cuba
Ecuador
U.S.A.
Jamaica
Mexico
Surinam
Venezuela and
an I.C.A.O Observer

An official of the I.F.R.B. also participated in the work.

The changes made in 12A, 12B and 9C were agreed in coordination with Working Group 5E.

The following Recommendations were submitted by the various delegates:

Area 10 : the United States sees no reason to make any changes in this area. As stated by the Delegate of Canada in Committee 5, the present boundaries of Sub-Areas 10A, 10B, 10C, 10D and 10E should be retained.

Area 11 : the United States proposes that Sub-Areas 11B, 11C, 11D, 11E, 11F, 11G, 11H and 11I be merged in a single Sub-Area 11B which would have the following geographical coordinates : 50°N 127°W, 33°N 127°W, 33°N 119°W 25°N 98°W, 25°N 35°W, 40°N 50°W, 40°N 65°W, 46°N 67°W, then along the frontier between the United States and Canada to close the sub-area at 50°N and 127°W.

The proposed changes are shown in the attached chart.

Area 12 : the United States proposes that Sub-Area 12A be extended southward to coincide with the boundaries of the I.C.A.O. flight information region to 3°30'N and 170°W. Then along the edge of I.T.U. Regions 2 and 3 to 29°N and 180°W and thence to 29°N and 153°W, 3°30'N and 153°W to close the area at 3°30'N and 170°W.

Sub-Area 12B : there was no objection to the minor amendment of the south-western boundary of Sub-Area 12B to conform with the change to Sub-Area 9C proposed by the French Overseas Territories. The adjusted coordinates for 12B would then be as follows:

Sub-Area 12B : COORDINATES:

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°N 93°W, 05°N 120°W, 03°30'N 120°W to close the area at 03°30'N 153°W.

Sub-Area 12C : no change.

Sub-Area 12D : no change.

Sub-Area 12E : at the request of the Delegate of Ecuador, the boundaries of Sub-Area 12E were extended south-eastward to include Ecuador in this sub-area as follows:

From 15°N 95°W and through 23°N 92°W, 23°N 85°W, 19°N 85°W, 09°N 77°W, 02°N 79°W. Thence to 01°N 75°W along the eastern and southern frontier of Ecuador to the point 04°S 81°W, and from there to 02°N 81°W and 02°N 86°W, 14°N 93°W to close the sub-area at 15°N 95°W.

Sub-Area 12F : no change.

Sub-Area 12G : no change.

Sub-Area 12H : the boundaries of Sub-Area 12H now amended as follows: 10°S 70°W, 05°N 70°W, 05°N 61°10'W, 08°45'N 60°W, 08°N 58°W, 08°N 49°W, 02°N 47°W, 10°S 47°W and thence to the point 10°S 70°W.

The change in Sub-Area 12H causes two small triangles to remain outside any sub-area. These triangular areas can be included in either 12I or 13K.

Sub-Area 12J : should be abolished as the flights now served in that sub-area are to be served by MWARA CAR, which had already been approved. The Jamaican Delegate asked whether the frequencies of Sub-Area 12J would be included in the Region CAR. The Rapporteur replied that while the assignment of frequencies was not included in the Working Party's terms of

reference, it would be assumed that, with the disappearance of Sub-Area 12J, those frequencies would be transferred to the frequency family of Region CAR and that this should be taken into account by Committee 6.

The United States Delegate asked whether the boundaries of Sub-Area 12J were included unchanged in the new MWARA CAR. The Rapporteur replied in the affirmative. The United States Delegate said that he had no objection to the abolition of Sub-Area 12J.

The Jamaican Delegate said that he was not opposed to the abolition of Sub-Area 12J.

Sub-Area 13C : no change.

Sub-Area 13D : no change.

Sub-Area 13E : no change.

Sub-Area 13F : no change.

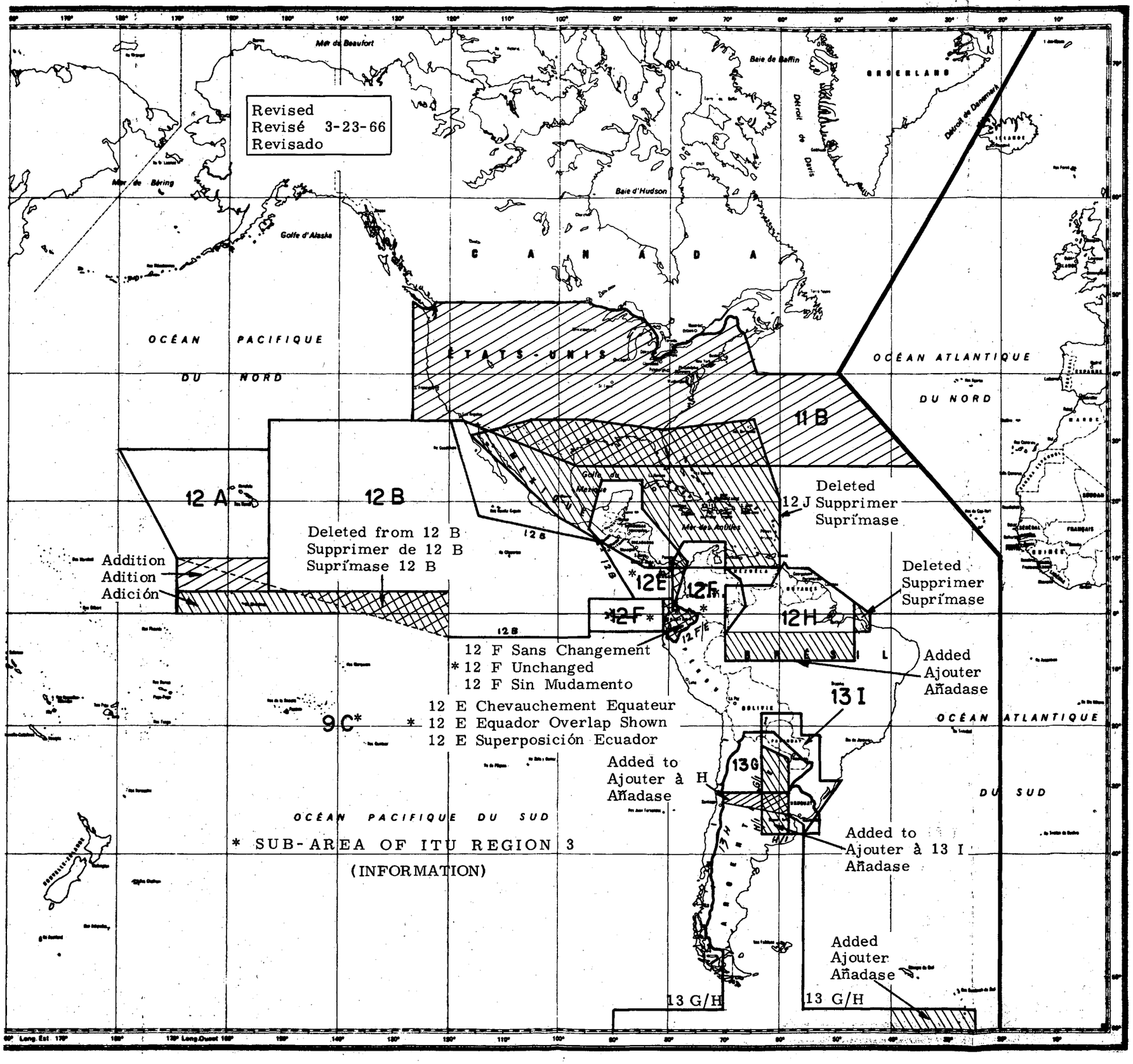
Sub-Area 13G : to be changed as follows : from the point 57°S 90°W, and through the points 57°S 70°W, and 52°S 70°W, then along the frontier between Argentina and Chile, and through the points 21°S 68°W, 21°S 62°W and thence to the meeting point of the frontiers of Argentina, Paraguay and Brazil. Then following the frontiers of Argentina with Brazil and Uruguay and through the points 36°S 56°W to 57°S 56°W, and 57°S 25°W to the South Pole to close the sub-area at 57°S 90°W. The attached map shows the changes concerned.

Sub-Area 13H : to be changed as follows : from the point 57°S 90°W, and through the point 57°S 70°W, to 52°S 70°W. Then along the frontiers between Argentina and Chile to the intersection with the 31°S parallel, and thence to the frontier between Argentina and Uruguay, continuing south of the frontier, and through points 35°S 56°W, 57°S 56°W, 57°S 25°W, to the South Pole, to close the sub-area at 57°S 90°W.

Sub-Area 13I : to be changed as follows : from 18°S 63°W through 18°S 56°W, 22°S 56°W, 22°S 53°W, 29°S 53°W, 29°S 47°W, 37°S 56°W, 37°S 63°W to close the sub-area at 18°S 63°W. These changes are indicated on the attached map.

L. SIGLER
Rapporteur
Working Party 5D

Annex : 1


Revised
Revisé 3-23-66
Revisado
Mer de Beaufort
Mer de Béring
Golfe d'Alaska
Baie de Baffin
Détroit de Davis
Baie d'Hudson
GROENLAND
Détroit de Danemark
C A N A D A
ÉTATS-UNIS
OCÉAN PACIFIQUE DU NORD
OCÉAN ATLANTIQUE DU NORD
OCÉAN ATLANTIQUE DU SUD
OCÉAN PACIFIQUE DU SUD
Golfe du Mexique
Mer des Antilles
11 B
12 A
12 B
Deleted from 12 B
Supprimer de 12 B
Suprímase 12 B
Deleted
12 J Supprimer
Suprímase
Addition
Adition
Adición
*12E
12F
12F
12H
Deleted
Supprimer
Suprímase
Added
Ajouter
Añadase
12 F Sans Changement
* 12 F Unchanged
12 F Sin Mudamento
12 E Chevauchement Equateur
* 12 E Equador Overlap Shown
12 E Superposición Ecuador
9C*
13 I
13G
Added to
Ajouter à H
Añadase
Added to
Ajouter à 13 I
Añadase
Added
Ajouter
Añadase
13 G/H
13 G/H
* SUB-AREA OF ITU REGION 3
(INFORMATION)

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. BT/II-16-E
24 March 1966
Original : English

COMMITTEE 4

DRAFT

FIFTH REPORT OF COMMITTEE 4 (TECHNICAL)

FREQUENCY SEPARATION AND FREQUENCIES TO BE ALLOTTED

(Appendix 26, pages 6 and 7)

1. Following a study of proposals by Administrations to the Conference and of the Report of the First Session, Committee 4 agreed by a majority of 28 delegations in favour, 5 against with 5 abstentions, the frequency separations and channelling set out in the Annex attached hereto (Document No. II/85) refers.

2. With regard to the frequencies to be allotted in Region 2 in the band 5450 - 5480 kc/s, the Delegate of the United States reserved the right of his Delegation, if it still so desired, to return to this subject at a later meeting.

J.T. PENWARDEN
Chairman

Annex : 1

Ap.26
p. 6

A N N E X

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

MOD Factors affecting the Plan

NOC 1. Frequency separation

(MOD) The frequency separations indicated in the following table are adequate to permit high capacity means of communication.

NOC

Band (kc/s)	Separation (kc/s)	Band (kc/s)	Separation (kc/s)
2850 - 3025	7	8815 - 8965	7
3400 - 3500	7	10005 - 10100	8
4650 - 4700	7	11275 - 11400	8
5450 - 5480 (Reg 2)	7	13260 - 13360	8
5480 - 5680	7	17900 - 17970	8
6525 - 6685	7		

MOD

NOC (a) It is assumed that A3 modulation frequencies will be limited to 3000 cycles per second and that the sideband radiation of other authorized emissions will not exceed that of A3 emissions.

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

NOC (c) It is recognized that two or more channels can be derived from each of the channels provided under this frequency separation plan.

NOC (d) The grouping of adjacent channels derived from the above table to permit the satisfaction of particular requirements, will be subject to special arrangements by the administrations concerned.

(MOD) (e) The arrangements contemplated in (b),(c) and (d) above should be made under the Articles of the International Telecommunication Convention and the Radio Regulations entitled "Special Agreements".

2. Frequencies to be allotted

(MOD) The list of frequencies to be allotted in the exclusive aeronautical mobile (R) bands, on the basis of the frequency separation provided for under paragraph X above, will be found in the following table:

(MOD)

kc/s				
2850 - 3025	4650 - 4700	6525 - 6685	10005 - 10100	17900 - 17970
2854 2861 2868 2875 2882 2889 2896 2903 2910 2917 2924 2931 2938 2945 2952 2959 2966 2973 2980 2987 2994 3001 3008 3015 3023.5 (R) & (OR) 24 channels 7 kc/s separation	4654 4661 4668 4675 4682 4689 4696 7 channels 7 kc/s separation	6533 6540 6547 6554 6561 6567 6575 6582 6589 6596 6603 6610 6617 6624 6631 6638 6645 6652 6659 6666 6673 6680 22 channels 7 kc/s separation	10009 10017 10025 10033 10041 10049 10057 10065 10073 10081 10089 11 channels 8 kc/s separation	17909 17917 17925 17933 17941 17949 17957 17965 8 channels 8 kc/s separation
3400 - 3500	5450 - 5480	8815 - 8965	11275 - 11400	
3404 3411 3418 3425 3432 3439 3446 3453 3460 3467 3474 3481 3488 3495 14 channels 7 kc/s separation	Region 2 5456 5463 5470 5477 4 channels 7 kc/s separation	8821 8828 8835 8842 8849 8856 8863 8870 8877 8884 8891 8898 8905 8912 8919 8926 8933 8940 8947 8954 8961 21 channels 7 kc/s separation	11279 11287 11295 11303 11311 11319 11327 11335 11343 11351 11359 11367 11375 11383 11391 15 channels 8 kc/s separation	
	5480 - 5680		13260 - 13360	
	5484 5491 5498 5505 5512 5519 5526 5533 5540 5547 5554 5561 5568 5575 5582 5589 5596 5603 5610 5617 5624 5631 5638 5645 5652 5659 5666 5673 5680 (R) & (OR) 28 channels 7 kc/s separation		13264 13272 13280 13288 13296 13304 13312 13320 13328 13336 13344 13352 12 channels 8 kc/s separation	

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-17-E
24 March 1966
Original : French

COMMITTEE 7

PROPOSALS BY COMMITTEE 7 (EDITORIAL) CONCERNING
THE LAYOUT OF THE FINAL ACTS OF
THE CONFERENCE

Committee 7, having noted various proposals concerning the layout of Appendix 26 (Docs.Nos.II/2 - United States, 4 - Canada, 10 - United Kingdom, 18 - India, 25 - Mexico and 35 - Argentina) and taken cognizance of Recommendation No. 4 of the First Session of the Conference, submits a few general suggestions below concering the layout of the Final Acts. These are not intended to prejudge decisions by the Plenary Meeting, but merely to facilitate the discussions.

A rapid decision on this subject by the Plenary Meeting will greatly facilitate the work of Committee 7, since the latter would be able to insert the texts which it receives from the various committees in the right place.

The Final Acts might well be given the following form :

- Final Acts proper (see for example pages 1 and 2 of the Final Acts of the Space E.A.R.C., Geneva 1963),

  Signatures;

  Annex I : Amendments to the Radio Regulations (Geneva 1959), if any,

  Annex II : Appendix 26 - OR Service (see document attached hereto),

  Annex III : Appendix 26A - R Service (see document attached hereto),

- Additional protocol, if any,

  Signatures,

- Resolutions and recommendations, if any.

Chairman

APPENDIX 26
(OR) SERVICE*

		pages
NOC	Part I	5
NOC	General Provisions	5
NOC	Section I Definitions	5
NOC	1 Frequency allotmant plan	5
NOC	2 Terminology	5
SUP	3 ...	5
SUP	4 ...	5
SUP	5 ...	5
SUP	6 ...	5
SUP	7 ...	5
(MOD)**	Section II Technical and Operational principles	6 to 15
SUP	Part II	16 to 44
NOC	Part III	45 to 46
NOC	Part IV	47 to 76

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* The texts which have been retained are from Appendix 26 to the Radio Regulations (Geneva 1959), without change.

** (MOD) This section is taken from Appendix 26 without changes in substance, but with the provisions relating to the (R) Service removed.

APPENDIX 26A

(R) SERVICE*

	pages
Part I	5 to 15
Part II	16 to 44
Maps and transparencies	

* The texts mentioned are from Appendix 26 to the Radio Regulations (Geneva, 1959) as amended by the Aeronautical E.A.R.C. (Geneva, 1966)

AERONAUTICAL CONFERENCE

Geneva, 1966

Document DT/II-18-E
28 March 1966
Original : French

COMMITTEE 5

(AIRCRAFT OPERATION STATISTICS COMMITTEE)

Chairman: Maurice CHEF (French Overseas Territories)

I. I hereby submit in the annex hereto, as a basis for discussion, my proposals regarding frequency requirements for the RDARAs.

II. By way of introduction, I would draw your attention to the following statutory provisions:

a) No. 281 of the Convention (Geneva, 1959)

"Members and Associate Members recognize that it is desirable to limit the number of frequencies and the spectrum space used to the minimum essential to provide in a satisfactory manner the necessary services."

b) No. 694 of the Radio Regulations (Geneva, 1959)

"All stations shall radiate only as much power as is necessary to ensure a satisfactory service."

Maurice CHEF
Chairman

Annexes : 2

ANNEX 1

PROPOSALS

No. 1 For the purpose of regional and domestic flights, a family of frequencies shall in principle consist of three frequencies chosen between 2.8 and 9 Mc/s.

No. 2 These families of frequencies shall be allotted by Regional and Domestic Air Route Sub-Areas.

No. 3 On the other hand, frequencies of 10 Mc/s or above shall be allotted by RDARAs.

No. 4 It should be possible to reduce the power of a large number of transmitters of aeronautical stations providing communication with aircraft on regional or national flights. This provision would certainly facilitate frequency repetition.

Note 1 It is clear from the frequency notices (I.T.U. list) submitted by many countries that transmitters of 50, 100, 200 or 300 W are quite common.

Note 2 In the present Plan, frequency repetitions are reckoned from the curves which indicate the minimum acceptable distance between two aeronautical stations of 1 kW radiated power (with no modulation).

Example

At present, to ensure a protection ratio of 15 db between 2 RDARAs, any 2 stations which are assumed to transmit at a power of 1 kW on 6 Mc/s must be 2500 km apart.

If the same stations transmit at a power of 250 W (6 db less), it should be possible for the distance between them to be considerably less (approximately 800 to 1000 km).

No. 5 The frequency requirements submitted in column 9 of the Table in Annex 2 should be considered and approved.

ANNEXE 2 - ANNEX 2 - ANEXO 2

PROJET DE PRESENTATION DES BESOINS EN FREQUENCES POUR LES ZLARN
DRAFT TABLE OF FREQUENCY REQUIREMENTS OF RDARAs
PROYECTO DE PRESENTACIÓN DE NECESIDADES DE FRECUENCIAS PARA LAS ZRRN

ZLARN RDARA ZRRN	Symbole des Pays et heures de vol Country symbol and hours of flight Símbolo de pais y horas de vuelo	Nombre de fréquences App. 26 Number of frequencies App. 26 Número de frecuencias Ap. 26	Recommandations O.A.C.I. I.C.A.O. Recommendations Recomendaciones O.A.C.I.	Total des nombres d'heures de vol Total No. of flight hours Total del número de horas de vuelo	$\frac{Ta}{3000} = N$ $\frac{Ta}{3000} = N$ $\frac{Ta}{3000} = N$	Nombre de familles N = 10(DT/2) No. of families N = 10(DT/2) Número de familias N = 10(DT/2)	Application modalités Doc. 62 Application provisions Doc. 62 Aplicación modalidades Doc. 62	Proposition Proposal Proposición	Remarques Remarks Observaciones
1	2	3	4	5	6	7	8	9	10
1		27						1 Freq. 10 1 Freq. 11 1 Freq. 13	(1)
1B	BEL (2709) D (M) G (10952) HOL (0) IRL (0) ISL (4474) LUX (0)	8		18 135	6	1	0	0	(2)

1	2	3	4	5	6	7	8	9	10
1C	AUT (O)(M) W/BLR * D-D (19418) DNK (18267) FNL (4300) HNG (1096) NOR (4538) POL (50052) S (1154) TCH (42139) W/UKR *	5		140964	47	5	3	1	(3)

1	2	3	4	5	6	7	8	9	10
1D	ALB - N/ARS * BUL (6100) CVA - CYP (85) + N/EGY * + GRC (41206)+ I (1525) W/IRQ * ISR (0) JOR (0) LBN (M) + N/LBY * MLT - ONJ - ROU (23993) SMR - SYR (730) N/TUN * TUR (65986) + YUG (9300)	9	+ S/Réseau N°3 S/Network S/Rev : 2896 6634,5 10084	148.925	50	5	3	1	(4)

1	2	3	4	5	6	7	8	9	10
1E	N/ALG * AND - AZR (M) E (O) F(103680) GIB - I (Sardaigne) * MCO - MDR - N/MRC * POR (2382) SUI (M) TUN (3964) add (S) (3891)	9		113917	38	4	2	1	(4)
2		35						6 Freq. 10 8 Freq. 11 1 Freq. 13 1 Freq. 17	
2A	FNL (130) BLR } URS } (875000)	8		875130	292	29	7	7	

1	2	3	4	5	6	7	8	9	10
2B	URS (1.623.000)	10		1.623.000	541	54	10	10	(5)
2C	BLR UKR } 2.822.000 URS	9		2.822.000	941	94	14	14	(5)
3		33						4 Freq. 10 3 Freq. 11 1 Freq. 13 1 Freq. 17	
3A	URS (570.000)	13		570.000	190	19	6	6	(5)
3B	URS (620.000)	20		620.000	206	20	6	6	(5)
3C	MNG - URS (800.000)	18		800.000	267	27	7	7	(5)
4		7					0	1 Freq. 11 1 Freq. 17	(1)

1	2	3	4	5	6	7	8	9	10
4A	ALG (8275)	5							
	AOE -								
	CNR -								
	LBY (0)								
	N/MLI (13873)			32879	11	1	1	1	
	MRC (19)								
	MTN (3284)								
	NGR (647)								
	TCD (0)								
	TUN *		FIR 6642						
	Add = BEL (6781)								

1	2	3	4	5	6	7	8	9	10
4B	CAF (540)	11	FIR 6589,5						
	CME -		FIR 6589,5-8922						
	COG -		FIR 6589,5 8922						
	CPV -								
	CTI (11594)		FIR 6642						
	DAH (0)								
	GAB -								
	GHA (3336)		FIR 6642						
	GMB (0)						1	1	
	GNE -								
	GNP			20808	7	1		+ 1 Freq.6	
	GUI (2182)		FIR 6642						
	HVO -								
	LBR (0)		FIR 6642						
	S/MLI *								
	S/MTN *								
	S/NGR *								
	NIG (M)		FIR 6642						
	SEN (1370)		FIR 6642						
	SRL (1284)		FIR 6642						
	STP (502)								
	S/TCD *								
	TGO -								

1	2	3	4	5	6	7	8	9	10
5		7						1 Freq. 11 1 Freq. 17	(6)
5A	ADN (14216) ARS (34315) EGY (M) IRQ * ISR (M) JOR * KWT (4370) LBN * ONJ * SYR (3380) YEM -	5	FIR 5656,5 FIR 4682,5	56281	19	2	1	1	(7)
5B	AFG - IND * IRN (41000) PAK (30000) TUR (2592)	6		73592	25	3	2	2	
5C	ADN (7169) ARS * GLP - IND * MLD -	5		7169	2	0,2			

1	2	3	4	5	6	7	8	9	10
5D	EGY (M)* ETH (7530) SDN – SMF (100) SOM –	6	FIR 5656,5 FIR 4682,5-5656,5 FIR 5656,5 FIR 5656,5-6552	7630	2	0,2			
6		8						2 Freq. 10	(1)
6A	BRM (15723) IND (259406) NPL – PAK (25000)	21		300129	100	10	4	5	(8)
6B	CHN * HKG (M) IWA – J (34768) KOR (3155) KRE – MAC – MCS – RYU –	14		37923	13	1	1	1	

1	2	3	4	5	6	7	8	9	10
6C	GIL – CAR – GUM – HWL – INS (174575) MLA * MRA – MRL – TMP – WAK –	16		174575	58	6	3	4	
6D	BRM * – BRU – CBG * INS * LAO – MLA (645) PHL (436400) SNG – THA (13188) VTN (55575)	18		505808	169	17	6	6	

1	2	3	4	5	6	7	8	9	10
6E	CLN (153) IND * MLD – INP –	16		153	0,05	0	0		
6F	BRM * – BRU * CBG (1294) CHN (535) HKG (M) INS * J * KOR * KRE (11769) LAO * MAC * MLA * PHL * RYU * SNG * THA * VTN (31928)	12		45526	15	1	1	1	

1	2	3	4	5	6	7	8	9	10
7		15							(1)
7A	ASC – MRN – SHN – TRC –	3							
7B	AGL (250) + BDI – CGO (2784) + RRW – Add (S) 2800	12	+ FIR 3474,5- 6552 8913,5	5834	2	0,2			
7C	KEN (M) SEY – TGK – UGA – ZAN –	4	FIR 6552				1	1	
7D	COM (2000) MAU – MDG (9860) MOZ (21817) REU (500)	16	FIR 3439,5-5649-8871 FIR 6552-6582-8879,5 FIR 2854-5649-8871	34177	11	1			5

1	2	3	4	5	6	7	8	9	10
7E	AFS (28376) BAS (2539) BCH (1250) MWI (0) RHS (13782) SWZ (1376) ZMB (5528)	21	FIR 6552-6582-8879,5 FIR 6552-8879,5 FIR 3425,5-6552-6597 FIR 3432,5-6552-6582-8879,5 FIR 3425,5-6552-6597-8879,5	52851	18	2	1	1	
8		0					0		
8A	ICO - KER - ROD -	7					0		(9)
9		17						2 Freq 11	
9A	AUS (81741) INS *	12 + 16 (ex 9E)		81741	27	3	2	2	(5)

1	2	3	4	5	6	7	8	9	10
9B	AUS (91893)		+ FIR 3460,5						
	FJI (8589) +		6634,5						
	GIL *								
	NCL (9000) +		8913,5						
	NGU -								
	NHB - +		11394,5	109482	36	4	3		
	PAP -	18							
	PHX -								
	SLM -								
	SMA -								
	SMO (M)								
	TKL -								
	TON -								
	WAL (Avec NCL) +							3	
9C	CHR -								
	CKH -								
	CKN -	3							
	JAR -			12000	4	0,4			
	OCE (12000)								
	PLM -								
	PTC -								

1	2	3	4	5	6	7	8	9	10
9D	AUS (124007) NZL (36167)	41		160174	53	5	3	3	
10		0						6 Freq 10 1 Freq 13	
10A	ALS (220540) CAN *	10		220540	74	7	4	4	(5)
10B	CAN (274857) USA *	11		274857	92	9	4	4	(5)
10C	CAN (221425) USA *	15		221425	74	7	4	4	(5)
10D	CAN (403781) GRL * USA *	16		403781	135	13	5	5	(5)
10E	CAN (88450) GRL (6177) USA * SPM (100)	12		94727	32	3	2	2	(5)
11		0							
11A		0							

1	2	3	4	5	6	7	8	9	10
11B	BER – MEX * USA (155718)	14 +11(ex11C) +13(ex11D) +10(ex11E) +13(ex11F) +12(ex11G) +11(ex11H)		155718	52	5	3	3	(10)
12		0							
12A	HWA – JON – MDW –	4					6	6	(5)
12C	CUB (974) GTM (M) HNB – HND – MEX (532678) SLV – SWN – USA *	20		533652	178	18			

1	2	3	4	5	6	7	8	9	10
12D	ATN (0)								
	BAH *								
	CLM *								
	CUB (23688)								
	DOM –								
	GDL (2000)			41932	14	1	1	1	
	HNB *	19							
	HTI –								
	IOB –								
	JMC (0)								
	MEX *								
	MRT (2000)								
	PNR (9360)								
	PNZ *								
	PTR –								
	SWN *								
	TRD –								
	USA (4884)								
	VEN *								
	VIR –								

1	2	3	4	5	6	7	8	9	10
12J	ATN *	9							
	BAH *								
	BER *								
	CLM *								
	CTR *							0	(10)
	CUB *								
	DOM *								
	GDL *								
	GTM *								
	HNB *								
	HND *								
	HTI *								
	IOB *								
	JMC *								
	MEX *								
	MRT *								
	NCG *								
	PNR *								
	PTR *								
	SLV *								
	SWN *								
	TRD *								
	USA *								
	VEN *								
	VIR *								

1	2	3	4	5	6	7	8	9	10
12E	CTR (12794) EQA * GTM (M) HNB * HND * MEX * NCG - PNR - PNZ - SLV - SWN -	9		12794	4	0,4			
12F	B * CLM (135283) EQA (M) PNR * PNZ * VEN *	15		135283	45	7	4	4	(5)

1	2	3	4	5	6	7	8	9	10
12G	ATN (0) B * CLM * GUB * IOB * TRD - VEN (13502)	12		13502	4	0,4			
12H	B * CLM * GUB (3867) GUF (1000) SUR (0) VEN *	9		4867	1,5	0,2			
13		0							
13B		0							
13C	B * BOL * CHL * PRU (M) *	11		0					

1	2	3	4	5	6	7	8	9	10
13D	ARG * B * BOL (28037) CHL * PRG (49275) PRU *	10		77312	26	3	2	6	(5)
13E	BOL * CHL (58590) PRU –	15		58590	20	2	3		
13F	CHL (77990)	12		77990	26	3	2		
13G	ARG (190800) B * BOL * FLK – PRG * URG (M)	16		190800	64	6	4	4	
13H	ARG (121500) FLK * URG (5459)	16		126959	42	4			

1	2	3	4	5	6	7	8	9	10
13I	ARG (30300) B * BOL * PRG (118260) URG (17342)	11		165902	55	5	3	4	(11)
13J	B (86747) (B1) BOL * CLM * PRG * PRU *	17		86747	29	3	2		
13K	B (189026) (B2)	19		189026	63	6	3	3	
13L	ARG * B (220401)(B3) PRG (29565) URG (13845)	16		263811	88	9	4	4	
				TOTAUX		438	144	139	

EXPLANATORY NOTES

Column 2

a) The symbols indicating names of countries are those adopted at the 1st Session (see Report of the 1st Session, Annex IV to Chapter IV, pages 85 to 88).

Their significance is purely geographical.

The following new symbols have been added:

MWI	MALAWI
ONJ	Stations of the group of U.N. observers in Jordan
SWZ	SWAZILAND
ZMB	REPUBLIC OF ZAMBIA

b) Opposite the country symbol is shown:

1) A number in brackets
- indicating the hours mentioned by the country.

2) Or the letter (M)
- indicating that the country has submitted world (MWARA) flight statistics but no information on regional flights.

3) Or the digit (0)
- indicating that the country has confirmed that it has no information on regional or domestic flights.

4) Or the sign -
- indicating that the country has not replied to the I.F.R.B. questionnaires and has taken no action to implement Resolution No. 9 of the 1st Session.

5) Or the sign *
- indicating that a country's territory extends into more than one Regional and Domestic Air Route Sub-Area (either by sub-division or overlapping).

- In this case, when no details have been furnished, the total number of flight hours notified by the country is shown in only one of the Sub-Areas in which a part of its territory - normally the largest part - is included.

Column 3

The number shown is the number of frequencies allotted to the various Regional and Domestic Air Route Areas and Sub-Areas.

When a frequency is common to more than one Regional and Domestic Air Route Area or Sub-Area, it is counted each time it appears.

Column 4

The I.C.A.O recommendations referred to are taken from the I.C.A.O. documents:

RDARA 1 = Report of the VIth EUM Regional Meeting (Geneva, February 1966)

RDARA 4, 5 and 7: AFI Regional Plan Doc. 7474/9, pages COM. 3.2.5 to 3.2.19 inclusive

RDARA 9 = PAC Regional Plan Doc. 7700/9, pages 3.2.5 to 3.2.11 inclusive.

Column 9

A digit or number by itself indicates a number of families.

A digit followed by "freq" and 10, 13, 17 indicates a frequency of a given order.

Column 10: Remarks

(1) 3 RDARA frequencies are used for VOLMET transmissions.

(2) Regional flights that can be served on the frequences MWARA EU (Network A).

(3) Part of the regional flights can be served on the frequencies MWARA EU (Network A or Network A1).

(4) Part of the regional flights can be served on the frequencies MWARA EU (Network B).

(5) Possible increase for low-power stations.

(6) Common frequences 4 and 5.

(7) Two frequencies of RDARA 1 are used for VOLMET transmissions.

(8) Possible application of No. 207 of the Radio Regulations.

(9) One family desirable in view of the geographical position.

(10) To be partly transferred for MWARA CAR and VOLMET SAM.

(11) Taking into account 2nd family MWARA SA.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-19-E
29 March 1966
Original: English

COMMITTEE 4

DRAFT

SIXTH REPORT OF COMMITTEE 4 (TECHNICAL)

Technical and Operational Principles - Special Arrangements

(Appendix 26, page 6, paragraphs 1 e) and 3)

Adaptation of Allotment Procedure

(Appendix 26, page 9, paragraphs 5-8)

1. Following a study of proposals by Administrations to the Conference and of the Report of the First Session, Committee 4 unanimously agreed the texts which appear in the Annex attached hereto.

2. With respect to paragraph 1 e of Section II.A of Appendix 26 (see also Document No. II/91, page 3, - Fifth Report of Committee 4, Technical), Committee 4 invites the attention of Committee 7 to an apparent incompatibility between the term "arrangements", which is the subject of the paragraph in question, and the term "Special Agreements", which is the title of each of the Articles to which cross-reference is made.

J.T. PENWARDEN
Chairman

Annex: 1

A N N E X

NOC 3. Channels Common to (R) and (OR) Services

3.1 The channels common to the (R) and (OR) services, centred at 3023.5 and 5680 kc/s are authorized for use world-wide as shown in Part II of this Appendix. (See Proposal No. 2).

NOC Notwithstanding those provisions of the Allotment Plan set forth in Part II hereof, the frequency 5680 kc/s may also be used at aeronautical stations for communication with aircraft stations when other frequencies of the aeronautical stations are either unavailable or unknown. However, this use shall be restricted to such areas and conditions that harmful interference cannot be caused to other authorized aeronautical uses.

ADD 3.2 Subject to appropriate co-ordination stations using the common (R) and (OR) channel centred at 3023.5 kc/s may operate with their carrier frequency at 3023 kc/s.

ADD 3.3 All stations using 3023.5 kc/s and 5680 kc/s for search and rescue purposes and equipped for SSB shall transmit a carrier at a level sufficient to permit reception on a DSB receiver and shall be able to receive DSB.

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

(ex 9.7 II/2 p.14) amended.

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P. 9

NOC

Adaption of Allotment Procedure

(MOD) 5. It is recognized that all the sharing possibilities have not been exhausted in the allotment plan contained in this Appendix. Therefore, in order to satisfy particular operational requirements which are not otherwise met by this allotment plan, Administrations may assign frequencies from the HF aeronautical mobile (R) bands in areas other than those to which they are allotted in this Plan. However, the use of the frequencies so assigned must not decrease the protection to the same frequencies in the areas where they are allotted by the plan below that determined by the application of the procedure defined in Part I, and Section II B of this Appendix for the (R) Service.

(ex II/2 p. 19 para.13.1)

NOC 6. When necessary to satisfy the needs of international air operations Administrations may adapt the allotment procedure for the assignment of aeronautical mobile (R) frequencies, which assignments shall then be the subject of prior agreement between Administrations affected.

(ex II/10 p. 14 para. 5)

(MOD) 7. Resort to the co-ordination described in paragraph 4 shall be made where appropriate and desirable for the efficient utilization of the frequencies in question.

(ex II/10 p. 14 para. 6)

SUP 8. In addition .... mobile service.

AERONAUTICAL CONFERENCE

Geneva, 1966

Corrigendum to
Document No. DT/II-20-E
29 March 1966
Original : English

COMMITTEE 5

SECOND REPORT BY WORKING GROUP 5C TO COMMITTEE 5

(Concerns the English text only)

Kindly replace page 2 of DT/II-20-E by the attached sheet.

M. ABDEL WAHAB
Chairman of
Working Group 5C

Annex : 1

A N N E X

REGIONAL AND DOMESTIC AIR ROUTE AREA - 1

(RDARA - 1)

MOD Sub-Area 1B

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

MOD Sub-Area 1C

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

MOD Sub-Area 1E

From the point 50°N 13°W, and through the points 40°N 13°W, 40°N 50°W, 30°N 39°W, 30°N 10°W, 31°N 10°W to the point 31°N 10°E. Then along the Libya-Tunisian border to the Mediterranean thence along the Tunisian coast to intersect the 10°E meridian. Thence to the point 43°N 10°E; thence

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-20-E
28 March 1966
Original : French

COMMITTEE 5

Second Report by Working Party 5C to Committee 5

REVISION OF PART II, ARTICLE 2, OF APPENDIX 26
TO THE RADIO REGULATIONS, PAGES 19-25
(I.T.U. REGION 1)

An addition to the First Report by Working Party 5C (Doc. No. DT/II-14-E) on this matter is attached hereto.

This new report is submitted for consideration by Committee 5.

M. ABDEL WAHAB
Chairman of
Working Party 5C

Annex : 1

A N N E X

REGIONAL AND DOMESTIC AIR ROUTE AREA - 1

(RDARA - 1)

MOD Sub-Area 1B

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

MOD Sub-Area 1C

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

MOD Sub-Area 1E

From the point 50°N 13°W, and through the points 40°N 13°W, 40°N 50°W, 30°N 39°W, 30°N 10°W, 31°N 10°W to the point 31°N 10°E. Then along the Libya-Tunisian border to the Mediterranean thence along the Tunisian coast to intersect the 10°E meridian. Thence to the point 43°N 10°E; thence

to the border between Italy and France and between Italy and Switzerland, Switzerland and Austria, Switzerland and the Federal Republic of Germany, and between France and the Federal Republic of Germany, France and Luxembourg, and France and Belgium to the Channel coast. Thence west through the territorial waters between the Channel Islands and the French coast to the point 50°N 13°W.

REVISION OF 1st REPORT

The description of the boundaries of Sub-Area 7E is as follows:

MOD Sub-Area 7E

From the point 17°S 10°E, and through the points 40°S 10°E, 40°S 33°E, to 27°S 33°E. Thence along the west border of Mozambique to Lake Nyassa. Thence along the border between Zambia and Tanzania and along the borders between the Democratic Republic of the Congo and Zambia, Angola and Zambia, and Angola and the Territory of South-West Africa to the coast at the point 17°S 10°E.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-21-E
28 March 1966
Original : English

COMMITTEE 4

DRAFT

DISCUSSION PAPER BY COMMITTEE 4 (TECHNICAL)

"DEFINITIONS"

Following a study of proposals by Administrations to the Conference, Committee 4 unanimously agreed the texts which appear in the Annex attached hereto as appropriate for guidance material to Committees 5 and 6, to use at their discretion.

It was noted that according to Document No. II/22, the subject of "Definitions" has been assigned to Committee 6. Nevertheless, in view of its decisions on other matters, Committee 4 feels that its recommendations on this subject may assist Committees 5 and 6 in their work.

J.T. PENWARDEN
Chairman

Annex: 1

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p.5

A N N E X

PART I

NOC

General Provisions

NOC

Section I - Definitions

NOC 1. Frequency Allotment Plan

MOD A plan which shows the frequencies to be used in particular areas without specifying the stations to which the frequencies are to be assigned.

NOC 2. The terms to express the different methods of frequency distribution as used in this Appendix have the following meanings:

NOC

Frequency distribution to	French	English	Spanish
Services	Attribution (attribuer)	Allocation (to allocate)	Atribución (atribuir)
Areas	Allotissement (allotir)	Allotment (to allot)	Adjudicación (adjudicar)
Stations	Assignation (assigner)	Assignment (to assign)	Asignación (asignar)

NOC 3. A Major World Air Route is considered to be a long-distance route, made up of one or more segments, essentially international in character, extending through more than one country and requiring long-distance communication facilities.

NOC 4. A Major World Air Route Area (MWARA) is an area embracing a certain number of Major World Air Routes, which generally follow the same traffic pattern and are so related geographically that the same frequency families may logically be applied.

NOC 5. Regional and Domestic Air Routes are all those using the Aeronautical Mobile (R) Service not covered by the definition of Major World Air Routes in paragraph 4 above.

App.26
p.5

NOC 6. A Regional and Domestic Air Route Area (RDARA) is one embracing a certain number of the air routes defined in the foregoing paragraph.

NOC 7. Family of frequencies in the Aeronautical Mobile Service : A group of frequencies selected from different aeronautical mobile bands in such a way as to permit communication, at any time and over any distance, between aircraft in flight and appropriate aeronautical stations.

ADD (ex 7, p.11, Doc.II/10) 7A. A Volmet Allotment Area. Subject to the conclusions of Committee 5 on the requirement for these Areas new terms appear necessary.

ADD (ex 8, p.11, Doc.II/10) 7B. A Volmet Reception Area. Subject to the conclusions of Committee 5 on the requirement for these Areas new terms appear necessary.

Documents of the Extraordinary Administrative Radio Conference for the preparation of a revised allotment plan for the aeronautical mobile (R) service (2nd session) (Geneva, 1966)

Document DT No. 22

Not available

****

Pas disponible

****

No disponible

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-23-E
29 March 1966
Original : English

COMMITTEE 4

SECOND REPORT OF WORKING GROUP 4 A
TO COMMITTEE 4 (TECHNICAL)

SELECTION OF RDARA FREQUENCY COMPLEMENTS

Appended hereto is a draft report on the above subject submitted for the consideration of Committee 4.

In addition to NBS 9141 and its Appendices, Working Group 4 A has also considered information from the I.F.R.B. concerning the selection of frequency families within RDARAs. Although certain technical information is available for use in selecting frequency families as a function of geographical localities and the distance that communication is required, it appears that this information may be best applied on an ad hoc basis in consultation with the I.F.R.B.

Participating in the work of the Group were Delegates of Australia, the Republic of South Africa, the Union of the Soviet Socialist Republics and the United States of America. Mr. J.A. Gracie, member of the I.F.R.B., rendered great assistance to the Group.

The Report was unanimously agreed by the Group.

George W. HAYDON
Chairman

Annex: 1

A N N E X

DRAFT ADDENDUM

TO DOCUMENT No. II/93

SELECTION OF RDARA FREQUENCY COMPLEMENTS

1. Document No. II/93 suggests a procedure for using NBS 9141 in the selection of frequency complements for the MWARAs and for the RDARAs when the RDARA requirement approximates a Major World Air Route Segment considered in NBS 9141.

2. It was further suggested that the Appendices to NBS 9141 might be consulted if the RDARA segment differed appreciably from any route segment considered in the Report.

3. The Committee, having given further consideration to the problem and noting additional information made available by the I.F.R.B., has concluded that a directly applicable method of frequency selection for the RDARAs mentioned in Paragraph 2 above cannot be made available at this time.

4. The Committee accordingly recommends that specific problems relating to the technical choice of frequency complements should be dealt with by Committee 6 or its Working Groups on an ad hoc basis in consultation with the I.F.R.B.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-24-E(Rev.2)
5 April 1966
Original: English

COMMITTEE 4

DISCUSSION PAPER

"Single Sideband"

1. The text which follows is offered to assist the Committee in its continued consideration of new Provisions to cover the use of SSB as one of the classes of emission permitted in the Aeronautical Mobile (R) Service.

2. Annex A reflects the extent of the Committee's agreement so far on the proposals submitted in Documents Nos. II/2 and II/4 and embodies the suggestions made by Working Group 4C after their adoption by the Committee on 5 April 1966.

3. Annex B contains the remaining proposals by administrations on this general subject. These are reproduced herein for ease of reference. The amendment to the text concerning frequency tolerance adopted by the Committee on 5 April 1966 has been incorporated on page 4 herein.

J.T. PENWARDEN
Chairman

Annexes : 2

A N N E X A

App. 26
p. 15

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

ADD 3.1 Definitions of carrier modes.

ADD 3.1.1 Full carrier (A3H). Carrier transmitted at a level between 0 db and 6 db, inclusive, below peak envelope power.

ADD 3.1.2 Reduced carrier (A3A). Carrier reduced to a level more than 6 db up to and including 26 db below peak envelope power.

ADD 3.1.3 Suppressed carrier (A3J). Carrier suppressed to a level more than 26 db below peak envelope power.

ADD 3.2 Modes of operation

ADD 3.2.1 A transmitter equipped only for single sideband operating in an environment including double sideband stations shall be capable of operation in, at least, both of the following modes:

ADD 3.2.2 Suppressed carrier mode (A3J).

ADD 3.2.3 Full carrier mode (A3H).

ADD 3.3 Tolerance for levels of SSB emission outside the necessary bandwidth.

ADD 3.3.1 When using single sideband (A3A, A3H, A3J) transmission, the mean power of any emission supplied to the antenna transmission line of an aeronautical or aircraft station, on any discreet frequency, shall be less than the mean power (Pm) of the transmitter in accordance with the following table.

ADD 3.3.2

TABLE

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

A N N E X B

4. Frequency tolerance

4.1 The frequency tolerance, as defined in No. 88 of the Radio Regulations, shall be as follos:

4.2 Aeronautical stations: 10 c/s

4.3 Aircraft stations: 20 c/s

CAN II/4 p.8 Spurious emissions, as defined in No. 92 of the Radio Regulations shall be attenuated at least 40 db below the desired emissions.

USA II/2 p.12 Channel availability

Aeronautical station and aircraft station transmitters shall provide at least the capability for operation on frequencies at 1.0 kc/s increments in the exclusive aeronautical mobile (R) bands between 2850 and 17 970 kc/s; maximum capability may be provided for operation on increments of 0.1 kc/s.

Reasons:

To provide minimum design and operating criteria where crystal synthesis is employed.

CAN II/4 p.8 Single sideband radiotelephone equipment operating in the Aeronautical Mobile (R) bands between 2850 and 17 970 kc/s shall be capable of operating at integral multiples not greater than 0.5 kc/s. Equipment limited to integral multiples of 1 kc/s operation may continue to operate provided that such operation in the 7 kc/s channels is restricted to the upper halves of the channels shown in the Allotment Plan.

J II/105 Carrier frequency in the SSB system shall be integral multiples of 1 kc/s.

Frequency to be used

USA Document No. II/126 in its entirety.

USA II/2 p.13 1. Assignments to stations utilizing single sideband shall be considered to be in accordance with the Table if the necessary bandwidth does not extend beyond the upper limit of the bandwidth provided for double sideband emissions in accordance with the Table.

2. Stations using single sideband single channel emissions (A3A, A3H, or A3J) shall operate:

2.1 in the upper half of the channels designated by the centre frequencies in the Table;

2.2 with the carrier frequency at a value listed in the Table; its assigned frequency would then be 1400 c/s higher than that listed in the Table; or

2.3 where necessary due to equipment limitations, a value of 0.5 kc/s lower than that listed in the Table when the allotted frequency terminates in 0.5 kc/s; its assigned frequency would then be 900 c/s higher than that listed in the Table.

CAN II/4 p.9 A station using single sideband emissions shall be considered to be operating in accordance with the Allotment Plan if the necessary bandwidth is confined respectively within the upper or the lower half of the channel provided for double sideband emissions.

Subject to the provisions of paragraph a station using single sideband emissions may operate either in the upper half or in the lower half of the double sideband channels designated by the centre frequency in the Allotment Plan;

a) when using the upper half of the channel, the station shall use upper sideband emissions with the carrier at the channel frequency listed in the Allotment Plan;

b) when using the lower half of the channel, the station shall use upper sideband emissions with the carrier at the following value below the channel frequency listed in the Allotment Plan:

Band	Carrier (reference) frequency relative to centre frequency of channel
2, 3, 4, 5, 6 and 8 Mc/s	3500 c/s below
10, 11, 13 and 16 Mc/s	4000 c/s below

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

Reasons:

In accordance with the decisions reached at the first session but modified to conform with the amended frequency separation table.

J II/105 A station using SSB emission in the upper half of the channel shall use upper sideband emissions with its carrier frequency at the value of channel frequency.

A station using SSB emission in the lower half of the channel shall use upper sideband emission with its carrier frequency at the following value below the channel frequency:

Band	Carrier frequency relative to channel frequency
2, 3, 4, 5, 6 and 8 Mc/s	3000 c/s
10, 11, 13 and 17 Mc/s	4000 c/s

AERONAUTICAL CONFERENCE

Geneva, 1966

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2 April 1966
Original: English

COMMITTEE 4

DISCUSSION PAPER

"Single Sideband"

1. The text which follows is offered to assist the Committee in its continued consideration of new Provisions to cover the use of SSB as one of the classes of emission permitted in the Aeronautical Mobile (R) Service.

2. Annex A reflects the extent of the Committee's agreement so far on the proposals submitted in Documents Nos. II/2 and II/4. It also embodies the suggestions made by Working Group 4C, which are submitted for the consideration of Committee 4 in Document No. DT/II-27.

3. Annex B contains the remaining proposals by Administrations on this general subject. These are reproduced herein for ease of reference.

J.T. PENWARDEN
Chairman

Annexes : 2

ANNEX A

App. 26
p. 15

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

ADD 3.1 Definitions of carrier modes.

ADD 3.1.1 Full carrier (A3H). Carrier transmitted at a level between 0 db and 6 db, inclusive, below peak envelope power.

ADD 3.1.2 Reduced carrier (A3A). Carrier reduced to a level more than 6 db up to and including 26 db below peak envelope power.

ADD (ex II/2 pp. 11 and 12) 3.1.3 Suppressed carrier (A3J). Carrier suppressed to a level more than 26 db below peak envelope power.

ADD 3.2 Modes of operation

ADD 3.2.1 A single sideband transmitter operating in an environment including double sideband stations shall be capable of operation in, at least, both of the following modes:

ADD 3.2.2 Suppressed carrier mode (A3J).

ADD 3.2.3 Full carrier mode (A3H).

ADD (ex-DT/II-27) 3.3 Tolerance for levels of SSB emission outside the necessary bandwidth.

ADD (ex-DT/II-27) 3.3.1 When using single sideband (A3A, A3H, A3J) transmission, the mean power (Pm) of any emission supplied to the antenna transmission line of an aeronautical or aircraft station shall be less than the mean power of the transmitter in accordance with the following table.

ADD.
(ex-DT/II-27)

3.3.2

TABLE

Frequency separation from assigned frequency Δ in kc/s	Attenuation in db
$2 \leq \Delta < 6$	25
$6 \leq \Delta < 10$	35
$10 < \Delta$	Aircraft stations 40 db Aeronautical stations $40 + 10 \log_{10}$ (Pm watts)

A N N E X B

USA II/2 p.12

9.3.5 Frequency tolerance

9.3.5.1 The carrier frequency shall be maintained within the following number of cycles per second of the specified carrier frequency:

9.3.5.2 Aeronautical stations: 10 c/s

9.3.5.3 Aircraft stations: 20 c/s

Reasons:

To meet the frequency tolerance achievable. This is consistent with Report 181 of the Xth Plenary Assembly of the C.C.I.R.

CAN II/4 p.8

Spurious emissions, as defined in No. 92 of the Radio Regulations shall be attenuated at least 40 db below the desired emissions.

USA II/2 p.12

Channel availability

Aeronautical station and aircraft station transmitters shall provide at least the capability for operation on frequencies at 1.0 kc/s increments in the exclusive aeronautical mobile (R) bands between 2850 and 17 970 kc/s; maximum capability may be provided for operation on increments of 0.1 kc/s.

Reasons:

To provide minimum design and operating criteria where crystal synthesis is employed.

CAN II/4 p.8

Single sideband radiotelephone equipment operating in the Aeronautical Mobile (R) bands between 2850 and 17 970 kc/s shall be capable of operating at integral multiples not greater than 0.5 kc/s. Equipment limited to integral multiples of 1 kc/s operation may continue to operate provided that such operation in the 7 kc/s channels is restricted to the upper halves of the channels shown in the Allotment Plan.

J II/105 Carrier frequency in the SSB system shall be integral multiples of 1 kc/s.

Frequency to be used

USA Document No. II/126 in its entirety.

USA II/2 p.13 1. Assignments to stations utilizing single sideband shall be considered to be in accordance with the Table if the necessary bandwidth does not extend beyond the upper limit of the bandwidth provided for double sideband emissions in accordance with the Table.

2. Stations using single sideband single channel emissions (A3A, A3H, or A3J) shall operate:

2.1 in the upper half of the channels designated by the centre frequencies in the Table;

2.2 with the carrier frequency at a value listed in the Table; its assigned frequency would then be 1400 c/s higher than that listed in the Table; or

2.3 where necessary due to equipment limitations, a value of 0.5 kc/s lower than that listed in the Table when the allotted frequency terminates in 0.5 kc/s; its assigned frequency would then be 900 c/s higher than that listed in the Table.

CAN II/4 p.9 A station using single sideband emissions shall be considered to be operating in accordance with the Allotment Plan if the necessary bandwidth is confined respectively within the upper or the lower half of the channel provided for double sideband emissions.

Subject to the provisions of paragraph a station using single sideband emissions may operate either in the upper half or in the lower half of the double sideband channels designated by the centre frequency in the Allotment Plan;

a) when using the upper half of the channel, the station shall use upper sideband emissions with the carrier at the channel frequency listed in the Allotment Plan;

b) when using the lower half of the channel, the station shall use upper sideband emissions with the carrier at the following value below the channel frequency listed in the Allotment Plan:

Band	Carrier (reference) frequency relative to centre frequency of channel
2, 3, 4, 5, 6 and 8 Mc/s	3500 c/s below
10, 11, 13 and 16 Mc/s	4000 c/s below

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

Reasons:

In accordance with the decisions reached at the first session but modified to conform with the amended frequency separation table.

J II/105 A station using SSB emission in the upper half of the channel shall use upper sideband emissions with its carrier frequency at the value of channel frequency.

A station using SSB emission in the lower half of the channel shall use upper sideband emission with its carrier frequency at the following value below the channel frequency:

Band	Carrier frequency relative to channel frequency
2, 3, 4, 5, 6 and 8 Mc/s	3000 c/s
10, 11, 13 and 17 Mc/s	4000 c/s

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-24-E
30 March 1966
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COMMITTEE 4

DISCUSSION PAPER

"Single Side-band"

The text which follows is offered to assist the Committee in its continued consideration of new Provisions to cover the use of SSB as one of the classes of emission permitted in the Aeronautical Mobile (R) Service.

This paper reflects the extent of the Committee's agreement so far on the proposals submitted in Documents Nos. II/2 and II/4.

App. 26
p. 15

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

ADD 3.1 Tolerance for levels of SSB emission outside the necessary bandwidth.

ADD 3.1.1 When using single sideband (A3A, A3H, or A3J) transmission, the mean power of emission of aeronautical and aircraft stations shall be attenuated below the mean power output of the transmitter in accordance with the following:

ADD 3.1.2 On any frequency removed from the assigned frequency by more than 50 per cent up to and including 150 per cent of the occupied bandwidth: at least 25 decibels.

ADD 3.1.3 On any frequency removed from the assigned frequency by more than 150 per cent up to and including 250 per cent of the occupied bandwidth: at least 35 decibels.

ADD 3.1.4 On any frequency removed from the assigned frequency by more than 250 per cent of the occupied bandwidth: (a) aircraft stations: 40 decibels; (b) aeronautical stations: $43 + 10 \log_{10}$ (mean output power in watts) decibels.

ADD 3.2 Modes of operation

ADD 3.2.1 A single sideband transmitter operating in an environment including double sideband stations shall be capable of operation in, at least, both of the following modes:

ADD 3.2.2 Suppressed carrier mode (A3J).

ADD 3.2.3 Full carrier mode (A3H).

ADD 3.3 Definitions of carrier modes.

ADD 3.3.1 Full carrier (A3H). Carrier transmitted at a level between 0 db and 6 db, inclusive, below peak envelope power.

ADD 3.3.2 Reduced carrier (A3A). Carrier transmitted at a level more than 6 db up to and including 26 db below peak envelope power.

ADD (ex II/2 pp 11 and 12) 3.3.3 Suppressed carrier (A3J). Carrier transmitted at a level more than 26 db below peak envelope power.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-25-E
4 April 1966
Original : English

COMMITTEE 4

FIRST REPORT OF WORKING GROUP 4B TO COMMITTEE 4

(TECHNICAL & OPERATIONAL)

1. Working Group 4B, established to prepare for the consideration of Committee 4 a draft Resolution on the introduction and applicability of single sideband in the high frequency bands allocated to the Aeronautical Mobile (R) Service, is unable to arrive at an unanimous decision.

2. Participating in the Working Group were the Delegates of Argentina*), Australia, Brazil, Canada, Colombia*), Cuba, Mexico, the United Kingdom, the United States of America, Venezuela, Mr. J.A. Gracie, member of the I.F.R.B. and the observers from I.A.T.A- and I.C.A.O.

3. Four meetings were held, during which the text of the Annex hereto was developed. It is important to note that, except for relatively minor amendments to the text, the attached material is essentially that which was distributed to the membership as a transactional text at the first meeting, insofar as the "considering" and "recognizing" clauses are concerned. Additionally, the enacting paragraphs 1 and 4 under "resolves" were agreed with little difficulty.

4. The point at issue, and the only portion of the Annex which does not represent agreed text, is contained in the enacting paragraphs 2 and 3 of the Resolution. A number of delegations favoured action by this Conference to establish a date after which newly developed equipments would be SSB, capable of operating compatibly in a DSB environment. Other delegations could not accept the date(s) proposed and doubted the wisdom of selecting any date at this Conference. In their view such a date can be set only after I.C.A.O. has established necessary technical specifications, and after equipment meeting those specifications has been evaluated and declared acceptable. Additionally, during the final meeting of 4B, it was proposed by one delegation that the application of paragraphs 2 and 3 of the Resolution be different for MWARA's and RDARA's. Consideration of this concept and the question of dates is left to the main Committee.

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*) Participation was limited to one meeting.

5. Proponents of the draft Resolution, as presented, contend that it would encourage the use of SSB on an evolutionary and permissive basis; would permit the continued installation and use of DSB; and would not specify any date by which the use of DSB must be discontinued.

S.M. MYERS
Chairman
Working Group 4B

Annex : 1

A N N E X

DRAFT RESOLUTION No. ...

RELATING TO THE INTRODUCTION OF SINGLE SIDEBAND TECHNIQUES IN THE HIGH FREQUENCY BANDS ALLOCATED TO THE AERONAUTICAL MOBILE (R) SERVICE

The Second Session of the Aeronautical Extraordinary Administrative Radio Conference, Geneva, 1966,

considering

a) that congestion should be avoided in the high frequency bands allocated to the Aeronautical Mobile (R) Service;

b) that the great majority of stations now operating in the Aeronautical Mobile (R) Service, in the high frequency bands, are capable of operating only in the double sideband radiotelephony mode;

c) that, because of the preponderance of double sideband equipment in use, the allotment plan adopted by the Conference is one based on the assumption that all existing stations are capable of operating only in the double sideband radiotelephony mode, and

d) that recent advances in technology may make it possible to avoid congestion in the high frequency bands allocated to the Aeronautical Mobile (R) Service, through the use of VHF techniques and of satellite-relay techniques;

recognizing

a) that, despite the recent advances in technology permitting the accommodation of the Aeronautical Mobile (R) Service in bands other than high frequency bands, there are many areas of the world where the need for high frequency communication will continue into the foreseeable future; and in some areas may be an increasing need;

b) that single sideband radiotelephony has demonstrated advantages over double sideband radiotelephony in many radio services in terms of radio spectrum economy and also reliability of communication particularly under adverse atmospheric and propagation conditions;

c) that economic, technical and operational considerations make it impracticable to specify, at this time, any definitive date by which the use of double sideband radiotelephony must be discontinued in favour of single sideband radiotelephony;

d) that single sideband equipment of appropriate design should operate compatibly with double sideband systems, and would permit the introduction of SSB on an evolutionary basis;

e) that significant spectrum economy will be realized only when the ratio of SSB-to-DSB users is sufficiently large to make channel splitting practicable; and

f) the desirability of introducing single sideband equipment in the interest of improving the standard of communication;

resolves

1. that Administrations shall effect a progressive conversion of their high frequency telephony services from DSB to SSB operation;

2. that Administrations shall ensure that all new models or types of high frequency radiotelephone equipment designed for installation after 1 January 1970, if possible, and in no event later than 1 January 1972, for use in the Aeronautical Mobile (R) Service, shall be capable of operation in the single sideband suppressed carrier mode, and additionally shall be capable of working compatibly in double sideband systems;

3. that, notwithstanding the conditions specified in the preceding paragraph, Administrations may continue to instal and operate after the date specified, models and types of equipment which have been installed and operated prior to that date; and

4. that the International Civil Aviation Organization be invited to undertake, as a matter of urgency, and within the framework of the decisions taken by this Conference, the establishment of technical characteristics for system standards relative to single sideband equipment, in respect of application to international operation; and to advise the C.C.I.R. of any technical or operational problems on which they would like the assistance of the C.C.I.R.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-26-E
4 April 1966
Original : English

COMMITTEE 6

DISCUSSION PAPER

INITIAL FREQUENCY ALLOCATION PROPOSALS

1. Attached are initial frequency allocation proposals for discussion in Committee 6 in accordance with the new areas described in Documents Nos. 95, 116 and 121.

2. The skeleton of the revised Plan was formed by meeting MWARA requirements as presented in Document No. II/128, retaining as near as possible frequencies allotted in the existing Plan and applying the new channeling presented in Document No. II/91.

3. VOLMET and RDARA requirements presented in Document No. 128 were then added, in so far as this was possible.

4. In general, families of frequencies were based on a 3 Mc/s, a 5 or 6 Mc/s and an 8 Mc/s frequency, constituting a family in respect of RDARAs.

5. The limited number of 8 Mc/s frequencies available necessitated choice of 6 Mc/s or 10/11 Mc/s in lieu thereof, and in a number of cases sharing of 8 Mc/s frequencies in adjacent sub-RDARAs.

6. The requirement for a family of frequencies utilising A1 emission in MWARA-EU has been excluded from the draft Plan pending discussion in Committee.

7. The draft Plan presented is in no way intended to impose upon delegates, but rather to serve as a starting point from which a satisfactory plan will emerge.

Chairman
E.B. POWELL

Annexes : 2

A N N E X E A - A N N E X A - A N E X O A

FAMILLES DE FREQUENCES

FAMILIES OF FREQUENCIES

FAMILIAS DE FRECUENCIAS

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
CAR	2966 2966 2966 2959			 5568 5484 5617	6540	8840 8868 8840	 10017		 13344 13296	17933
CEP		3467		5603		8931			13304	17925
CWP	2966 2882		 4675	5505	 6568	8861		 11327	13352	17909 17941
EU	2910	 3467	4689	 5554	6582 6568	8868 8931		11303 11303		
FE	2868 2987			5610 5624		8840 8868			13288 13328	17965 17965
ME		3404 3446		5603	 6624	8847	 10017		13336 13336	17925 17925
NA1	2868			5624		8910			13328	17965
NA2	2931 2987 2945 2868			5610 5673 5638 5624		8945 8889 8861 8910			13328 13288 13352 13328	 17965
NA3	2931			5610		8945			13328	

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
NP	2987			5519		8938			13272	17909
NSA1		3411		5519		8819			13304	17949
NSA2	2966			5505		8959			13336	17925
SA	2875	3432			6610 6680	8882	10049		13272 13272	17949 17949
SAM1			4696		6666	8819			13312	17917
SAM2	2910			5582		8847			13344	17917
SEA	2987			5673		8931			13328	17965
SP	2945			5638		8847			13344	17949

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
AFI-MET	2854	3488			6575 6617		10073	11279		
AT-MET	3001			5561		8826			13264	
EU-MET	2980 2889			5575 5533		8903		11295		
ME-MET	3001 3015			5561	6596	8826		11347		
SEA-MET		3488			6575		10073			
PAC-MET	2980			5575		8903		11391		

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
1							10065	11359	13312	
1B										
1C	2917				6533	8959				
1D	2896				6631		10081			
1E	2861		4668		6547					
2							10009 10033 10041 10057 10073 10089	11287 11311 11351 11367 11375 11391	13344	17957
2A	2973 2875 2966 2896 2917	3404 3495	4661 4696	5512 5568	6561 6575 6610	8840 8854 8917				
2B	2854 2868 2938 2980 2924 2994 2875	3460 3488 3425	4654	5484 5498 5645 5638 5540	6645 6673 6638 6568	8854 8917				

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
2C	2945 2987 2952 2959 2903 3015 2882 3008 2938	3418 3474 3439 3411 3425		5491 5631 5596 5666 5589 5617 5582 5652	6617 6659 6652 6666 6680 6603	8840 8854				
3							10025 10065 10081 10049	11319 11327 11343	13264	17917
3A	2861 2875 2910	3481 3432 3446	4675	5659	6547 6582 6589 6554	8854 8917				
3B	2854 2903 2938 2952 2959 2973		4689	5484 5526 5673	6533 6610	8854 8896 8910 8945				

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
3C	2896 2917 2994 3008 3015	 3425 3453	4668 4696 4661	 5568 5533	 6624 6631	 8854 8896 8910 8945				
4								11383		17933
4A	2854				6638	8896				
4B	2924				6589 6638	8924				
5								11383		17933
5A		3453		5526	6540	8959				
5B-5C	2903		 4682	5659	 6554	8910 8896				
5D										
6							10049	11336		
6A	2931 2945 2959			5512 5568 5582		8889 8938 8924				
6B	2889			5547		8952				
6C	2882 2924 2910	 3439		5659	 6554 6603 6617	8819 8840 8854 8945				

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
6D		3425 3453 3481 3495	4668 4689	5526 5596 5617	6589 6617 6659	8819 8826 8875 8882 8959 8903				
6E	2861 2903			5652	6533	8833 8861				
6F	2945				6540		10009			
7										
7A-7B- 7C-7D	2868			5498		8861		11319	13264	
7E	2917	3425		5491	6596		10041			
8A										
9								11359 11375		
9A	2959 3008		4654	5589		8938 8952				
9B-9C	2861 2973	3460		5498 5547	6533	8910 8917 8896				
9D	2875 2903 2917		4661 4682 4696			8833 8889 8924				
9E										
10							10041 10057	11311 11336 11359 11375	13280	

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
10A	2931	3460 3411 3425	4682 4668	5547	6568	8959 8917 8924		11351		
10B	2917 2973	3404 3418		5461 5526 5491	6596	8896 8952 8875 8882				
10C	2861 2952	3474	4689	5498 5512	6638 6533 6582 6624 6673	8959				
10D	3008	3418 3439 3467 3488	4661	5540 5652 5645 5666	6610 6554 6659 6666 6680					
10E	2882 2924			5454	6631	8833 8854				
11										
11B	2903 2938 2994		4682	5631	6617	8854 8917 8959				
12										
12A-12C	2875	3453 3411 3460	4661 4675	5454 5533 5652 5666	6547 6603 6554 6652	8924	10025 10049 10073			
12D	2861			5461		8833				

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
12E-12F	2882 2973	 3446 3467 		5477 5589 5631 	 6533	8875 8938 	 10033 10065			
12G										
12H										
13										
13C										
13D-13E	2994 2924 2917 3015	 3495 3439 	4654	 5454 5469 5666	 6617 6624 	8910 8917 8945 8952 8896	 10041 			
13F										
13G-13H	2868 2952 3008 	 3425	4668	 5491 5547 	 6554	8861 8903 8931 8938				
13I-13J	2987 2854	 3411 3474 		5540 5652 	 6582 6638 6652	8833 8882 	 10081 			
13K	2896 2945 	 3460	4661	 5505 5596		8854 8959 	 10089			
13L	2882 2931 2973 	 3418		5461 5659 	 6533 6561	8889 8924 	 10009 10057			

A N N E X E B - A N N E X B - A N E X O B

Fréquence Frequency Frecuencia kHz kc/s	Zones d'emploi autorisé Authorized area of use Zonas de uso autorizado MWARA = ZLAMP ZRMP RDARA = ZLARN ZRRN	Remarques Remarks Observaciones
1	2	3
2854	AFI-MET RDARA: 2B, 3B, 4A, 13I, 13J	
2861	RDARA: 1E, 3A, 6E, 9B, 9C, 10C, 12D	
2868	MWARA: FE, NA1, NA2 RDARA: 2B, 7, 13G, 13H	
2875	MWARA: SA RDARA: 2A, 2B, 9D, 12A, 12C	
2882	MWARA: CWP RDARA: 2C, 6C, 10E, 12E, 12F, 13L	
2889	EU-MET RDARA: 6B	
2896	RDARA: 1D, 2A, 3C, 13K	
2903	RDARA: 2C, 3B, 5B, 6E, 9D, 11B	
2910	MWARA: EU, SAM2 RDARA: 3A, 6C	

1	2	3
2917	RDARA: 1C, 2A, 3C, 7E, 9D, 10B, 13D, 13E	
2924	RDARA: 2A, 4B, 6C, 10E, 13D, 13E	
2931	MWARA: NA2, NA3 RDARA: 6A, 10A, 13L	
2938	RDARA: 2B, 2C, 3B, 11B	
2945	MWARA: NA2, SP RDARA: 2C, 6A, 6F, 13K	
2952	RDARA: 2C, 3B, 10C, 13G, 13H	
2959	MWARA: CAR RDARA: 2C, 3B, 6A, 9A	
2966	MWARA: CAR, CWP, NSA2 RDARA: 2A	
2973	RDARA: 2A, 3B, 9B, 9C, 10B, 12E, 12F, 13L	
2980	EU-MET, PAC-MET RDARA: 2B	
2987	MWARA: FE, NA2, NP, SEA RDARA: 2C, 13I, 13J	

1	2	3
2994	RDARA: 2A, 3C, 11B, 13D, 13E	
3001	AT-MET, ME-MET	
3008	RDARA: 2C, 3C, 9A, 10D, 13G, 13H	
3015	ME-MET RDARA: 2C, 3C, 13D, 13E	
3023,5	World-wide	
3404	MWARA: ME RDARA: 2A, 10B	
3411	MWARA: NSA1 RDARA: 2C, 10A, 12A, 12C, 13I, 13J	
3418	RDARA: 2C, 10D, 13L	
3425	RDARA: 2B, 2C, 3C, 6D, 7E, 10A, 13G, 13H	
3432	MWARA: SA RDARA: 3A	
3439	RDARA: 2C, 6C, 10D, 13D, 13E	

1	2	3
3446	MWARA: ME RDARA: 3A, 12E, 12F	
3453	RDARA: 3C, 5A, 6D, 12A, 12C	
3460	RDARA: 2A, 9B, 9C, 10A, 12A, 12C, 13K	
3467	MWARA: CEP, EU RDARA: 12E, 12F	
3474	RDARA: 2C, 10C, 13I, 13J	
3481	RDARA: 3A, 6D	
3488	AFI-MET, SEA-MET RDARA: 2A, 10D	
3495	RDARA: 2A, 6D, 13D, 13E	
4654	RDARA: 2B, 9A, 13B, 13E	
4661	RDARA: 2A, 3C, 9D, 10D, 12A, 12C, 13K	
4668	RDARA: 1E, 3C, 6D, 10A	

1	2	3
4675	MWARA: CWP RDARA: 3A, 12A, 12C	
4682	RDARA: 5B, 5C, 9D, 10A, 11B	
4689	MWARA: EU RDARA: 3B, 6D, 10C	
4696	MWARA: SAM1 RDARA: 2A, 3C, 9D	
5454	RDARA: 10E, 12A, 12C, 13D, 13E	ITU Region 2
5461	RDARA: 10B, 12A, 12C, 13L	ITU Region 2
5469	RDARA: 13D, 13E	ITU Region 2
5477	RDARA: 12E, 12F	ITU Region 2
5484	MWARA: CAR RDARA: 2B, 3B	
5491	RDARA: 2C, 7E, 10B, 13G, 13H	
5498	RDARA: 2B, 7, 9B, 9C, 10C	

1	2	3
5505	MWARA: CWP, NSA2 RDARA: 13K	
5512	RDARA: 2A, 6A, 10C	
5519	MWARA: NP, NSA1	
5526	RDARA: 3B, 5A, 6D, 10B	
5533	EU-MET RDARA: 3C, 12A, 12C	
5540	RDARA: 2B, 10D, 13I, 13J	
5547	RDARA: 6B, 9B, 9C, 10A, 13G, 13H	
5554	MWARA: EU	
5561	AT-MET, ME-MET	
5568	MWARA: CAR RDARA: 2A, 3C, 6A	
5575	EU-MET, PAC-MET	
5582	MWARA: SAM2 RDARA: 2C, 6A	

1	2	3
5589	RDARA: 2C, 9A, 12E, 12F	
5596	RDARA: 2C, 6D, 13K	
5603	MWARA: CEP, ME	
5610	MWARA: FE, NA2, NA3	
5617	MWARA: CAR RDARA: 2C, 6D	
5624	MWARA: FE, NA1, NA2	
5631	RDARA: 2C, 11B, 12E, 12F	
5638	MWARA: NA2, SP RDARA: 2B	
5645	RDARA: 2B, 10D	
5652	RDARA: 2C, 6E, 10D, 12A, 12C, 13I, 13J	
5659	RDARA: 3A, 5B, 6C, 13L	
5666	RDARA: 2C, 10D, 12A, 12C, 13D, 13E	

1	2	3
5673	MWARA: NA2, SEA RDARA: 3B	
5680	World-wide	
6533	RDARA: 1C, 3B, 6E, 9B, 9C, 10C, 12E, 12F, 13L	
6540	MWARA: CAR RDARA: 5A, 6F	
6547	RDARA: 1E, 3A, 12A, 12C	
6554	RDARA: 3A, 5B, 5C, 6C, 10D, 12A, 12C, 13G, 13H	
6561	RDARA: 2A, 13L	
6568	MWARA: CWP RDARA: 2B, 10A.	
6575	AFI-MET, SEA-MET RDARA: 2A	
6582	MWARA: EU RDARA: 3A, 10C, 13I, 13J	

1	2	3
6589	RDARA: 3A, 4B, 6D	
6596	ME-MET RDARA: 7E, 10B	
6603	RDARA: 2C, 6C, 12A, 12C	
6610	MWARA: SA RDARA: 2A, 10D	
6617	AFI-MET RDARA: 2C, 6C, 11B, 13D, 13E	
6624	MWARA: ME RDARA: 3C, 10C, 13D, 13E	
6631	RDARA: 1D, 3C, 10E	
6638	RDARA: 2B, 4A, 4B, 10C, 13I, 13J	
6645	PAC-MET RDARA: 2B	
6652	RDARA: 2C, 12A, 12C, 13I, 13J	
6659	RDARA: 2C, 6D, 10D	

1	2	3
6666	MWARA: SAM1 RDARA: 2C, 10D	
6673	RDARA: 2B, 10C	
6680	MWARA: SA RDARA: 2C, 10D	
8819	MWARA: NSA1, SAM1 RDARA: 6C, 6D	
8826	AT-MET, ME-MET RDARA: 6D	
8833	RDARA: 6E, 9D, 10E, 12A, 12C, 13I, 13J	
8840	MWARA: CAR, FE RDARA: 6C	
8847	MWARA: ME, SAM2, SP	
8854	RDARA: 6C, 10E, 11B, 13K	
8861	MWARA: CWP, NA2 RDARA: 6E, 13G, 13H	

1	2	3
8868	MWARA: CAR, EU, FE	
8875	RDARA: 6D, 10B, 12E, 12F	
8882	MWARA: SA RDARA: 6D, 10B, 13I, 13J	
8889	MWARA: NA2 RDARA: 6A, 9D, 13L	
8896	RDARA: 3B, 3C, 4A, 5B, 5C, 9B, 9C, 10B, 13D, 13E	
8903	EU-MET, PAC-MET RDARA: 6D, 13G, 13H	
8910	MWARA: NA1, NA2 RDARA: 5B, 9B, 9C, 13D, 13E	
8917	RDARA: 9B, 9C, 10A, 11B, 13D, 13E	
8924	RDARA: 4B, 6A, 9D, 10A, 12A, 12C, 13L	
8931	MWARA: CEP, EU, SEA RDARA: 13G, 13H	
8938	MWARA: NP RDARA: 6A, 9A, 12E, 12F, 13G, 13H	

1	2	3
8945	MWARA: NA2, NA3 RDARA: 6C, 10C, 13D, 13E	
8952	RDARA: 6B, 9A, 10B, 13D, 13E	
8959	MWARA: NSA2 RDARA: 1C, 5A, 6D, 10A, 11B, 13K	
10009	RDARA: 2, 6F, 13L	
10017	MWARA: CAR, ME	
10025	RDARA: 3, 12A, 12C	
10033	RDARA: 2, 12E, 12F	
10041	RDARA: 2, 7E, 10, 13D, 13E	
10049	MWARA: SA RDARA: 3, 6A, 12A, 12C	
10057	RDARA: 2, 10, 13L	
10065	RDARA: 1, 3, 12E, 12F	

1	2	3
10073	AFI-MET, SEA-MET RDARA: 2, 12A, 12C	
10081	RDARA: 1D, 3, 13I, 13J	
10089	RDARA: 2, 13K	
11279	AFI-MET	
11287	RDARA: 2	
11295	EU-MET	
11303	MWARA: EU	
11311	RDARA: 2, 10	
11319	RDARA: 3, 7	
11327	MWARA: CWP RDARA: 3	
11336	RDARA: 6A, 10	

1	2	3
11343	ME-MET RDARA: 3	
11351	RDARA: 2, 10A	
11359	RDARA: 1, 9, 10	
11367	RDARA: 2	
11375	RDARA: 2, 9, 10	
11383	RDARA: 4, 5	
11391	PAC-MET RDARA: 2	
13264	AT-MET RDARA: 3, 7	
13272	MWARA: NP, SA	
13280	RDARA: 10	
13288	MWARA: FE, NA2	

1	2	3
13296	MWARA: CAR	
13304	MWARA: CEP, NSA1	
13312	MWARA: SAM1 RDARA: 1	
13320		
13328	MWARA: FE, NA1, NA2, NA3, SEA	
13336	MWARA: ME, NSA2	
13344	MWARA: SAM2, SP RDARA: 2	
13352	MWARA: CWP, NA2	
17909	MWARA: CWP, NP	
17917	MWARA: SAM1, SAM2 RDARA: 3	
17925	RWARA: CEP, ME, NSA2	

1	2	3
17933	MWARA: CAR RDARA: 4, 5	
17941	MWARA: CWP	
17949	MWARA: NSA1, SA, SP	
17957	RDARA: 2	
17965	MWARA: FE, NA1, NA2, SEA	

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-27-E
2 April 1966
Original: English

COMMITTEE 4

FIRST REPORT OF WORKING GROUP 4C TO COMMITTEE 4
(TECHNICAL)

1. Working Group 4C, formed to suggest a clarification of the interpretation of paragraph 3.1 of Document No. DT/II-24, has unanimously agreed on the text appearing in the Annex attached hereto, for replacement of sub-paragraphs 3.1.1 to 3.1.4 inclusive of that paragraph.

2. Those participating in the Working Group were the Delegates of Canada, Italy, Portugal, the United Kingdom and the United States of America and the observer of I.A.T.A.

H.G. ARTHUR
Chairman

Annex: 1

A N N E X

In Document No. DT/II-24, replace sub-paragraphs 3.1.1 to 3.1.4 inclusive by the following:

3.1.1 When using single sideband (A3A, A3H, A3J) transmission, the mean power (Pm) of any emission supplied to the antenna transmission line of an aeronautical or aircraft station shall be less than the mean power of the transmitter in accordance with the following table.

3.1.2

TABLE

Frequency separation from assigned frequency Δ in kc/s	Attenuation in db
$2 \leq \Delta < 6$	25
$6 \leq \Delta < 10$	35
$10 < \Delta$	Aircraft stations 40 db Aeronautical stations $40 + 10 \log_{10}$ (Pm watts)

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-28-E
4 April 1966
Original : English

COMMITTEE 4

DRAFT

SEVENTH REPORT OF COMMITTEE 4

(TECHNICAL)

DRAFT RECOMMENDATION RELATING TO A STUDY ON UTILIZATION OF SPACE RADIOCOMMUNICATION TECHNIQUES BY THE AERONAUTICAL MOBILE (R) SERVICE

Following a study of a proposal by the Administration of the United States of America made pursuant to Resolution No.5 adopted by the First Session (page 57 of the Report of the First Session), Committee 4 unanimously agreed the text of a draft Recommendation as shown in the Annex hereto.

J. T. PENWARDEN
Chairman

Annex: 1

A N N E X

DRAFT RECOMMENDATION ...

Relating to a study on utilization of space radiocommunication techniques by the Aeronautical Mobile (R) Service

The Aeronautical Extraordinary Administrative Radio Conference, Geneva, 1966,

considering

ex II/120 p. 1 a) the continuing efforts of the Aeronautical Mobile (R) Service to obtain improvements in air-ground-air communications, commensurate with increases in number, size and speed of aircraft;

b) the efforts of the Union to reduce congestion in the bands between 4 and 27.5 Mc/s; and

c) the need to effect conservation in the use of the high frequency spectrum;

noting

a) that successful application of space radiocommunication techniques to the communication needs of international civil aviation offers the possibility of substantially improving Aeronautical Mobile (R) Service communications while reducing congestion in the bands between 4 and 27.5 Mc/s;

b) that tests have demonstrated the capability of effecting communication between aircraft and aeronautical stations by relay via a stationary satellite;

c) that the state of the art in space radiocommunication techniques is rapidly advancing;

d) that the technical potential is such that satellite relay techniques could provide a capability for accommodation of many of the Aeronautical Mobile (R) Service communication requirements over major world air routes on all but the polar routes in the near future;

ex II/2
p. 55

e) that before administrations will be willing to undertake a programme to implement space radiocommunication techniques they will need a comprehensive technical investigation into those techniques and a statement of the measures that need to be taken;

ex II/2
p. 55

f) that the ability of administrations to undertake such a programme is intimately linked to the economic implications involved; and

ex II/120
p. 2

g) that the International Civil Aviation Organization is the international body primarily concerned with the establishment of standards and recommended practices governing communication systems and techniques used to support international civil aviation; and that that organization has included the subject of space radiocommunication techniques on the agenda of its Communications/Operations Divisional Meeting scheduled to convene in October 1966;

recommends

ex II/120
p. 2

1. that administrations take account of the possibilities of satisfying the communication needs of the Aeronautical Mobile (R) Service on major world air routes by the use of space techniques bearing in mind the economic and operational aspects involved; and

2. that administrations give further study to these questions taking as a basis for their consideration the factors set forth in the Annex hereto.

Annex : 1

ANNEX

to draft Recommendation No....

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

ex II/2 pp. 61-63

1. The technical parameters of the satellite and aircraft receiving and transmitting system, including :

a) Required received (carrier) power at the satellite (from the aircraft).

b) Required received (carrier) power at the aircraft (from the satellite).

c) Satellite effective radiated power (per channel).

d) Aircraft effective radiated power (per channel).

e) Type of emission which should be employed.

f) Bandwidth of each channel.

g) Channelling arrangement.

h) Polarization requirements.

i) Need for omni-directional aircraft antenna; sea/ground reflections.

j) Required separation between transmit and receive frequencies on the satellite.

k) Requirement on the satellite for capability of aircraft to independently use each channel (multiple/random access).

l) Other considerations.

2. The number and location of satellites, including :

   a) In regard to provision of service, tabulate air routes and number of flights over each air route.

   b) Group of air routes which may be served via a common satellite.

   c) Number of satellites needed to provide service to each group of air routes.

   d) Location of each of the satellites.

   e) Number of channels needed aboard each satellite.

   f) Other considerations.

3. Technical performance requirements of aeronautical (R) stations, including :

   a) Suitable transmitting and receiving antenna characteristics : gain, beamwidth, siting, etc.

   b) Minimum effective radiated power.

   c) Development and utilization of low-cost aeronautical (R) station (terminal) facilities.

   d) Other considerations.

4. Method of operation and location of aeronautical (R) stations, including :

   a) The method of operation : where multiple frequencies are provided on the satellite, the need, or absence of need, to continue the present practice of providing route separation by use of different/separate frequencies; that is,

      i) should all (R) frequencies on the satellite be available at all aeronautical (R) stations; or

      ii) should the communication load be distributed between available frequencies, each of which is limited to a specific geographic area; or

      iii) some other arrangement.

   b) As appropriate, to list (by frequency) each of the aeronautical (R) stations which should employ each satellite frequency.

   c) Other considerations.

5. Provisions for handling aeronautical point-to-point communications among ground terminals :

   a) Technical system performance parameters of the ground equipment.

   b) Technical system performance parameters of the satellite equipment.

   c) Requirement on the satellite for capability of ground terminals to have independent access to relay-channels through the satellite (multiple/random access).

   d) Frequency bands to be used.

   e) Required separation between transmit and receive frequencies on the satellite.

   f) Development and utilization of low-cost ground terminal facilities.

   g) The entity or entities which should provide, own or operate the satellites and ground terminal facilities as well as the extent to which aeronautical point-to-point communications should be handled.

   h) Other considerations.

6. Estimated costs of a model satellite system to include : satellite(s), aircraft, and ground terminal(s).

7. Operational aspects, including a study of :

   a) One or more models of an operational environment.

   b) A specific time period; and

   c) the evolutionary process involved in implementation of the satellite system.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-29-E
5 April 1966
Original: English

COMMITTEE 2

WORKING PAPER

DRAFT REPORT OF THE CREDENTIALS COMMITTEE

Attached is a draft report of the Credentials Committee. It is submitted for consideration of the Committee at its meeting to be held on Tuesday, 12 April 1966. It reflects the results of the work of the Working Group. However since some questions remain for determination by the full Committee, it is anticipated that changes will be made in this draft before the report is approved and adopted by the full Committee. In addition, the appropriate title and heading will be added when the report has been adopted and before it is submitted to the plenary.

Annex: 1

A N N E X

REPORT OF COMMITTEE 2
(CREDENTIALS COMMITTEE)

1. Proceedings of the Committee

Committee 2 held its first meeting on 23 March 1966. It designated a delegate of the United States (Mr. L. Loevinger) as rapporteur. The Committee unanimously agreed to refer the work of examination and detailed verification of credentials to a Working Group consisting of the Chairman, the Rapporteur and the following delegates:

Mr. Pierre C.M. BOUCHIER (Belgium)
Mr. T. FURUYA (Japan)
Mr. Jose J. HERNÁNDEZ (Mexico)
Mr. A. PETTI (Italy)

The Working Group met on 27 March 1966 and on 4 April 1966 and examined the credentials of all delegations that had filed credentials with the Secretariat. In addition, the Working Group communicated with delegations which had failed to file credentials or whose credentials raised points of doubt, and made further inquiries concerning the credentials of certain delegations. The Working Group reported the results of its work to the full Committee at a meeting of the full Committee held on 12 April 1966. The Committee considered the report of the Working Group and also considered additional information presented to it by the Chairman and the Secretariat. On the basis of such reports and information, and having fully considered all credentials received to the date of this report, the Committee has reached the following conclusions.

2. Accredited delegations

2.1 Credentials for delegations of the following administrations have been received and filed and found to be in proper form authorizing the delegations to participate and vote in the proceedings of the Conference and to sign the Final Acts:

Algeria (Algerian Democratic and Popular Republic)
Saudi Arabia (Kingdom of)
Australia (Commonwealth of)
Belgium
Brazil
Bulgaria (People's Republic of)
Canada
China
Colombia (Republic of)
Cuba
Denmark
Group of Territories represented by the French Overseas Post & Telecommunication Agency
Spain
United States of America
Ethiopia
France
Ghana
India (Republic of)
Indonesia (Republic of)
Ireland
Italy
Jamaica
Japan
Kuwait (State of)
Luxembourg
Malaysia
Norway
New Zealand
Netherlands (Kingdom of)
Poland (People's Republic of)
Portugal
Portuguese Overseas Provinces
Federal Republic of Germany
Roumania (Socialist Republic of)
United Kingdom of Great Britain and Northern Ireland
Singapore
South Africa (Republic of) and Territory of South-West Africa
Switzerland (Confederation of)
Czechoslovak Socialist Republic
Overseas Territories (United Kingdom)
Thailand
Union of Soviet Socialist Republics
Venezuela (Republic of)

2.2 Credentials for the delegation of the following administration have been received and filed and found to be in proper form authorizing the delegation to participate and vote in the proceedings of the Conference without authority to sign the Final Acts:

Territories of the United States of America

3. Provisionally accredited delegations

Provisional credentials for delegations of the following administrations have been received and filed and the delegations have been found provisionally accredited under Chapter 5 of the General Regulations annexed to the International Telecommunication Convention (Geneva, 1959):

Ecuador
Hungarian People's Republic
Mexico
Pakistan

4. Delegations with questioned credentials

Credentials have been received for delegations of the following administrations, but the Committee is unable to resolve certain questions or points of doubt concerning each of these credentials, and, therefore, is unable to report that these credentials are in order:

Argentine Republic
Tunisia

5. Delegations without credentials

Delegations of the following administrations have attended the Conference but no credentials have yet been received from these administrations:

Cameroon (Federal Republic of)
Congo (Republic of the) (Brazzaville)
Monaco
Yugoslavia (Federal Socialist Republic of)

6. Further verification of credentials

It is recommended that any questions remaining or arising after the filing of this Report concerning the verification of credentials to this Conference shall be referred to the Chairman of the Credentials Committee who shall be authorized and empowered to determine such questions with the assistance of such members of the Credentials Committee, or the Working Group of the Credentials Committee, as he may be able to summon when such questions require determination. The Chairman of the Credentials Committee should report any such determination to the plenary session of this Conference for approval or disapproval.

7. Recommendation to the Secretary General

It is recommended that the plenary session of this Conference recommend to the Secretary General of the I.T.U. that in the future whenever an invitation is sent to any administration to attend an I.T.U. Conference the attention of each such administration shall be invited to the provisions of the I.T.U. Convention concerning credentials for Conferences and that a copy of the full text of such provisions shall be enclosed with each such invitation.

Rapporteur:
Lee LOEVINGER

Chairman:
S.C. BOSE

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-30-E
6 April 1966
Original : Spanish

COMMITTEE 5D

BOUNDARIES OF AREA 13 AND ITS SUB-AREAS

Working Party 5D met merely to adjust the boundaries of the sub-areas in Area 13. The delegations of Argentina and Brazil took part in this work. The meeting was also attended by a representative of the I.F.R.B. and a delegate of I.C.A.O.

The results of its work are given in the Annex to this document.

Chairman of Working Party 5D,
L. SIGLER

Annex : 1

A N N E X

BOUNDARIES OF AREA 13 AND ITS SUB-AREAS

Regional and Domestic Air Route Area - 13 (RDARA 13)

Sub-Area 13A

From the point 05°S 120°W and 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 close the sub-area at 05°S 120°W.

Sub-Area 13B

No change.

Sub-Area 13C

From the point 15°50'S 47°50'W and through the points 20°30'S 55°W, 22°35'S 54°30'W, and along the frontiers of Brazil with Paraguay, Bolivia, Peru, Colombia, Venezuela, British Guiana, Surinam and French Guiana to 05°N 50°W, 05°N 48°30'W to close the sub-area at 15°50'S 47°50'W.

Sub-Area 13D

From the point 19°S 81°W, and through the points 04°S 82°W, 03°S 80°W, and along the northern frontier between Peru and Ecuador to 00° 75°W. Then along the northern frontier between Peru, Colombia and Brazil to 11°S 69°30'W. Thence along the frontier between Bolivia and Brazil and through the point 20°10'S 58°W, continuing along the frontier between Paraguay and Brazil to 25°50'S 54°30'W and thence following the frontier between Paraguay and Argentina to 22°30'S 62°30'W. Then along the frontier between Bolivia and Argentina and through the point 23°S 67°W along the frontier between Bolivia and Chile and through the point 17°30'S 69°30'W, following the frontier between Peru and Chile to close the sub-area at 19°S 81°W.

Sub-Area 13E

From the point 32°S 81°W and through the point 19°S 81°W, continuing along the frontier between Chile, Peru, Bolivia and Argentina, to the point of intersection with 32°S to close the sub-area at 32°S 81°W.

Sub-Area 13F

From the point 57°S 81°W and through the point 32°S 81°W to the intersection of 32°S with the frontier between Chile and Argentina, and through the points 52°S 67°W, 57°S 67°W, 57°S 40°W, to the South Pole to close the sub-area at 57°S 81°W.

Sub-Area 13G

From the point 36°S 55°W to the intersection of 32°S with the frontier between Argentina and Chile, then north along the frontiers of Argentina with Bolivia, Paraguay, Brazil and Uruguay to close the sub-area at 36°S 55°W.

Sub-Area 13H

From the point 57°S 90°W and through the point 57°S 70°W to 52°S 70°W. Then along the frontier 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 to close the sub-area at 57°S 90°W.

Sub-Area 13I

From the point 40°S 50°W through the point 36°S 55°W and the frontiers between Uruguay, Argentina and Brazil, then through the point 35°S 45°W to close the sub-area at 40°S 50°W.

Sub-Area 13J

From the points 15°50'S 47°50'W through the points 20°S 44°W, 22°55'S 43°10'W, 29°S 40°W, 35°S 45°W and thence along the frontiers of Brazil with Uruguay, Argentina and Paraguay to the point 22°35'S 55°40'W, 20°30'S 54°30'W to close the sub-area at the point 15°50'S 47°50'W.

Sub-Area 13K

From the point 15°50'S 47°50'W and through the points 20°S 44°W, 22°55'S 43°10'W, 29°S 40°W, 20°S 32°W, 00° 32°W, 05°N 48°30'W to close the sub-area at 15°50'S 47°50'W.

Sub-Area 13L

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

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-31-E
6 April 1966
Original : English

COMMITTEE 4

DRAFT

EIGHTH REPORT OF COMMITTEE 4

(TECHNICAL)

DRAFT RESOLUTION RELATING TO THE USE OF FREQUENCIES 3023.5 kc/s AND 5680 kc/s COMMON TO THE AERONAUTICAL MOBILE R AND OR SERVICES

To fulfil the task given to Committee 4 during the Second Plenary Meeting of the Conference, I present herewith a draft text for the consideration of the Committee.

Chairman,
J.T. PENWARDEN

Annex : 1

A N N E X

DRAFT RESOLUTION

RELATING TO THE USE OF FREQUENCIES 3023.5 kc/s AND 5680 kc/s COMMON TO THE AERONAUTICAL MOBILE R AND OR SERVICES

The Aeronautical Conference,

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 3023.5 kc/s and 5680 kc/s as contained in Column 3, clauses 2 a) and 2 b) of the frequency allotment plan and having taken steps to remove these anomalies;

considering

1. that coordinated search and rescue operations at the scene of a disaster would be improved if the use of the frequencies 3023.5 kc/s and 5680 kc/s, in such operations, were extended to include communication between mobile stations and participating land stations;

2. that it would be in the general interests of the Aeronautical Mobile Service if the same provisions relating to the use of the frequencies 3023.5 kc/s and 5680 kc/s 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 the provisions governing the use of the frequencies 3023.5 kc/s and 5680 kc/s specified in pages .... and ..... of Appendix 26A.

AERONAUTICAL CONFERENCE

Geneva 1966

Document No. DT/II-32-E
7 April 1966
Original: English

COMMITTEE 6

ARGENTINA AND BRAZIL

As requested in the Third Meeting of Committee 6 on 7 April 1966, the attached rearrangement of frequencies in Area 13 (page 10 of Document No. DT/II-26 refers) is submitted for consideration. The rearrangement is based on the sub-Areas as re-defined in Document No. DT/II-30.

Annex: 1

A N N E X E - A N N E X - A N E X O

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
13C	2882 2931			5461	6533	8889	10009			
13D	2994 2924	3495 3418		5454 5469	6617 6561	8931 8910 8917	10041			
13E	2917		4654			8945				
13F	3015	3439		5666	6624	8952 8896				
13G	2868 2952 3008		4668	5491	6554	8861 8903	10057			
13H	2861 2889	3425		5547 5477 5498		8938		11287 11319	13264 13264	17957 17957
13I	2973			5659		8924				
13J	2987 2854	3411 3474		5540 5652	6582 6638 6652	8833 8882	10081			
13K	2896 2945	3460	4661	5502 5596		8854 8959	10089			

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-33-E
7 April 1966
Original: English

PLENARY MEETING

DRAFT

NINTH REPORT OF COMMITTEE 4 (TECHNICAL)

Technical provisions relating to the use of simple sideband emissions

Assigned frequencies

Following a most thorough study of proposals by Administrations to the Conference and of the Report of the First Session, Committee 4 unanimously agreed the texts attached hereto for inclusion in the revised Appendix for the Aeronautical Mobile (R) Service.

J.T. PENWARDEN
Chairman

Annex: 1

A N N E X

App. 26
p. 15

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

ADD 3.1 Definitions of carrier modes.

3.1.1 Full carrier (A3H). Carrier transmitted at a level between 0 db and 6 db, inclusive, below peak envelope power.

3.1.2 Reduced carrier (A3A). Carrier reduced to a level more than 6 db up to and including 26 db below peak envelope power.

3.1.3 Suppressed carrier (A3J). Carrier suppressed to a level more than 26 db below peak envelope power.

ADD 3.2 Modes of operation

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

3.2.2 Suppressed carrier mode (A3J).

3.2.3 Full carrier mode (A3H).

ADD 3.3 Tolerance for levels of SSB emission outside the necessary bandwidth.

3.3.1 When using single sideband (A3A, A3H, A3J) transmission, the mean power of any emission supplied to the antenna transmission line of an aeronautical or aircraft station, on any discrete frequency, shall be less than the mean power (Pm) of the transmitter in accordance with the following table.

3.3.2

TABLE

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

ADD 3.4 Frequency tolerance

3.4.1 The frequency tolerance, as defined in No. 88 of the Radio Regulations, Geneva, 1959, for A3J operation, shall be as follows:

3.4.2 Aeronautical stations: 10 c/s

3.4.3 Aircraft stations: 20 c/s

ADD 3.5 Channel utilization

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

3.5.2 Subject to the provisions of paragraph [1 b) of Document No.91, page 3] a station using single sideband emissions may operate either in the upper half or in the lower half of the double sideband channels designated by the centre frequency in the Allotment Plan;

a) when using the upper half of the channel, the station shall use upper sideband emissions with the carrier at the channel frequency listed in the Allotment Plan;

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

c) when using the lower half of the channel, the station shall use upper sideband emissions with the carrier at the following value below the channel frequency listed in the Allotment Plan:

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

ADD 4. Assigned Frequencies

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

4.2 Stations employing double sideband emissions (A3) shall operate with assigned frequencies at the values listed in the Table.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-34-E
12 April 1966
Original : Spanish

COMMITTEE 4

CUBA

INTRODUCTION OF SINGLE SIDEBAND TECHNIQUES IN THE HIGH FREQUENCY BANDS ALLOCATED TO THE AERONAUTICAL MOBILE (R) SERVICE

The opinions expressed by several delegates in the plenary meeting of Committee 4 on the introduction of single sideband showed that there are some misgivings as to the way in which it should be effected.

Among these opinions the following may be mentioned :

1. The early introduction of single sideband might be premature in view of the extent and effectiveness of new techniques, such as VHF and, in the future, satellite-relay techniques;

2. There is no need to increase available channels in the high frequency bands for the Aeronautical Mobile (R) Service;

3. Technical standards should be set up to serve as a basis for the makers of single sideband equipment to ensure compatibility with double sideband equipment;

4. The advantages of single sideband should be weighed up before starting to introduce it gradually in the Aeronautical Mobile (R) Service;

5. The technical, economic and operational implications should be carefully considered;

6. In many areas the Aeronautical Mobile (R) Service will, for a long time to come, continue to make use of similar equipment to that now in operation;

7. Some guidance should be given to manufacturers for the production of compatible suppressed carrier SSB/DSB equipment, especially for international routes;

8. Manufacture of these new types of equipment should not involve the scrapping of existing communication systems, nor the disappearance from the market of the relevant equipment, its accessories and its spare parts.

Nevertheless, it has been recognised that account must be taken of the technical characteristics and specifications required for the design and manufacture of single sideband equipment, its assessment and its eventual introduction on a given date.

Bearing these views in mind, this Delegation proposes the following draft resolution to the Technical and Operational Committee.

Annex : 1

A N N E X

DRAFT RESOLUTION No....

RELATING TO THE INTRODUCTION OF SINGLE SIDEBAND TECHNIQUES IN THE HIGH FREQUENCY BANDS ALLOCATED TO THE AERONAUTICAL MOBILE (R) SERVICE

The Second Session of the Aeronautical Extraordinary Administrative Radio Conference, responsible for "Drawing up a Revised Allotment Plan for the Aeronautical Mobile (R) Service", Geneva, 1966",

considering

a) that congestion should be avoided in the high frequency bands allocated to the Aeronautical Mobile (R) Service;

b) that the great majority of stations now operating in the Aeronautical Mobile (R) Service, in the high frequency bands, are capable of operating only with double sideband radiotelephony;

c) that, because of the preponderance of double sideband equipment in use, the allotment plan adopted by the Conference is based on the assumption that all existing stations are capable of operating only with double sideband radiotelephony, and

d) that recent advances in technology may make it possible to avoid congestion in the high frequency bands allocated to the Aeronautical Mobile (R) Service, through the greater use of VHF techniques and of satellite-relay techniques;

recognizing

a) that, despite the recent advances in technology permitting the accommodation of the Aeronautical Mobile (R) Service in bands other than high frequency bands, there are many areas of the world where the need for high frequency communication will continue into the foreseeable future; and in some areas may be an increasing need;

b) that single sideband radiotelephony has demonstrated advantages over double sideband radiotelephony in many radio services in terms of spectrum economy and also reliability of communication particularly under adverse atmospheric and propagation conditions;

c) that economic, technical and operational considerations make it impracticable to specify, at this time, any definitive date by which the use of double sideband radiotelephony must be discontinued in favour of single sideband radiotelephony;

d) that single sideband equipment of appropriate design should operate compatibly with double sideband systems, and would permit the introduction of SSB on an evolutionary basis;

e) that significant spectrum economy will be realized only when the ratio of SSB to DSB users is sufficiently large to make channel-splitting practicable; and

f) that the desirability of having equipment capable of working compatibly with both single sideband and double sideband so as to permit the regular, gradual introduction of the single sideband system;

resolves

1. that, taking into account economic, technical and operational considerations, Administrations should endeavour, as soon as possible, to make use of equipment capable of working compatibly with both single sideband and double sideband which will permit the gradual introduction of single sideband techniques;

2. that, notwithstanding the conditions specified in the preceding paragraph, Administrations may continue to instal and operate equipment having similar characteristics to that in current use;

3. that the International Civil Aviation Organizations be invited, as a matter of urgency and within the framework of the decisions taken by this Conference, to establish technical characteristics for system standards relative to single sideband equipment, in respect of application to international operation; and to advise the C.C.I.R. of any technical or operational problems on which they would like the assistance of the C.C.I.R.; and

4. that Administrations shall ensure that all the new models or types of radiotelephone equipment designed for installation after 1 January 1972, for use in the Aeronautical Mobile (R) Service on international routes, shall be suppressed-carrier SSB/DSB compatible.

J. VALLADARIS-TIMONEDA

Chief of the Delegation of Cuba

AERONAUTICAL CONFERENCE

Geneva, 1966

Addendum to
Document No. DT/II-35-E
19 April 1966
Original: English

COMMITTEE 6 AND
WORKING GROUPS 6C, 6D, 6E

DRAFT REVISED FREQUENCY ALLOTMENT PLAN FOR RDARA 13

The attached draft revised Plan for RDARA 13, prepared at the request of the Chairman of Working Group 6E, is a consolidation of the pertinent information contained in Documents Nos. DT/II-26, DT/II-32 and DT/II-35 and cancels and replaces this information.

E.B. POWELL
Chairman
Committee 6

Annex: 1

A N N E X E - A N N E X - A N E X O

PROJECT - DRAFT - PROYECTO

Bandes Bands Bandas MHz Mc/s	3	3,5	4,7	5,6	6,6	9	10	11,3	13,3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
13									13 264	17 957
13 C	2854 2987			5540 5652	6652	8833		11 295		
13D	2868 2924	3495 3411		5454 5469	6617 6638	8931 8910 8917	10 041			
13E	2917		4654			8945				
13F	3015	3439		5666	6624	8952 8896				
13G	2994 2952 3008 2980		4668	5491	6554 6645	8861 8903 8...	10 081			
13H	2861 2889	3425		5547 5477 5498		8938 8840[1]		11 287 11 319	13 320	
13I	2966			5659		8924				
13J	2882 2931 2973	3418		5461	6582 6533 6561	8... 8889	10 009 10 057			
13K	2896 2945	3460	4661	5505 5596	6631	8854 8859	10 089			

1) Utilisation au Sud de 40° Sud
To be used South of 40° South
Para ser usado al Sur de 40° Sur

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No.DT/II-35-E
14 April 1966
Original: English

COMMITTEE 6 AND WORKING GROUPS 6C, 6D AND 6E

PROPOSED AMENDMENTS TO THE DRAFT REVISED FREQUENCY ALLOTMENT PLAN

(Documents No.DT/II-26 and DT/II-32)

1. Attention is invited to the following documents containing proposals:

Document No.II/135 URS	Document No.II/154 BUL
" " II/142 CUB	" " II/161 VEN
" " II/143 ARG, B	" " II/162 D,G, NOR
" " II/153 ETH	" " II/170 INS, J, THA

Document No.II/172 ROU

2. Additionally the Chairman has received proposals from the following Delegations which are reproduced in the Annexes hereto as shown

Annex A	AFS	G	HNG POL TCH
B	ALG	H	MLA SNG
C	ARG	I	MEX
D	AUS, NZL, UK overseas	J	PAK
E	B	K	URS
F	CAN	L	VEN

E.B. POWELL
Chairman of Committee 6

Annexes : 12 (A to L)

ANNEX A AFS

RDARA 7 AND SUB-RDARA 7E

It would be appreciated if (a) a 9 Mc/s frequency (8875 kc/s is suggested) could be allotted to sub-RDARA 7E and (b) the frequency 10 041 kc/s presently allotted to area 7E vide Document No. DT/II-26 could be transferred to RDARA 7.

Reasons are as follows:

a) An investigation of the route distances to be covered in 7E in conjunction with the appendices to NBS 9141 indicates that 10 Mc/s would be just too high for most periods except, possibly, December sunspot high. 9 Mc/s falls well within the MUF and almost exactly on the OWF.

b) To cater for December high conditions in RDARA 7.

A N N E X B

ALG

Subject :

Allocation of a frequency in the 10 Mc/s range to RDARA Sub-Area 4A.

Reason :

The allocation of a frequency in the 10 Mc/s range is necessary because of difficulties encountered in establishing reliable communications with aircraft flying over the Saharan areas.

ANNEX C ARG

Request for additions or amendments to sub-areas 13G and 13H (supplementary to Document No. DT/II-30).

1. Add a family of frequencies to 13G in accordance with Document No. II/143 approved by Committee 5 at its meeting on 13 April. This family should be of: 3, 6.5 and 9 Mc/s.

2. Complete a family of frequencies of 13H (South Argentina and Antarctic sector) with two frequencies of the order of 9 and 13 Mc/s, exclusive to that sub-area, so that a family will be made with: 3, 5.4, 9, 11 and 13 Mc/s.

The two remaining to be kept at 3.4, 5.5, 9, and 3, 5.5 and 11 Mc/s.

Reason:

The longitude of South FIR exceeds 3000 km (60%) and flights are covered in the South Continental and Antarctic Sector area since no MWARA has been created for that sector.

The frequency of 13 Mc/s thus assigned to 13H can be shared by 13F (Chile) which has the same longitude, but must be independent of the one assigned to Area 13.

Bands Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13	17
13 G	2.8	-	4.6	-	-	8.8	-	-	13.2	17.9
	2.9	-	-	5.5	-	8.9	-	-	"	"
	3.0	-	-	-	6.5	-	10	-	"	"
	3.0	-	-	-	6.6	8.9	-	-	"	"
13 H	-	3.4	-	5.5	-	8.9	-	-	"	"
	2.8	-	-	5.5	-	-	-	11.2	"	"
	2.8	-	-	5.5	-	8.8	-	11.3	13.3	"

ANNEX D

AUS
NZL
UK o/seas

Statement by New Zealand, Australia and British Overseas Territories on the changes required in the proposed frequency allotments recorded in Document No. DT/II-26, and of the proposed additional frequency allotments necessary to maintain existing radio-communication facilities serving Regional and Domestic Services in RDARA 9.

Area	Frequency allotted in Doc.No.DT/II-26 (kc/s)	Frequency Preferred (kc/s)	Remarks
9	11359	11311	-
	11375	11375	No change
	-	11391	Allotment of 11391 kc/s is dependent on PAC-MET being transferred to another frequency - possibly 11287 kc/s
		17...	For long distance over-water flights during high sunspot number periods
9A	2959	3404	
	3008	3418	
	-	3432	
	4654	6680	
	5589	6610	
	-	6638	
	8938	8938	No change
	8952	8924	
	-	8833	
9B	2861	2861	No change
	2973	2973	No change
	3460	3460	No change
	-	3008	Shared with 9D
	-	3411	
	-	3488	
	5498	5498	No change, shared with 9D

Area	Frequency allotted in Doc.No.DT/II-26 (kc/s)	Frequency Preferred (kc/s)	Remarks
9B contd.	5547	5526	Shared with 9D
	6533	6533	No change
	-	6582	
	-	6666	
	-	5666	
	-	6631	
	8896	8896	No change
	8910	8910	No change
	8917	8917	No change
	-	8959	
	-	8889	
9D	2875	2959	
	2903	3008	Shared with 9B
	2917	2917	No change
	-	3467	
	-	3481	For use east of 160°E
	4661	4661	No change
	4682	5526	Shared with 9B
	4696	6561	
	-	5498	Shared with 9B
	8833	8931	
	8889	8952	
	8924	8882	
	-	8861	

A N N E X E B

Subject: Frequency requirements of sub-areas 13C, 13J and 13K

Reference: Documents Nos. DT/II-26 and DT/II-32

Referring to the above documents, I am forwarding you hereunder a Table of Frequencies, which expresses what we consider to be acceptable, as far as the Brazilian territory, and the operational characteristics are concerned.

As you will see, some changes have been introduced as follows:

Sub-RDARA 13C (previously 13J) = B1

The frequency 8882 kc/s has to be replaced because of lack of protection from MWARA SA allotment, by frequency 6652 kc/s. Taking into account the geographical extension of the sub-area and in order to complete the family of frequencies, frequency 11 295 kc/s is listed.

Sub-RDARA 13J (previously 13L) = B3

As presented.

Sub-RDARA 13K (previously 13K) = B2

In this sub-RDARA frequency 6631 kc/s has been included because there were none in this band and until now the use of such frequencies in the sub-area has presented very good conditions of propagation for efficient operations. The repetition of this frequency was found feasible because it was allotted for sub-RDARAs 1D, 3C and 10E, which provides the necessary protection as far as Appendix 26 is concerned.

Sub-RDARA 13I

This sub-RDARA is presented mainly as a suggestion, because it was created with the amendments shown in Document No. DT/II-30 and the frequencies are already in operation in the territory of Uruguay.

BANDS	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
ZONES	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s
13									13 264	17 957
13C	2854 2987			5540 5652	6652	8833		11 295		
13J	2882 2931 2973	3418		5659 5461	6533 6561	8924 8889	10 009 10 057			
13K	2896 2945	3460	4661	5505 5596	6631	8854 8959	10 089			
13I (URG)		3474			6582		10 081			

A N N E X F CAN

With reference to the frequency requirements outlined in Document No. II/128 and DT II/26 the following additional requirements need to be satisfied in RDARAs 10B, 10C, 10D and 10E;

10B - 2875, 2896, 3432, 4675, 4696, 5469 kc/s (5617 daytime only);

10D - 3446, 3481, 5477, 5554, 5603 kc/s;

10E - 2980, 3460, 3495, 4696, 5519 kc/s.

In accordance with the principles outlined in Document No. II/128 it is considered that these frequencies may be alloted to the above areas without restricting their use in other RDARAs. The remaining Canadian regional and domestic requirements will be satisfied by the adaptation of the allotment procedure, that is by additional sharing through the use of low power stations within the RDARA.

ANNEX G

HNG
POL
TCH

The Delegation of the People's Republic of Poland had proposed that two frequency families should be allocated to Sub-Area 1C (see Document No. II/128, page 11).

After a more detailed study of the question and after an exchange of views with the Delegations of other countries of the same Sub-Area, the Delegation of the People's Republic of Poland, taking into account the shortage of frequencies and bearing in mind the need for collaboration among all Delegations in the solution of difficult problems of this kind, hereby withdraws its original request, provided that the frequency family proposed in Document No. DT/II-26 for RDARA 1C is so supplemented as to allow for HF wave propagation in all conditions.

To this end, we propose that the frequency family in question be supplemented by an additional frequency of 4.7 Mc/s (or 5.6 Mc/s).

The Delegations of the Hungarian People's Republic and the Czechoslovak Socialist Republic associate themselves with the above proposal.

A N N E X H

MLA
SNG

1. In Document No. DT/II-26-E the initial frequency allocation proposals for MWARAS FE and SEA are reproduced below in paragraph 4.

2. It is observed that there are certain frequencies the adjacent channels of which are also allocated to RDARAs in the same/neighbouring areas and the possibility of adjacent channel interference could not be ruled out.

3. It is proposed that the working group to Committee 6 responsible for looking further into the frequency requirements of the RDARAs would also take into consideration this factor and re-position the RDARA frequencies where possible as indicated in the "Remarks column" below so that the possibility of adjacent channel interference could be minimised or eliminated.

4.

MWARA frequencies allocated for FE kc/s	Remarks (Possible interference due to)
2868	2861 from 6 E
5610	5617 from 6 D
8840	8840 from 6 C and 8833 from 9D; and 6 E
13288	-
17965	-
2987	-
5624	5617 from 6 D
8868	8875 from 6 D and 8861 from 6 E
13328	-
17965	-

MWARA frequencies allocated for SEA kc/s	
2987	-
5673	-
8931	8924 from 6 A and 9 D; 8938 from 6 A and 9 A
13328	-
17965	-

A N N E X I

MEX

In accordance with Document No. II/128 (page 14) a frequency of 11 Mc/s should be allotted to RDARA 12 and this is not included in Document No. DT/II-26.

A N N E X J PAK

1. To overcome the difficulties arising from the fact that there is no common frequency between MWARAs ME and SEA and taking into consideration that West Pakistan is situated in MWARA ME and East Pakistan in SEA and FE and as supported by the working group detailed by Committee 6A to check the frequencies in MWARAs ME, SEA, FE and CEP it is proposed that:

At least two frequencies, one in the 10 Mc/s and the other in the 13 Mc/s bands may be exclusively allotted to sub-RADARA 6A.

Reasons:

To ensure continuity of communication for flight between East and West Pakistan and coordination between Aeronautical Stations directly concerned with the flights.

2. An additional frequency in the 3 Mc/s bands may be allotted to sub-RDARAs 5B and 5C.

Reasons:

Frequency 2903 kc/s is common to three adjacent sub-RDARAs namely 5B, 5C and 6E.

ANNEX K

U.R.S.

Area and Sub-Area	Number of families of frequencies according to Doc.II/128	Number of frequencies in a family	Total Number of Freqs.	3.0	3.5	4.7	5.6	6.6	9.0	10.0	11.3	13.3	18.0
2			14							6	6	1	1
2A	4 3	4 3	16) 9) 25	5	4	2	4	5	5				
2B	4 6	4 3	16) 18) 34	7	5	4	7	6	5				
2C	14	3	42	9	8	4	9	7	5				
3			9							4	3	1	1
3A	2 4	4 3	8) 12) 20	3	3		2	6	4				
3B	1 2 3	5 4 3	5) 8) 22 9)	6	2	2	4	3	5				
3C	1 2 4	5 4 3	5) 8) 25 12)	5	4	4	4	3	5				

ANNEX L VEN

Reference: Document No. II/161, submitted by Venezuela on 12 April 1964.

I wish to refer to the above-mentioned document, with the aim of drawing the Chairman's attention to the following questions which are of great importance to my country:

1. In Document No. II/128, page 15, first line, Sub-Areas 12E, 12F, 12G and 12H are grouped together, with the recommendation that they be assigned four frequency families.

2. Document No. DT/II-26, submitted by the Chairman of Committee 6 and supported by Venezuela, shows the frequencies proposed for use in the four Sub-Areas in question.

3. Venezuela considers that it would be exceedingly risky to entrust the domestic Aeronautical Mobile (R) Service to frequencies which, according to Document No. DT/II-26, would be shared among four Sub-Areas.

4. At present, Sub-Area 12G has exclusive, unshared frequencies, so that our air traffic control requirements are not hampered by interference problems; they are met as shown in the following table:

2980	kc/s	common use at night for the East and West sectors of the country;
4682.5	"	used in both sectors, depending on propagation;
5491.5	"	used towards the West sector of the country;
5544	"	used towards the East sector of the country;
6642	"	common use for both sectors;
6657	"	common use for both sectors.

5. To ensure that in the new allotment plan Venezuela may continue to have frequencies available which will enable it to assign channels for air traffic control that are free from harmful interference through the use of exclusive frequencies, and

6. in view of the fact that every effort is being made in Venezuela to replace HF technique by VHF, but that the aim of the Venezuelan Administration is still far from being reached, so that the need for HF operation in the Aeronautical Mobile (R) Service will obviously continue, the Chairman of Committee 6 is asked to reconsider the situation with which Venezuela is faced as a result of the proposal contained in Document No. DT/II-26 and, taking into consideration all the past safety factors, it is proposed that HF frequencies of the following order be assigned to it exclusively for Sub-Area 12G:

one 3 Mc/s frequency

two 5 Mc/s frequencies in the upper part of the band

one 6 Mc/s frequency " " " " " " "

7. The present request differs from the original request made in our note contained in Document No. II/161. With this slight amendment it is our aim to facilitate a rapid solution to the problem in hand which will be the task of the respective working parties set up today by Committee 6.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-36-E
12 April 1966
Original: English

COMMITTEE 4

Reference DT/II-34 Page 4

Resolves:

1. that, taking into account economic, technical and operational considerations, Administrations shall make, as soon as possible, a progressive conversion of their High Frequency radio telephony services from double sideband to single sideband operation using, where necessary, single sideband equipment capable of working compatibly with double sideband systems;

2. that notwithstanding the foregoing, Administrations may continue to install and operate equipment having similar characteristics to that in current use;

3. that the International Civil Aviation Organization be invited, as a matter of urgency and within the framework of the decisions taken by this Conference, to establish technical characteristics for system standards relative to single sideband equipment, in respect of application to international operations in the Aeronautical Mobile (R) Service, and to advise the C.C.I.R. of any technical or operational problems on which they would like the assistance of the C.C.I.R.

J. T. PENWARDEN
Chairman

AERONAUTICAL CONFERENCE

Geneva 1966

Document No. DT/II-37-E
13 April 1966
Original : French

COMMITTEE 3

REPORT BY THE WORKING PARTY OF COMMITTEE 3

1. The Working Party of Committee 3 (Budget Control), which was set up at the first meeting of the Committee (Document No. II/90), met on 29 March and 5 April 1966 to consider the budget and accounts of the Conference.

2. The members of the Working Party were :

Mr. R. MONNAT (Switzerland)

Mr. A. VIEIRA (Portugal)

The Secretariat was represented by Mr. R. Prélaz, head of the administrative services of the Conference. Mr. U. Mohr (Federal Republic of Germany), Chairman of Committee 3, and Mr. R. Petit and Mr. J.A. Gracie, members of the I.F.R.B., were present at the meeting on 29 March. Mr. C. Stead, Counsellor in the General Secretariat, and Mr. J. Kunz, Secretary of the Conference, were present at the meeting on 5 April in addition to the participants mentioned above and furnished the Working Party with certain information.

3. The Working Party compared the statement of expenditure as at 31 March 1966 with the estimate of expenditure until the close of the Conference.

Expenses were examined subhead by subhead and point by point in the light of information and explanations provided by the representative of the Secretariat.

4. The total of actual expenditure, commitment to expenditure and planned expenditure of the Conference was estimated at 947,200 Swiss francs at 31 March 1966. The Working Party noted that this amount was 82,800 Swiss francs less than the budget of 1,030,000 Swiss francs.

4.1 The savings will be made mainly under Subhead I (staff expenditure) and are attributable to a reduction in travel costs under Item 7602 and to the fact that the margin provided will probably not be used.

4.2 In Subhead II (expenses for premises and equipment) provision must be made for additional expenditure of approximately 3,000 Swiss francs under Item 7605, which is accounted for mainly by rental of a photocopying machine

and an offset machine. Under the same Item, however, a saving of 10,000 Swiss francs is possible as the electronic computer will not be used. Under Item 7606, a saving on paper of approximately 11,000 Swiss francs can be expected.

4.3 In Subhead III (preparatory work) the Working Party noted that mission expenses charged to the Conference budget under Item 7610 related to preparatory contacts in connection with the establishment of statistics assembled by the I.F.R.B., by reason of which it was possible to speed up the work of the Second Session of the Conference considerably.

4.4 The Working Party estimated that savings would certainly exceed 82,800 Swiss francs should the Conference end before the date foreseen.

5. The Working Party considered also the distribution of staff working on the Conference. It noted that, in view of current recruitment difficulties and the need to draw up contracts in advance, it had not been possible to wait until the volume of work was known before taking the required action. A list of the staff concerned appears in Annex II to the present Report.

6. In view of the foregoing, the Working Party invites Committee 3 to approve Annex I to the present Report which shows total expenditure amounting to 947,200 Swiss francs for the Second Session of the Aeronautical Conference.

7. The Working Party discussed the problem of the printing of the final documents. It decided to invite Committee 3 to propose that the Plenary Assembly charge one-third of the cost of printing the Final Acts to the budget of the Second Session of the Aeronautical Conference. This procedure as provided in the I.T.U. Financial Regulations will enable the documents to be sold at a reasonable price, and will not prevent appreciable savings over the Conference budget.

R. MONNAT (Switzerland)

A. VIEIRA (Portugal)

Annexes : 2

A N N E X I

STATEMENT OF EXPENDITURE FOR THE AERONAUTICAL CONFERENCE AT 31 MARCH 1966

Subheads and items	Budget including additional credits[1]	Transfer of credits: item to item	Transfer of credits: subhead to subhead	Total credits available	Actual expenditure	Commitment to expenditure	Estimated expenditure	Total estimated expenditure
I. Staff								
7.601. Administration								
- Salaries					22,066.30	39,549.70	2,363,-	63,979.-
- Travel					634.45	91.35	-	725.80
- Overtime					-	2,800.-	13,200.-	16,000.-
- Miscellaneous					-	-	5,295.20	5,295.20
	95,900.-			95,900.-	22,700.75	42,441.05	20,858.20	86,000.-
7.602. Language Services								
- Salaries					163,715.45	284,029.55	47,250.-	494,995.-
- Travel					6,734.55	4,716.55	4,000.-	15,451.10
- Overtime					95.40	3,230.-	15,000.-	18,325.40
- Miscellaneous					-	-	15,228.50	15,228.50
	607,800.-		- 6,000.-	601,800.-	170,545.40	291,976.10	81,478.50	544,000.-
7.603. Reproduction								
- Salaries					22,753.95	30,628.05	9,348.-	62,730.-
- Travel					-	-	-	-
- Overtime					-	2,360.-	10,000.-	12,360.-
- Miscellaneous					-	-	4,910.-	4,910.-
	93,800.-			93,800.-	22,753.95	32,988.05	24,258.-	80,000.-
7.604. Insurance								
- Accident Insurance					-	3,500.-	-	3,500.-
- Sickness Insurance/ Pension Fund					200.20	-	1,299.80	1,500.-
	6,300.-			6,300	200.20	3,500.-	1,299.80	5,000.-
TOTAL, Subhead I	803,800.-		- 6,000.-	797,800.-	216,200.30	370,905.20	127,894.50	715,000.-

1) Budget, including additional credits, approved by the 20th Session of the Administrative Council, 1965.

Subheads and items	Budget including additional credits	Transfer of credits: item to item	Transfer of credits: subhead to subhead	Total credits available	Actual expenditure	Commitment to expenditure	Estimated expenditure	Total estimated expenditure
II. Premises and equipment								
7.605. Premises, furniture, machines								
- rent, Maison des Congrès					-	68,200.-	6,200.-	74,400.-
- installation costs					-	1,700.-	-	1,700.-
- hire of furniture and machines					1,600.-	8,900.-	-	10,500.-
- upkeep and repair of machines					-	-	500.-	500.-
- electronic computer					-	-	10,000.-	10,000.-
- miscellaneous					-	-	900.-	900.-
	74,000.-	+18,000.-	+6,000.-	98,000.-	1,600.-	78,800.-	17,600.-	98,000.-
7.606. Document production								
- paper					)	-		
- stencils					)15,145.70	-	20,000.-	35,145.70
- ink					)	-		
- offset workshop					1,315.75	-	10,000.-	11,315.75
- printing, charts, miscellaneous						-	11,538.55	11,538.55
	72,000.-	-14,000.-		58,000.-	16,461.45	-	41,538.55	58,000.-
7.607. Office supplies and overheads								
- office supplies					5,194.15	-	5,000.-	10,194.15
- removal expenses					-	1,500.-	1,500.-	3,000.-
- local transport					534,90	-	3,500.-	4,034.90
- postage					-	-	5,000.-	5,000.-
- telephone calls and telegrams					189.25	-	2,000.-	2,189.25
- guide, badges, etc.					180.-	-	-	180.-
- miscellaneous					183.50	-	218 20	401.70
	29,000.-	- 4,000.-		25,000.-	6,281.80	1,500.-	18,718.20	25,000.-
7.608. Simultaneous interpretation and other sound equipment								
- hire of equipment					-	-	-	-
- magnetic tapes, etc.					-	-	1,000.-	1,000.-
	1,000.-			1,000.-	-	-	1,000.-	1,000.-

Subheads and items	Budget including additional credits[1]	Transfer of credits: item to item	Transfer of credits: subhead to subhead	Total credits available	Actual expenditure	Commitment to expenditure	Estimated expenditure	Total estimated expenditure
7.609. Unforeseen	5,000.-			5,000.-	3.50		4,996.50	5,000.-
Total, Subhead II	181,000.-		+6,000.-	187,000.-	24,346.75	78,800.-	83,853.25	187,000.-
III. Preparatory work								
7.610 I.F.R.B. preparatory work								
- Staff					14,045.10	-	-	14,045.10
- Equipment					8,066.05		-	8,066.05
- Mission expenses					10,359.24	-	-	10,359.24
- Postage, telephone calls, telegrams					12,721.75	-	7.86	12,729.61
	45,200.-			45,200.-	45,192.14		7.86	45,200.-
TOTAL, SECTION 7.6 AERONAUTICAL CONFERENCE	1,030,000.-	-	-	1,030,000	285,739.19	449,705.20	211,755.61	947,200.-
Margin compared with the budget								82,800.-

A N N E X II

AERONAUTICAL CONFERENCE

7.601 - Administration	Number of officials	Grade
Office of the Chairman :		
- Secretary	1	G4
Secretariat of the Conference :		
- Secretary	1	G4
Delegates' Service	1	G2
Administration :		
- staff	1	G2
- finance	1	G4
- supplies	1	G5
General Services :		
- secretary	-	-
- registry	1	G5
- document distribution	8	3/G1 - 4/G2 - 1/G3
- messengers	8	G1
- driver	1	G1
- telephonists	2	G3
7.602 - Language services		
Interpreters	24	23/I - 1/II
- office assistants	2	1/G2- 1/G3
- SIE operators	3	G2
Translators	11	1/P2 - 8/P3 - 1/P4 - 1/P5
- shorthand-typists	11	6/G2 - 5/G3
- registry	1	G2
Shorthand-typing pool	35	12/G2 - 20/G3 - 3/G4
Draughtsman	1	G2
Proof readers	-	-
7.603 - Reproduction		
Roneo operators	8	G2
Roneo assemblers	15	G1

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-38-E
13 April 1966
Original : English

COMMITTEE 4

DRAFT

RESOLUTION No. ..... - RELATING TO THE USE OF FREQUENCIES IN THE HF BANDS ALLOCATED EXCLUSIVELY TO THE AERONAUTICAL MOBILE (R) SERVICE

The Aeronautical Extraordinary Administrative Radio Conference, Geneva, 1964/66,

considering

a) that monitoring observations on the use of frequencies in the bands allocated exclusively to the Aeronautical Mobile (R) Service between 2850 and 17 970 kc/s show that a number of frequencies in these bands are being used by stations of services other than the Aeronautical Mobile (R) Service, thus causing harmful interference to Aeronautical Mobile (R) Service communications on some international air routes; and that a considerable number of emissions, the sources of which could not be positively identified, were observed in these bands;

b) that the Aeronautical Mobile (R) Service is a safety service, to which exclusive frequency bands are specially allocated in order to ensure the safety and regularity of flight along national or international civil air routes as defined in No. 429 of the Radio Regulations, Geneva, 1959;

c) that in order to protect the safety of human life and property in the air, and to develop aeronautical transport services in a regular and effective manner, it is indispensable to have the aeronautical mobile communication channels kept free from harmful interference;

resolves

that Administrations, recognizing that the Aeronautical Mobile (R) Service is a safety service, shall abstain from the use of frequencies in the bands allocated exclusively to this service by stations of services other than the Aeronautical Mobile (R) Service, except under the express conditions prescribed in No. 115 or No. 415 of the Radio Regulations, Geneva, 1959;

requests

the I.F.R.B. to continue to organise monitoring observations in the bands allocated exclusively 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; and to seek the collaboration of Administrations in identifying the source of such emissions by means such as the use of automatic recording equipments, direction finding and field strength measurements and in securing the suppression of these emissions.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-39-E
14 April 1966
Original : English

COMMITTEE 6

FIRST REPORT OF WORKING GROUP 6A (MWARA)
TO COMMITTEE 6 (PLAN)

1. After considering all proposals presented to it, Working Group 6A agreed to the draft revised Plan attached hereto.

Participating in the Working Group were the delegates of about twenty Administrations and the observers of I.C.A.O., and I.A.T.A. Mr. Maqbool of the I.F.R.B. assisted the Group.

2. In the allotment of the specific frequencies in this Plan, consideration was not given to the effect of these allotments on the proposals concerning VOLMET and RDARA frequencies as contained in the Document No. DT/II-26. In the opinion of the sub-Group, any incompatibility between the MWARA allotment on the one hand and the VOLMET and/or RDARA allotments on the other, should be taken into consideration by other sub-Groups which have been established to prepare the remaining portion of the Frequency Allotment Plan. The MWARA Plan, shown in the Annex, has, accordingly, been prepared on the assumption that the subsequent working groups will protect the MWARA allotments to the extent necessary.

3. In so far as the allotment of the third family of frequencies, class of emission A1, to the MWARA EU is concerned, the sub-Group 6A was of the opinion that the matter should be forwarded to one of the working groups dealing with the RDARA portion of the Plan. It was agreed that a family of three frequencies in the order of 3.5 Mc/s, 5.6 Mc/s and 9 Mc/s bands would be satisfactory and the Delegates of Roumania, Poland, Hungary and Czechoslovakia have suggested that the following frequencies be considered for their purpose : 3481 kc/s, 5645 kc/s, 8917 kc/s.

D. CHILD
Chairman

Annex : 1

A N N E X E - A N N E X - A N E X O

FAMILLES DE FREQUENCES

FAMILIES OF FREQUENCIES

FAMILIAS DE FRECUENCIAS

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
CAR	2966 2966 2966 2952			5568 5484	6540 6561	8840 8959 8840	10017		13264 13320	17917
CEP		3467		5603 5554		8931 8875			13304	17925
CWP	2896		4675	5505	6631	8861		11303	13296	17909
EU	2910	3467	4689	5554	6582 6568	8875 8931		11303 11303		17909
FE	2868 2987			5645 5624		8840 8875			13288 13312	17965 17965
ME		3404 3446		5603	6624	8847	10009		13336 13336	17925 17925
NA1	2868			5624		8910			13328	17965
NA2	2931 2987 2945 2868			5610 5673 5638 5624		8945 8889 8861 8910			13328 13288 13352 13328	17965
NA3	2931			5610		8945			13328	

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
NP	2910			5589		8938			13272	17909
NSA1		3411		5519		8826			13304	17949
NSA2	2966	3481		5505	6540 6533	8959	10025		13336 13280	17925
SA	2875	3432			6610 6680	8882	10049		13272 13272	17949 17949
SAM1	2889		4696		6666	8826			13312	17917
SAM2	2910			5582		8847		11327	13320	17917
SEA	2987			5673		8882 8840			13288	17965
SP	2945			5638		8847			13344	17949

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-40-E
18 April 1966
Original : English

WORKING GROUP 6B

DRAFT

SECOND REPORT OF WORKING GROUP 6B (VOLMET)

TO COMMITTEE 6 (PLAN)

1. Pursuant to the Terms of Reference given to it by Committee 6, Working Group 6B has considered all proposals submitted to it relating to VOLMET allotments.

2. The attached draft Plan has been unanimously agreed by the Group, subject to confirmation by Working Group 6 COORD of the three 13 Mc/s frequency allotments. The Report is published for the consideration of Committee 6 and the advance information of the RDARA Working Groups (6C, 6D and 6E).

3. Fifteen delegations participated in the work of the Group. Detailed examination of particular problems was undertaken by a sub-group - Working Group 6B ad hoc composed of the Delegates of Brazil, Canada, Ireland, Japan, the United Kingdom and the United States, and the observers of I.C.A.O. and I.A.T.A. Mr. Gracie, member of the I.F.R.B., gave valuable assistance to both Working Group 6B and its ad hoc Group.

B.L. GOULT
Chairman
Working Group 6B

Annex : 1

A N N E X

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18	
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	
AFI-MET		3488 3495			6575 6617		10073	11279		17909	2)
AT-MET	3001			5617		8868			13264 4)		
EU-MET	2889 2980			5533 5575		8833		11391	13312 4)		1)
ME-MET	3001 3015			5561	6596	8819		11343			
SEA-MET		3432			6680		10017				
PAC-MET	2980			5519	6610	8903		11279	13344 4)		3)

1) 2889 kHz utilisation au Nord 50°N
2889 kc/s to be used North of 50°N
2889 kc/s para ser empleada al Norte de 50°N

2) 3495 kHz, 6617 kHz, 10073 kHz et 17909 kHz utilisation au Sud de l'Equateur
3495 kc/s, 6617 kc/s, 10073 kc/s and 17909 kc/s to be used South of the Equator
3495 kc/s, 6617 kc/s, 10073 kc/s y 17909 kc/s para ser empleada al Sur del Ecuador

3) 6610 kHz et 11279 kHz, allotie pour extension vers le Nord-Ouest de la Zone PAC-MET
6610 kc/s and 11279 kc/s, allotted for North West extension of PAC-MET area
6610 kc/s y 11279 kc/s, adjudicada para la extensión al Noroeste de la zona PAC-MET

4) Voir paragraphe 2 du présent rapport
See paragraph 2 of the present Report
Véase el párrafo 2 del presente Informe

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-41-E
15 April, 1966
Original: English

WORKING GROUP 6C

AGENDA

FOR THE FIRST MEETING OF WORKING GROUP 6C

(RDARA ALLOTMENTS IN THE 3 AND 3.5 Mc/s BANDS)

Monday, 18 April 1966, at 09.30 a.m. in Room B

Terms of Reference

To consider proposals for revision of the Frequency Allotment Plan for the Aeronautical Mobile (R) Service in Appendix 26 to the Radio Regulations and to prepare a draft revised Plan for the areas and frequency bands concerned in accordance with the channel provisions from Committee 4 (Documents Nos. II/91, II/93 and Addendum) and frequency requirements from Committee 5 (Document No. II/128 and Addendum), amending DT/26 as further amended by the Reports of Working Groups 6A (MWARA) (DT/39) and 6B (VOLMET) (DT/40) and DT/32, as appropriate, and taking into consideration DT/35.

1. Organization of the work of the Group.

2. Any other business.

Chairman
F.G. PERRIN

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-42-E
15 April, 1966
Original : English

WORKING GROUP 6D

AGENDA

FOR THE FIRST MEETING OF WORKING GROUP 6D

(RDARA ALLOTMENTS IN THE 4.7 Mc/s 5.6 Mc/s AND 6.6 Mc/s BANDS)

Monday, 18 April 1966, at 11.00 a.m. in Room B

Terms of Reference

To consider proposals for revision of the Frequency Allotment Plan for the Aeronautical Mobile (R) Service in Appendix 26 to the Radio Regulations and to prepare a draft revised Plan for the areas and frequency bands concerned in accordance with the channel provisions from Committee 4 (Documents Nos. II/91, II/93 and Addendum) and frequency requirements from Committee 5 (Document No. II/128 and Addendum), amending DT/26 as further amended by the Reports of Working Groups 6A (MWARA) (DT/39) and 6B (VOLMET) (DT/40) and DT/32, as appropriate, and taking into consideration DT/35.

1. Organization of the work of the Group.

2. Any other business.

Chairman
J.T. PENWARDEN

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-43-E
15 April, 1966
Original: English

WORKING GROUP 6E

AGENDA

FOR THE FIRST MEETING OF WORKING GROUP 6E

(RDARA ALLOTMENTS IN THE 9 Mc/s; 10 Mc/s,
11.3 Mc/s; 13.3 Mc/s AND 18 Mc/s BAND

Monday, 18 April 1966, at 3 p.m. in Room B

Terms of Reference

To consider proposals for revision of the Frequency Allotment Plan for the Aeronautical Mobile (R) Service in Appendix 26 to the Radio Regulations and to prepare a draft revised Plan for the areas and frequency bands concerned in accordance with the channel provisions from Committee 4 (Documents Nos. II/91. II/93 and Addendum) and frequency requirements from Committee 5 (Document No. II/128 and Addendum), amending DT/26 as further amended by the Reports of Working Groups 6A (MWARA) (DT/39) and 6B (VOLMET) (DT/40) and DT/32, as appropriate, and taking into consideration DT/35.

1. Organization of the work of the Group.

2. Any other business.

Chairman
H.G. ARTHUR

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/44-E
16 April 1966
Original : English

WORKING GROUP 6B

FIRST REPORT OF WORKING GROUP 6B (VOLMET) TO COMMITTEE 6 (PLAN)

Pursuant to the Terms of Reference given to it by Committee 6, Working Group 6B has considered all proposals submitted to it relating to VOLMET allotments.

The attached Plan has been agreed provisionally for the frequency bands shown and is published for the attention of Committee 6 and the RDARA Working Groups pending the publication of the complete draft VOLMET Plan which, it is hoped, will be available late on Monday 18 April or Tuesday morning.

B.L. GOULT
Chairman
Working Group 6B ad hoc

Annex: 1

A N N E X

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	Remarques Remarks Observaciones
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	
AFI-MET		3488 3495			6575 6617	**)
AT-MET	3001			5617		
EU-MET	2889 29800			5533 5575		*)
ME-MET	3001 3015			5561		
SEA-MET		3432			6680	
PAC-MET	2980			5610	6610	***)

*) 2889 kHz utilisation au Nord 50°N
2889 kc/s to be used North of 50°N
2889 kc/s para ser empleada al Norte de 50°N

**) 3495 et 6617 kHz utilisation ou Sud de l'Equateur
3495 and 6617 kc/s to be used South of the Equator
3495 y 6617 kc/s para ser empleada al Sur del Ecuador

***) 6610 kHz allotie pour extension vers le Nord-Ouest de la Zone PAC-MET
6610 kc/s allotted for North West extension of PAC-MET area
6610 kc/s adjudicada para la extensión al Noroeste de la zona PAC-MET

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-45-E
19 April 1966
Original: English

COMMITTEE 6

DISCUSSION PAPER

DRAFT REVISED TITLES FOR THE FREQUENCY ALLOTMENT PLAN

Ap. 26
pp.30 and 36
NOC

SECTION II

ALLOTMENT OF FREQUENCIES TO THE AERONAUTICAL MOBILE (R) SERVICE

Article 1

MOD

Frequency Allotment Plan

(per MWARAs, VOLMET Areas, RDARAs and sub-RDARAs)

NOC Notes: a) * = For exact nature of restriction refer to: col. 3 of Article 2 of the Frequency Allotment Plan (per numerical order of frequencies).

NOC b) The following listing does not include the world common (R) and (OR) frequencies of 3023.5 kc/s and 5680 kc/s.

NOC

Bands Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s

Article 2

NOC

Frequency Allotment Plan

(per numerical order of frequencies)

MOD General Notes:

1) Class of stations: FA

For types of emission, see.....
Unless otherwise indicated in the Plan, the power values for aeronautical and aircraft stations are those appearing in

MOD 2) A frequency allotted on "day-time basis" may be used on a secondary basis during the period one hour after sunrise to one hour before sunset when the identical channel is allotted on a primary basis to Major World Air Route Areas, VOLMET Areas, Regional and Domestic Air Route Areas, or Sub-Regional and Domestic Air Route Areas which receive full protection during the twenty-four hours. The use of frequencies on a secondary basis is subject to there being no interference with the primary allotment.

NOC 3) A "shared channel" is a channel allotted in common to adjacent areas within interference distance of each other and its use is subject to agreement between the administrations concerned.

(R) FREQUENCY PLAN

NOC

Frequency kc/s 1	Authorized area of use 2	Remarks 3

E.B. POWELL
Chairman

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-46-E
18 April 1966
Original : English

WORKING GROUP 6B

AGENDA

THIRD MEETING WORKING GROUP 6B (VOLMET)

Tuesday, 19 April 1966, at 1500 hours, Room A

1. Draft Second Report of Working Group 6B to Committee 6 (Plan) - Document No. DT/II-40

2. Any other business

B.L. GOULT
Chairman

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-47-E
19 April 1966
Original : English

COMMITTEE 6

SECOND REPORT OF WORKING GROUP 6B (VOLMET)
TO COMMITTEE 6 (PLAN)

1. Pursuant to the Terms of Reference given to it by Committee 6, Working Group 6B has considered all proposals submitted to it relating to VOLMET allotments.

2. The attached draft Plan has been unanimously agreed by the Group, subject to confirmation by Working Group 6 COORD of the three 13 Mc/s frequency allotments. The Delegate of India, while accepting the draft Plan attached hereto, asked that consideration be given in Committee 6 to his request for the allotment of a 13 Mc/s frequency to the SEA-MET area.

3. Fifteen delegations participated in the work of the Group. Detailed examination of particular problems was undertaken by a sub-group - Working Group 6B ad hoc composed of the Delegates of Brazil, Canada, Ireland, Japan, the United Kingdom and the United States, and the observers of I.C.A.O. and I.A.T.A. Mr. Gracie, member of the I.F.R.B., gave valuable assistance to both Working Group 6B and its ad hoc Group.

B.L. GOULT
Chairman
Working Group 6B

Annex : 1

A N N E X

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18	
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	
AFI-MET		3488 3495			6575 6617		10073	11279		17909	2)
AT-MET	3001			5617		8868			13264 4)		
EU-MET	2889 2980			5533 5575		8833		11391	13312 4)		1)
ME-MET	3001 3015			5561	6596	8819		11343			
SEA-MET		3432			6680		10017				
PAC-MET	2980			5519	6610	8903		11279	13344 4)		3)

1) 2889 kHz utilisation au Nord 50°Nord
2889 kc/s to be used North of 50°North
2889 kc/s para ser empleada al Norte de 50°Norte

2) 3495 kHz, 6617 kHz, 10073 kHz et 17909 kHz utilisation au Sud de l'Equateur
3495 kc/s, 6617 kc/s, 10073 kc/s and 17909 kc/s to be used South of the Equator
3495 kc/s, 6617 kc/s, 10073 kc/s y 17909 kc/s para ser empleada al Sur del Ecuador

3) 6610 kHz et 11279 kHz, utilisation au Nord de 30° Nord et à l'Ouest de 160° Est
6610 kc/s and 11279 kc/s, to be used North of 30° North and West of 160° East
6610 kc/s y 11279 kc/s, utilización al Norte de 30° Norte y al Oeste de 160° Este

4) Voir paragraphe 2 du présent rapport
See paragraph 2 of the present Report
Véase el párrafo 2 del presente Informe

AERONAUTICAL CONFERENCE

Geneva, 1966

Addendum to
Document No. DT/II-48-E
20 April 1966
Original: French

COMMITTEE 6

FIRST REPORT OF WORKING GROUP 6F

1. Working Group 6F has examined Document No. DT/II-45 and unanimously recommends that the Committee adopt the texts in Document No. DT/II-48.

2. As regards note 2) of Article 2, the Group, after a thorough study of the present text of Appendix 26 has come to the conclusion that the sections in brackets should be deleted. This would provide an unambiguous definition of the term "day-time basis" without going into detail, which was perhaps required in the case of the present Appendix 26 to cover certain aspects of interest to the Aeronautical Mobile (OR) Service.

3. The other questions being studied by Working Group 6F will be dealt with in later reports.

M.A. VIERA,
Chairman

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-48-E
20 April 1966
Original: English

COMMITTEE 6

FIRST REPORT OF WORKING GROUP 6F

DRAFT REVISED TITLES FOR THE FREQUENCY ALLOTMENT PLAN

Ap. 26
pp.30 and 36
NOC

SECTION II

ALLOTMENT OF FREQUENCIES TO THE AERONAUTICAL MOBILE (R) SERVICE

Article 1

MOD

Frequency Allotment Plan

(per MWARAs, VOLMET Areas, RDARAs and sub-RDARAs)

MOD Notes: a) * = For exact nature of restriction on the use of the frequency concerned, refer to: col. 3 of Article 2 of the Frequency Allotment Plan (per numerical order of frequencies).

NOC b) The following listing does not include the world common (R) and (OR) frequencies of 3023.5 kc/s and 5680 kc/s.

NOC

Bands Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Areas	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s

Article 2

NOC

Frequency Allotment Plan

(per numerical order of frequencies)

MOD General Notes:

1) Class of stations: FA

For classes of emission, see /page B.3/1/.
Unless otherwise indicated in the Plan, the power values for aeronautical and aircraft stations are those appearing in /page B.3/2/.

Hours: H24 unless otherwise indicated.

MOD 2) A frequency allotted on "day-time basis" may be used /~~on a secondary basis~~/ during the period one hour after sunrise to one hour before sunset when the same channel is allotted in the Plan to Major World Air Route Areas, VOLMET Areas, Regional and Domestic Air Route Areas, or Sub-Regional and Domestic Air Route Areas which receive full protection during the twenty-four hours. /~~The use of frequencies on a secondary basis is subject to there being no interference to the primary allotment in the Plan.~~/

MOD 3) A "common channel" is a channel allotted in common to adjacent areas within interference distance of each other and its use is subject to agreement between the administrations concerned.

(R) FREQUENCY PLAN

NOC

Frequency kc/s 1	Authorized area of use 2	Remarks 3

M.A. VIEIRA
Chairman

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-49-E
20 April 1966
Original : English

COMMITTEE 6

SECOND REPORT OF WORKING GROUP 6F TO

COMMITTEE 6 (PLAN)

1. Pursuant to the terms of reference given to it by Committee 6, Working Group 6F has considered all proposals submitted to it relating to the review of the Radio Regulations associated with the (R) Frequency Allotment Plan and the preparation of any modifications or additions considered essential (paragraph b) of the terms of reference of Committee 6.

2. A first Report was published in Document No. DT/II-48 dealing with the draft revised titles for the (R) Frequency Allotment Plan.

3. The attached draft Second Report of Committee 6 has been unanimously agreed by the Group and is submitted for the consideration of Committee 6.

4. The Working Group carefully considered the proposals in Document No. II/151 for the production of a tabular presentation of the frequency plan to show all allotments by areas. It was recognized that the aims of this proposal would be met in practice by the display boards set up by Committee 6. The Group was unanimous as to the usefulness of this as a working tool of the Conference but concluded that the addition of such a table in the Final Acts would not be appropriate. In support of this conclusion, it is pointed out that an additional table in this form would not be complete without the notes and remarks in Column 3 of the Plan and the essential cross-reference would thereby counter its usefulness.

5. The Delegates of India, the United Kingdom and the United States participated in the work of the Group. Mr. R. Petit, member of the I.F.R.B., gave valuable assistance to the Working Group.

M.A.VIEIRA
Chairman
Working Group 6F

Annex : 1

ANNEX

DRAFT

SECOND REPORT OF COMMITTEE 6 (PLAN)

MODIFICATIONS AND ADDITIONS TO THE RADIO REGULATIONS
ASSOCIATED WITH THE REVISED FREQUENCY ALLOTMENT PLAN
FOR THE AERONAUTICAL MOBILE (R) SERVICE

In fulfilment of paragraph b) of its Terms of Reference (Document No. II/22, page 5) and having considered all proposals of administrations submitted to it, Committee 6 agreed the texts appended hereto for First Reading by the Plenary Meeting.

Chairman

Appendix : 1

APPENDIX

Partial revision of the Radio Regulations (RR)

(MOD)	RR 431	[See (MOD) 431 on page B.6/26, adopted at the Fourth Plenary Meeting]
NOC	RR 552	
NOC	RR 553	
MOD (ex RR 554 and II/2 page 68)	RR 554	a) The frequency corresponds to one of the frequencies specified in Column 1 of the Allotment Plan for the Aeronautical Mobile (R) Service contained in [Part II, Section II, Article 2] of Appendix 27, or the assignment is the result of a permissive change from one class of emission to another and the occupied bandwidth is within the channelling arrangement provided for in Appendix 27.
NOC	RR 555	
MOD (ex II/2 page 69)	RR 556	c) The notice is in conformity with the Plan technical principles set forth in Appendix 27.
MOD (ex II/2 page 69)	RR 557	d) The area of use is within the boundaries of the Areas as set forth in Column 2 of the Plan.
(MOD)	RR 558	[Cross-references only]
SUP	RR 559	
NOC	RR 560	
NOC	RR 589	
MOD (ex II/2 page 69)	RR 590	2) If the finding is favourable with respect to Nos. 554 to 557 the date of (date of signing of the Final Acts) shall be entered in Column 2a.
MOD (ex II/2 page 70)	RR 591	3) If the finding is favourable with respect to No. 558, the date of (date of signing of the Final Acts) shall be entered in Column 2b.
NOC	RR 592	
NOC	RR 593	

Ap. 1
p. 337

MOD
(ex II/10
page 3)

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. For stations in the Aeronautical Mobile (R) Service using permitted emissions other than DSB, the reference frequency together with the appropriate centre frequency of the channel listed in the frequency Plan in Appendix 27 shall be supplied as supplementary information.

AERONAUTICAL CONFERENCE

Geneva, 1966

Document No. DT/II-50-E
21 April 1966
Original: English/French

COMMITTEE 6

THIRD REPORT OF WORKING GROUP 6F

Working Group 6F unanimously adopted the draft resolution annexed hereto.

The aim of the draft resolution is to provide rules for the notification and registration of frequency assignments pending the entry into force of the revised plan.

M.A. VIEIRA
Chairman

Annex: 1

A N N E X

DRAFT RESOLUTION NO. ...

RELATING TO THE TREATMENT OF FREQUENCY ASSIGNMENTS TO AERONAUTICAL STATIONS IN THE AERONAUTICAL MOBILE (R) SERVICE IN THE BANDS ALLOCATED EXCLUSIVELY TO THAT SERVICE BETWEEN 2850 AND 17 970 kc/s

The Extraordinary Administrative Radio Conference, Geneva, 1966

considering

a) that the Final Acts of this Conference shall enter into force on ....., but;

b) that the Allotment Plan contained in Section ... of Appendix 27 shall enter into force on .....;

c) that some administrations may wish to implement in advance of that date where this may be done without causing harmful interference to stations working in accordance with the present Plan and, therefore;

d) that it will be necessary to provide an interim procedure to facilitate transition from the present Plan to the revised Plan;

resolves

1. that during the period between the date of entry into force of the Final Acts and the date of entry into force of the revised Frequency Allotment Plan :

1.1 the provisions of Nos. 553 to 559 of the Radio Regulations, Geneva, 1959, shall continue to be applied in the examination of frequency assignments to aeronautical stations in the aeronautical Mobile (R) Service in the bands allocated exclusively to that service between 2850 and 17 970 kc/s;

1.2 all such assignments shall be recorded in the Master International Frequency Register according to the findings reached by the I.F.R.B.;

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

a) if the finding is favourable with respect to Nos. 554 to 557, the date of 3 December 1951 shall be entered in Column 2a;

b) if the finding is favourable with respect to No. 558, the date of 3 December 1951 shall be entered in Column 2b;

c) for all other such assignments (including those which may be in conformity with the Aeronautical Mobile (R) Frequency Allotment Plan, Geneva, 1966, but not in conformity with the Aeronautical Mobile (R) Frequency Allotment Plan, Geneva, 1959) the date of receipt of the notice by the I.F.R.B. shall be entered in Column 2b;

1.4 any assignment which is in accordance with the Aeronautical Mobile (R) Frequency Allotment Plan, Geneva, 1966, shall be so indicated by the insertion by the I.F.R.B. of an appropriate symbol in the Remarks Column of the Master International Frequency Register;

2. that on the date of coming into force of the revised Frequency Allotment Plan, the I.F.R.B. shall examine those frequency assignments to aeronautical stations in the Aeronautical Mobile (R) Service in the bands allocated exclusively to that service between 2850 and 17 970 kc/s, which are contained in the Master International Frequency Register from the point of view of their conformity with the Aeronautical Mobile (R) Frequency Allotment Plan, Geneva, 1966, following the relevant parts of the procedure described in Nos. 553 to 559 of the Radio Regulations, Geneva, 1959, as modified by the E.A.R.C., Geneva, 1966, and shall record them in the Master International Frequency Register with a date in Column 2a or 2b as follows :

2.1 assignments found favourable with respect to Nos. 554 to 557 shall have (the date of signing of the E.A.R.C. Final Acts, Geneva, 1966) entered in Column 2a;

2.2 assignments found favourable with respect to No. 558 shall have (the date of signing of the E.A.R.C. Final Acts, Geneva, 1966) entered in Column 2b;

2.3 all other assignments shall have (the day <u>after</u> the date of signing of the E.A.R.C. Final Acts, Geneva, 1966) entered in Column 2b;

3. that, on the date of entry into force of the revised Frequency Allotment Plan, the allotments therein shall replace in the Master International Frequency Register, those allotments in the present Plan;

<u>invites</u>

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

Documents of the Extraordinary Administrative Radio Conference for the preparation of a revised allotment plan for the aeronautical mobile (R) service (2nd session) (Geneva, 1966)

Document DT No. 51

Not available

****

Pas disponible

****

No disponible

CONFERENCE AERONAUTIQUE

Geneve, 1966

Document N° DT/II-52-F/E/S(Rev.)
25 avril 1966

Annexe A au Document N° DT/II-52-F - Revisée

Revised Annex A to Document No. DT/II-52-E

Anexo A al Documento N.° DT/II-52-S - Revisado

A N N E X E A - A N N E X A - A N E X O A

Bandes Bands Bandas MHz Mc/s		3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas		kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
CAR		2952 2966			5484 5568	6540 6561	8840 8959	10017	11367	13320	17917
CEP			3467		5554 5603		8875 8931			13336	17925
CWP		2896		4675	5505	6631	8854		11303	13296	17909
EU		2910	3467	4689	5554	6568 6582	8875 8931		11303		17941
FE		2868 2987			5624 5645		8840 8868			13288 13312	17965
ME			3404 3446		5603	6624	8847	10009		13336	17917
NA	NA1	2868			5624		8910			13328	17941
	NA2	2868 2931 2945 2987			5610 5624 5638 5673		8854 8889 8910 8945			13288 13328 13352	17941
	NA3	2931			5610		8945			13328	17941

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
NP	2910			5589		8938			13272	17909
NSA1		3411		5519		8826			13304	17949
NSA2	2966	3481		5505	6540 6561	8959	10025		13280 13336	17925
SA	2875*	3432			6610 6680	8882	10049		13344	17949
SAM1	2889		4696		6666	8826		11343		17917
SAM2	2910			5582		8847		11327	13320	17917
SEA	2987			5673		8868 8882			13288*	17965
SP	2945			5638		8847			13304	17949

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
AFI		3488* 3495*			6575 6617*		10073*	11279		17909*
AT	3001			5617		8868			13264	
EU	2889* 2980			5533 5575		8833		11391	13312	
ME	3001 3015			5561	6596	8819		11343		
SEA		3432			6680		10017			
PAC	2980			5519	6610*	8903		11279*	13344	

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
1								11359	13296	
1B		3453*		5645*			10065			
1C	2994	3453*		5645* 5659	6533	8938	10065			
1D	2896	3418*	4668		6631	8952	10081			
1E	2861		4654*		6547		10065			
2							10033 10041 10057 10089	11287 11319 11335 11351 11367 11383	13320	17957
2A	2875 2882 2903 2973 3008	3425 3439 3460 3495	4661 4696	5512 5568 5596 5666	6540 6561 6575 6589 6610	8840 8861 8868 8903 8917	10017 10049			
2B	2854* 2868* 2875 2924 2938 2952 2980*	3425 3439 3460 3488	4654 4661 4668* 4696	5484 5498 5540 5596 5638* 5645* 5666	6533 6589 6603 6638 6645 6673	8861 8917				

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.5	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
2C	2882 2903 2917 2924 2938 2952 2959 2987* 3008	3418 3425 3439 3460 3474 3495	4654 4661 4675 4696	5491 5547 5582 5589 5596 5617* 5631 5652 5666	6554 6603 6617 6645 6652 6659 6666	8840 8861 8903 8917*	10017			
3							10033 10073 10089	11327 11375 11391*	13264	17941*
3A	2861 2875 2924	3411* 3432* 3439 3481	4661 4675*	5631 5659	6547 6589 6617 6631 6673 6680	8840 8861 8868* 8882* 8917 8959*				
3B	2854 2903 2931 2938 2959 2966	3404 3495	4661 4689*	5484 5533 5540 5575	6533 6589 6624 6659	8819* 8826* 8833* 8847* 8861 8875* 8882 8889 8896 8910 8931* 8945*	10025			
3C	2854 2882 2917 2994 3008	3425 3453 3474*	4654 4661 4682* 4696	5498 5526 5554* 5568	6603 6652 6666	8861 8896 8910 8945*	10025			

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
4								11375		17933
4A	2854				6638	8896	10081			
4B	2924				6589 6638	8924				
5								11295		17933
5A		3453		5526	6610	8896				
5B	2966		4682	5659	6547	8854 8896				
5C			4682	5659	6547	8896				
5D			4682	5659	6533 6547	8861				
6							10049	11311	13328 13352	
6A	2910 2931 2945	3411*		5512 5547* 5568 5582		8889 8924 8938	10065			
6B	2889 2952*	3418* 3460*		5491 5610* 5631*	6540 6575	8952				

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Aeras Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
6C	2924 3015	3439		5659	6554 6617	8819 8833 8861* 8945			13320	
6D		3411 3474 3488 3495	4668 4689	5526 5596 5617	6589 6617 6659	8819 8826 8833 8903 8924 8931 8959		11359		
6E	2861 2931	3411* 3467		5547* 5652	6533	8889 8917				
6F	2973 3001*	3481*			6568 6582 6673*	8854	10065 10081		13280	

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
7				5498			10033	11335		
7A	2868					8840			13272	
7B	2868					8840			13272	
7C	2868					8840			13272	
7D	2868					8840			13272	
7E	2917	3425		5491	6603	8875				
8A										
9								11335 11383		
9A		3404 3418 3453			6610 6638 6652	8938 8952		11319		
9B	2861 2959 3008	3425 3446 3460		5498 5526 5666	6533 6540 6575 6645	8889 8896 8910 8917		11319		17933*
9C	2861 2973	3425 3446 3460		5498 5526 5666	6533	8896 8910 8917 8924 8952 8959				17933*
9D	2917 2938 2973 3008	3467* 3481*	4661 4675	5498 5526	6561	8826 8840 8854 8889 8952 8959		11319		17933*

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
10							10041 10057	11295 11319 11359 11383	13280	
10A	2861 2868 2875* 2924	3411 3446 3481	4668 4696*	5454 5547 5631	6568 6617	8868 8917 8924				
10B	2896 2917 2973 3015	3418 3432 3453	4654 4682	5461 5469 5491 5526 5659	6596 6645	8896 8952		11311*		
10C	2854 2889	3474	4689*	5498 5512 5575	6533 6582 6624 6638 6673	8826		11311*		
10D	2903 3008	3425 3432 3439 3488 3495	4661	5477 5540 5561 5596 5645 5652 5666	6554 6610 6659 6666 6680			11311*		
10E	2882 2924 2938	3460 3495	4682	5454 5505* 5631	6631	8861 8903		11311*		

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
12								11351		
12A										
12C	2875	3404 3453 3460	4661 4689	5454 5533 5652 5666	6547 6589 6603 6652	8861	10025 10073 10089			
12D	2861			5461	6575	8924				
12E	2959 3015	3425 3446		5575 5631	6533	8875 8938				
12F	2959 3015	3425 3446 3467		5491 5589 5631	6533 6673	8861* 8875 8938				
12G	2959 2980* 3015	3425 3446		5477 5512	6596					
12H	2959 3015	3425 3446		5589	6533					
13									13280	17957
13A										
13B										
13C	2854 2987	3474		5540 5652	6603 6652	8819		11295		
13D	2868 2924	3411 3495		5454 5469	6617 6638	8910 8917	10033 10065			

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
13E	2917		4654			8945				
13F	2952	3439		5666	6624	8896 8952				
13G	2938 2980 2994 3008		4668	5491	6554 6645	8854 8903	10025 10041 10081			
13H	2861 2966	3425		5477 5498 5547		8840 8938		11287 11319	13312	
13I	2931			5659		8924				
13J	2882 2903 2973	3418	4675 4682	5461 5526	6547 6568 6582	8889 8931	10009 10057			
13K	2896 2945	3460 3481	4661	5505 5596	6631 6659	8833 8861	10089			
13L										

CONFERENCE AERONAUTIQUE

Genève, 1966

Document N° DT/II-52-F/E/S(Rev.)
25 avril 1966

ANNEXE B AU DOCUMENT N° DT/II-52-F - Revisée

incorporant les modifications décidées par le
Groupe de Travail 6 COORD jusqu'au 26 avril 1966 à 16 h.00

REVISED ANNEX B TO DOCUMENT No. DT/II-52-E

incorporating amendments agreed in
Working Group 6 COORD as of 1600 hours 25 April 1966

ANEXO B AL DOCUMENTO N.° DT/II-52-S - Revisado

con las enmiendas acordadas por la
Subcomisión 6 COORD a las 4 de la tarde del 25 de abril
de 1966

kc/s	Zona de uso autorizado	Observaciones
1	2	3
2854	ZRRN: 2B, 3B, 3C, 4A, 10C, 13C	En 2B, uso limitado al Norte de 40° Norte y al Este de 60° Este Canal común a 2B, 3B y 3C
2861	ZRRN: 1E, 3A, 6E, 9B, 9C, 10A, 12D, 13H	Canal común a 9B y 9C
2868	ZRMP: FE, NA1, NA2, ZRRN: 2B, 7A, 7B, 7C, 7D, 10A, 13D	En 2B, limitado al uso diurno Canal común a NA1 y NA2 Canal común a 7A, 7B, 7C y 7D
2875	ZRMP: SA ZRRN: 2A, 2B, 3A, 10A, 12C	En SA, uso limitado al Sur de 30° Norte Canal común a 2A, 2B y 3A En 10A, limitado al uso diurno
2882	ZRRN: 2A, 2C, 3C, 10E, 13J	Canal común a 2A, 2C y 3C
2889	ZRMP: SAM1 VOLMET: EU-MET ZRRN: 6B, 10C	En EU-MET, uso limitado al Norte de 50° Norte
2896	ZRMP: CWP ZRRN: 1D, 10B, 13K	
2903	ZRRN: 2A, 2C, 3B, 10D, 13J	Canal común a 2A, 2C y 3B
2910	ZRMP: EU, NP, SAM2 ZRRN: 6A	Canal común a 6A y EU

1	2	3
2917	ZRRN: 2C, 3C, 7E, 9D, 10B, 13E	Canal común a 2C y 3C
2924	ZRRN: 2B, 2C, 3A, 4B, 6C, 10A, 10E, 13D	Canal común a 2B, 2C y 3A
2931	ZRMP: NA2, NA3 ZRRN: 3B, 6A, 6E 13I	Canal común a NA2 y NA3 Canal común a 6A y 6E
2938	ZRRN: 2B, 2C, 3B, 9D, 10E, 13G	Canal común a 2B, 2C y 3B
2945	ZRMP: NA2, SP ZRRN: 6A, 13K	
2952	ZRMP: CAR ZRRN: 2B, 2C, 6B 13F	Canal común a 2B y 2C En 6B, uso limitado al Este de 125° Este
2959	ZRRN: 2C, 3B, 9B, 12E, 12F, 12G, 12H	Canal común a 2C y 3B Canal común a 12E, 12F, 12G y 12H
2966	ZRMP: CAR, NSA2 ZRRN: 3B, 5B, 13H	En ZRMP CAR uso ampliado hasta el punto medio de la ruta aérea entre Ciudad de México y Tahití
2973	ZRRN: 2A, 6F, 9C, 9D, 10B, 13J	Canal común a 9C y 9D

1	2	3
2980	VOLMET: EU-MET, PAC-MET ZRRN : 2B, 12G, 13G	En 2B, limitado al uso diurno En 12G, potencia limitada a 500 vatios (potencia media) durante la noche En 12G, protección de noche de 12 db
2987	ZRMP: FE, NA2, SEA ZRRN: 2C, 13C	En 2C, limitado al uso diurno Canal común a ZRMP FE y SEA
2994	ZRRN: 1C. 3C, 13G	En 10A, limitado al uso diurno
3001	VOLMET: AT-MET, ME-MET ZRRN : 6F	En 6F, uso limitado al Este de 120° Este
3008	ZRRN: 2A, 2C, 3C, 9B, 9D, 10D, 13G	Canal común a 2A, 2C y 3C Canal común a 9B y 9D
3015	VOLMET: ME-MET ZRRN : 6C, 10B, 12E, 12F, 12G, 12H	Canal común a 12E, 12F, 12G y 12H
3023,5	Mundial	

1	2	3
3404	ZRMP: ME ZRRN: 3B, 9A, 12C	
3411	ZRMP: NSA1 ZRRN: 3A, 6A, 6D, 6E, 10A, 13D	En 3A, limitado al uso diurno. En 6A, potencia reducida a 250W (potencia media) durante la noche. En 6E, uso limitado al Oeste de 82°30' Este y potencia reducida a 250W (potencia media) durante la noche.
3418	ZRRN: 1D, 2C, 6B, 9A, 10B, 13J	En 1D, uso limitado al Este de 21°E etc. En 6B, uso limitado al Este de 120° Este.
3425	ZRRN: 2A, 2B, 2C, 3C, 7E, 9B, 9C, 10D, 12E, 12F, 12G, 12H 13H	Canal común a 9B y 9C.
3432	ZRMP: SA VOLMET: SEA-MET ZRRN: 3A, 10B, 10D	En ZRMP SA, uso ampliado a la ruta aérea a Buenos Aires. En 3A, potencia reducida a 250W (potencia media) durante la noche.
3439	ZRRN: 2A, 2B, 2C, 3A, 6C, 10D, 13F	
3446	ZRMP: ME ZRRN: 9B, 9C, 10A, 12E, 12F, 12G, 12H	Canal común a 9B y 9C.
3453	ZRRN: 1B, 1C, 3C, 5A, 9A, 10B, 12C	Canal común a 1B y 1C y uso limitado a la zona del Mar del Norte.
3460	ZRRN: 2A, 2B, 2C, 6B, 9B, 9C, 10E, 12C, 13K	En 6B, uso limitado al Este de 120° Este Canal común a 9B y 9C.

1	2	3
3467	ZRMP: EU, CEP ZRRN: 6E, 9D	En 9D, uso limitado al Oeste de 160° Este.
3474	ZRRN: 2C, 3C, 6D, 10C, 13C	En 3C, limitado al uso diurno.
3481	ZRMP: NSA2, ZRRN: 3A, 6F, 9D 10A, 13K	En ZRMP NSA2, uso ampliado a Australia occidental e Islas Cocos. Canal común a 6F y ZRMP NSA2 ampliado. En 6F, uso limitado al Sur de 25° Norte y potencia reducida a 250 vatios (potencia media) durante la noche. En 9D, uso limitado al Este de 160° Este.
3488	VOLMET: AFI-MET ZRRN: 2B, 6D, 10D	En AFI-MET uso limitado al Oeste de 10° Este y al Sur de 20° Norte
3495	VOLMET: AFI-MET ZRRN: 2A, 2C, 3B, 6D, 10D, 10E, 13D	En AFI-MET, uso limitado al Sur del Ecuador
3499	Mundial	Al solamente

1	2	3
4654	ZRRN: 1E, 2B, 2C, 3C, 10B, 13E	En 1E, limitado al uso diurno
4661	ZRRN: 2A, 2B, 2C, 3A, 3B, 3C, 9D, 10D, 12A, 12C, 13K	Canal común a 2A, 2B, 2C, 3A, 3B y 3C
4668	ZRRN: 1D, 2B, 6D, 10A, 13G	En 2B, limitado al uso diurno
4675	ZRMP: CWP ZRRN: 2C, 3A, 9D, 13J	En 3A, limitado al uso diurno
4682	ZRRN: 3C, 5B, 5C, 5D, 10B, 10E, 13J	En 3C, limitado al uso diurno
4689	ZRMP: EU ZRRN: 3B, 6D, 10C, 12A, 12C	En 3B y 10C, limitado al uso diurno
4696	ZRMP: SAM1 ZRRN: 2A, 2B, 2C, 3C, 10A	En 10A, limitado al uso diurno

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

1	2	3
5484	ZRMP: CAR ZRRN: 2B, 3B	
5491	ZRRN: 2C, 6B, 7E, 10B, 12F, 13G	
5498	ZRRN: 2B, 3C, 7, 9B, 9C, 9D, 10C, 13H	Canal común a 9B, 9C y 9D
5505	ZRMP: CWP, NSA2 ZRRN: 10E, 13K	En 10E, uso limitado al Este de 60° Oeste y a una potencia de 250 vatios (potencia media)
5512	ZRRN: 2A, 6A, 10C, 12G	
5519	ZRMP : NSA1, VOLMET: PAC-MET	
5526	ZRRN: 3C, 5A, 6D, 9B, 9C, 9D 10B, 13J	Canal común a 9B, 9C y 9D
5533	VOLMET: EU-MET ZRRN : 3B, 12C	
5540	ZRRN: 2B, 3B, 10D, 13C	

1	2	3
5547	ZRRN: 2C, 6A, 6E, 10A, 13H	Canal común a 6A y 6E
5554	ZRMP: EU, CEP ZRRN: 3C	En 3C, limitado al uso diurno
5561	VOLMET: ME-MET ZRRN : 10D	
5568	ZRMP: CAR ZRRN: 2A, 3C, 6A	En ZRMP CAR uso ampliado al punto medio de la ruta aérea entre Ciudad de México y Tahití
5575	VOLMET: EU-MET ZRRN : 3B,10C,12E	
5582	ZRMP: SAM2 ZRRN: 2C, 6A	
5589	ZRMP: NP ZRRN: 2C, 12F 12H	Canal común a 12F y 12H
5596	ZRRN: 2A. 2B, 2C, 6D, 10D,13K	Canal común a 2A, 2B y 2C
5603	ZRMP: CEP, ME	

1	2	3
5610	ZRMP: NA2,NA3 ZRRN: 6B	En 6B, uso limitado al Este de 100° Este
5617	VOLMET: AT-MET ZRRN : 2C,6D	En 2C, limitado al uso diurno
5624	ZRMP: FE,NA1,NA2	
5631	ZRRN: 2C,3A,6B, 10A,10E, 12E,12F	En 6B, uso limitado al Este de 100° Este y al Sur de 40° Norte Canal común a 12E y 12F
5638	ZRMP: NA2,SP, ZRRN: 2B	En 2B, limitado al uso diurno
5645	ZRMP: FE ZRRN: 1B,1C,2B, 10D	En 2B, limitado al uso diurno Canal común a 1B y 1C y uso limitado a la zona del Mar del Norte
5652	ZRRN: 2C,6E,10D, 12C,13C	
5659	ZRRN: 1C,3A,5B, 5C,5D,6C, 10B,13I	Canal común a 5B,5C y 5D
5666	ZRRN: 2A,2B,2C, 9B,9C,10D, 12C,13F	Canal común a 2A, 2B y 2C Canal común a 9B y 9C

1	2	3
5673	ZRMP: NA2, SEA	
5680	Mundial	

1	2	3
6526	Mundial	A1 y A3J solamente
6533	ZRRN: 1C, 2B, 3B, 5D, 6E, 9B, 9C, 10C, 12E, 12F, 12H	Canal común a 9B y 9C Canal común a 12E, 12F y 12H
6540	ZRMP: CAR, NSA2 ZRRN: 2A, 6B, 9B	
6547	ZRRN: 1E, 3A, 5B, 5C, 5D, 12C, 13J	Canal común a 5B, 5C y 5D
6554	ZRRN: 2C, 6C, 10D, 13G	
6561	ZRMP: CAR, NSA2, ZRRN: 2A, 9D	En ZRMP CAR, uso ampliado al punto medio de la ruta aérea entre Ciudad de México y Tahití En ZRMP NSA2, uso ampliado a Australia occidental e Islas Cocos
6568	ZRMP: EU ZRRN: 6F, 10A, 13J	
6575	VOLMET: AFI-MET ZRRN: : 2A, 6B, 9B, 12D	
6582	ZRMP: EU ZRRN: 6F, 10C, 13J	
6589	ZRRN: 2A, 2B, 3A, 3B, 4B, 6D, 12C	Canal común a 2A, 2B, 3A y 3B

1	2	3
6596	VOLMET: ME-MET ZRRN : 10B, 12G	
6603	ZRRN: 2B, 2C, 3C, 7E, 12C, 13C	Canal común a 2B, 2C y 3C
6610	ZRMP : SA VOLMET: PAC-MET ZRRN : 2A, 5A, 9A 10D	En PAC-MET, uso limitado al Norte de 30° Norte y al Oeste de 160° Este
6617	VOLMET: AFI-MET ZRRN : 2C, 3A, 6C, 6D, 10A, 13D	En AFI-MET, uso limitado al Sur del Ecuador Canal común a 2C y 3A Canal común a 6C y 6D
6624	ZRMP: ME ZRRN: 3B, 10C, 13F	
6631	ZRMP: CWP ZRRN: 1D, 3A, 10E, 13K	
6638	ZRRN: 2B, 4A, 4B, 9A, 10C, 13D	Canal común a 4A y 4B
6645	ZRRN: 2B, 2C, 9B, 10B, 13G	Canal común a 2B y 2C
6652	ZRRN: 2C, 3C, 9A, 12C, 13C	

1	2	3
6659	ZRRN: 2C, 3B, 6D, 10D, 13K	
6666	ZRMP: SAM1 ZRRN: 2C, 3C, 9B, 10D	
6673	ZRRN: 2B, 3A, 6F, 10C, 12F	En 6F, uso limitado al Este de 120° Este y al Sur de 43° Norte Canal común a 2B y 3A
6680	ZRMP : SA VOLMET: SEA-MET ZRRN : 3A, 10D	En ZRMP SA, uso ampliado a la ruta aérea a Buenos Aires

1	2	3
8819	VOLMET: ME-MET ZRRN : 3B, 6C, 13C	En 3B, uso limitado al Este de 140° Este
8826	ZRMP: NSA1, SAM1 ZRRN: 3B, 6D, 9D 10C	En 3B, uso limitado al Este de 130° Este
8833	VOLMET: EU-MET ZRRN : 3B, 6C, 6D, 12A, 13K	En 3B, uso limitado al Norte de 50° Norte Canal común a 6C y 6D
8840	ZRMP: CAR, PE ZRRN: 2A, 2C, 3A, 7A, 7B, 7C, 7D, 9D, 13H	En ZRMP CAR, uso ampliado al punto medio de la ruta aérea entre Ciudad de México y Tahití Canal común a 2A, 2C y 3A
8847	ZRMP: ME, SAM2, SP ZRRN: 3B	En 3B, uso limitado al Este de 140° Este
8854	ZRMP: CWP, NA2 ZRRN: 5B, 6F, 9D, 13G	
8861	ZRRN: 2A, 2B, 2C, 3A, 3B, 3C, 5D, 6C, 10E, 12C, 12F, 13K	Canal común a 2A, 2B, 2C, 3A, 3B y 3C En 6C, uso limitado al Sur de 10° Norte En 12F, uso limitado al Norte de 04° Norte y a 300 W de potencia media
8868	ZRMP : FE, SEA VOLMET: AT-MET ZRRN : 2A, 3A, 10A	En 3A, uso limitado al Norte de 60° Norte Canal común a 2A y 3A
8875	ZRMP: CEP, EU ZRRN: 3B, 7E, 12E, 12F	En 3B, uso limitado al Este de 120° Este

1	2	3
8882	ZRMP: SA, SEA ZRRN: 3A, 3B	Autorizada su utilización en India y en Pakistán más allá de los límites de la ZRMP SEA En 3A, uso limitado al Norte de 60° Norte Canal común a 3A y 3B En ZRMP SA, uso ampliado a la ruta aérea a Buenos Aires
8889	ZRMP: NA2 ZRRN: 3B, 6A, 6E, 9B, 9D, 13J	Canal común a 6A y 6E Canal común a 9B y 9D
8896	ZRRN: 3B, 3C, 4A, 5A, 5B, 5C, 9B, 9C, 10B, 13F	Canal común a 3B y 3C Canal común a 4A, 5A, 5B y 5C Canal común a 9B y 9C
8903	VOLMET: PAC-MET ZRRN : 2A, 2C, 6D, 10E, 13G	Canal común a 2A y 2C
8910	ZRMP: NA1, NA2 ZRRN: 3B, 3C, 9B, 9C, 13D	Canal común a 3B y 3C Canal común a 9B y 9C
8917	ZRRN: 2A, 2B, 2C, 3A, 6E, 9B, 9C, 10A, 13D	Canal común a 2A, 2B, 2C y 3A En 2C, uso limitado al Oeste de 40° Este Canal común a 9B y 9C
8924	ZRRN: 4B, 6A, 6D, 9C, 10A, 12D, 13I	Canal común a 6A y 6D
8931	ZRMP: CEP, EU ZRRN: 3B, 6D, 13J	En 3B, uso limitado al Oeste de 180°
8938	ZRMP: NP ZRRN: 1C, 6A, 9A, 12E, 12F, 13H	Canal común a 12E y 12F

1	2	3
8945	ZRMP: NA2, NA3 ZRRN: 3B, 3C, 6C, 13E	En 3B y 3C, uso limitado al Norte de 50° Norte Canal común a 3B y 3C
8952	ZRRN: 1D, 6B, 9A 9C, 9D, 10B, 13F	Canal común a 9A, 9C y 9D
8959	ZRMP: NSA2, CAR ZRRN: 3A, 6D, 9C, 9D	En 3A, uso limitado al Este de 80° Este Canal común a 9C y 9D
8963	MUNDIAL	Al solamente

1	2	3
10 009	ZRMP: ME ZRRN: 13J	
10 017	ZRMP: CAR VOLMET: SEA-MET ZRRN: 2A, 2B	En ZRMP CAR, uso ampliado al punto medio de la ruta aérea entre Ciudad de México y Tahití Canal común a 2A y 2B
10 025	ZRMP: NSA2 ZRRN: 3B, 3C, 12C, 13G	En ZRMP NSA2, uso ampliado a Australia occidental e Islas Cocos Canal común a 3B y 3C
10 033	ZRRN: 2, 3, 7, 13D	Canal común a 2 y 3
10 041	ZRRN: 2, 10, 13G	
10 049	ZRMP: SA ZRRN: 2A, 6	En ZRMP SA, uso ampliado a la ruta aérea a Buenos Aires
10 057	ZRRN: 2, 10, 13J	
10 065	ZRRN: 1B, 1C, 1E, 6A, 6F, 13D	Canal común a 1B, 1C y 1E Canal común a 6A y 6F
10 073	VOLMET: AFI-MET ZRRN: 3, 12C	En AFI-MET, uso limitado al Sur del Ecuador

1	2	3
10 081	ZRRN: 1D, 4A, 6F, 13G	Canal común a 1D y 4A
10 089	ZRRN: 2, 3, 12C, 13K	Canal común a 2 y 3
10 093	Mundial	A1 y A3J solamente
10 097	Mundial	A1 y A3J solamente

1	2	3
11 279	VOLMET: AFI-MET, PAC-MET	En PAC-MET, uso limitado al Norte de 30° Norte y al Oeste de 160° Este
11 287	ZRRN: 2, 13H	
11 295	ZRRN: 5, 10, 13C	
11 303	ZRMP: CWP, EU	
11 311	ZRRN: 6, 10B, 10C, 10D, 10E	Canal común a 10B, 10C, 10D y 10E
11 319	ZRRN: 2, 9A, 9B, 9D, 10, 13H	Canal común a 9A, 9B y 9D
11 327	ZRMP: SAM2 ZRRN: 3	
11 335	ZRRN: 2, 7, 9	
11 343	ZRMP: CAR, SAM1 VOLMET: ME-MET	

1	2	3
11 351	ZRRN: 2, 12	
11 359	ZRRN: 1, 6D, 10	
11 367	ZRMP: CAR ZRRN: 2	
11 375	ZRRN: 3, 4	
11 383	ZRRN: 2, 9, 10	
11 391	VOLMET: EU-MET ZRRN: 3	En 3, uso limitado al Este de 90° Este

1	2	3
13 264	VOLMET: AT-MET ZRRN : 3	
13 272	ZRMP: NP ZRRN: 7A, 7B, 7C, 7D	Canal común a 7A, 7B, 7C y 7D
13 280	ZRMP: NSA2 ZRRN: 6F, 10, 13	
13 288	ZRMP: FE, NA2, SEA	Autorizada su utilización en India y en Pakistán más allá de los límites de la ZRMP SEA, a reserva de que se garantice la protección requerida entre 300° y 340°.
13 296	ZRMP: CWP ZRRN: 1	
13 304	ZRMP: NSA1, SP	
13 312	ZRMP : FE VOLMET: EU-MET ZRRN : 13H	
13 320	ZRMP: CAR, SAM2 ZRRN: 2, 6C	En ZRMP CAR, uso ampliado al punto medio de la ruta aérea entre Ciudad de México y Tahití
13 328	ZRMP: NA1, NA2, NA3 ZRRN: 6	Canal común a NA1, NA2 y NA3

1	2	3
13 336	ZRMP: CEP, ME, NSA2	En NSA2, uso ampliado a Australia occidental e Islas Cocos Canal común a ZRMP ME y NSA2
13 344	ZRMP: SA VOLMET: PAC-MET	
13 352	ZRMP: NA2 ZRRN: 6	
13 356	MUNDIAL	Solamente A1 y A3J

1	2	3
17 909	ZRMP : CWP, NP VOLMET: AFI-MET	En AFI-MET, uso limitado al Sur del Ecuador
17 917	ZRMP : CAR, ME SAM1, SAM2	Canal común a SAM1 y SAM2
17 925	ZRMP : CEP, NSA2	En ZRMP NSA2, uso ampliado a Australia occidental e Islas Cocos
17 933	ZRRN : 4, 5, 9B, 9C, 9D	Canal común a 4 y 5 Canal común a 9B, 9C y 9D
17 941	ZRMP : EU, NA1, NA2, NA3, ZRRN : 3	Canal común a NA1, NA2 y NA3 En 3, uso limitado al Este de 100° Este
17 949	ZRMP : NSA1, SA, SP	Canal común a NSA1 y SA
17 957	ZRRN : 2, 3, 13	Canal común a 2 y 3
17 965	ZRMP : FE, SEA ZRRN : 3	Canal común a FE y SEA

AERONAUTICAL CONFERENCE

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COMMITTEE 6

REPORT OF WORKING GROUPS 6 COORD, 6A, 6B, 6C, 6D AND 6E

DRAFT REVISED FREQUENCY ALLOTMENT PLANS

The attached Annexes comprise the draft revised Allotment Plans, prepared by the Working Groups of the Plan Committee for MWARA's, VOLMET Areas and RDARA's.

For the benefit of delegates who may have questions on this draft or who may wish to seek explanations of any kind on its details, special arrangements are being made on Monday, 25 April. During the morning, from 0930, the Rapporteur delegates of each sub-Working Group responsible for each frequency band will be in attendance in Salle 4.

To facilitate the formal consideration of this draft Plan commencing in Committee 6 on Monday afternoon, it is earnestly requested that delegates will take the fullest advantage of these special arrangements.

Maurice CHEF

Chairman,
Working Group 6 COORD

Annexes: 2

A N N E X E A - A N N E X A - A N E X O A

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
CAR	2966 2952			5568 5484	6540 6561	8840 8959	10017	11343	13320	17917
CEP		3467		5603 5554		8931 8875			13304	17925
CWP	2896		4675	5505	6631	8861		11303	13296	17909
EU	2910	3467	4689	5554	6582 6568	8875 8931		11303	13357	17941
FE	2868 2987			5645 5624		8840 8868			13288 13312	17965
ME		3404 3446		5603	6624	8847	10009		13336	17917
NA1	2868			5624		8910			13328	17941
NA2	2931 2987 2945 2868			5610 5673 5638 5624		8945 8889 8861 8910			13328 13288 13352	17941
NA3	2931			5610		8945			13328	17941

andes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
NP	2910			5589		8938			13272	17909
NSA1		3411		5519		8826			13304	17949
NSA2	2966	3481		5505	6540 6561	8959	10025		13336 13280	17925
SA	2875	3432			6610 6680	8882	10049		13344	17949
SAM1	2889		4696		6666	8826		11343		17917
SAM2	2910			5582		8847		11327	13320	17917
SEA	2987			5673		8882 8868			13288	17965
SP	2945			5638		8847			13304	17949

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
AFI-MET		3488 3495*			6575 6617*		10073*	11279		17909*
AT-MET	3001			5617		8868			13264	
EU-MET	2889* 2980			5533 5575		8833		11391	13312	
ME-MET	3001 3015			5561	6596	8819		11343		
SEA-MET		3432			6680		10017			
PAC-MET	2980			5519	6610*	8903		11279*	13344	

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zones	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
1								11359	13296	
1B		3453*		5645*			10065*			
1C	2994	3453*		5645* 5659	6533	8938	10065*			
1D	2896	3418*	4668		6631	8952	10081			
1E	2861		4654*		6547		10065*			
2							10033* 10041 10057 10089*	11287 11319 11335 11351 11367 11383	13320	17957
2A	2875 2882 2903 2973 3008	3425 3439 3460 3495	4661 4696	5512 5568 5596 5666	6540 6561 6575 6589 6610	8840 8854 8868 8903 8917	10017* 10049			
2B	2854* 2868* 2875 2924 2938 2952 2980*	3425 3439 3460 3488	4654 4661 4668* 4696	5484 5498 5540 5596 5638* 5645* 5666	6533 6589 6603 6638 6645 6673	8854 8917	10017*			

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
2C	2882 2903 2917 2924 2938 2952 2959 2987* 3008	3418 3425 3439 3460 3474 3495	4654 4661 4675 4696	5491 5547 5582 5589 5596 5617* 5631 5652 5666	6554 6603 6617 6645 6652 6659 6666	8840 8854 8903 8917*				
3							10033* 10073 10089*	11327 11375 11391	13264	17941
3A	2861 2875 2924	3411* 3432 3439 3481	4661 4675*	5631 5659	6547 6589 6617 6631 6673 6680	8840 8854 8868* 8882* 8917 8959*				
3B	2854 2903 2931 2938 2959 2966	3404 3495	4661 4689*	5484 5533 5540 5575	6533 6589 6624 6659	8819* 8826* 8833* 8847* 8854 8875* 8882 8889 8896 8910 8931* 8945*	10025*			
3C	2854 2882 2917 2994 3008	3425 3453 3474*	4654 4661 4682* 4696	5498 5526 5554* 5568	6603 6652 6666	8854 8896 8910 8945*	10025*			

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
4								11375		17933*
4A	2854				6638	8896	10081			
4B	2924				6589 6638	8924				
5								11295		17933*
5A		3453		5526	6610	8896				
5B	2966		4682	5659	6547	8861 8896				
5C			4682	5659	6547	8896				
5D			4682	5659	6533 6547					
6							10049	11311	13328 13352	
6A	2910* 2931* 2945	3411*		5512 5547 5568 5582		8889 8924 8938	10065*			
6B	2889 2952*	3418* 3460*		5491 5610* 5631*	6540 6575	8952				

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
6C	2924 3015	3439	-	5659	6554 6617	8819 8833 8854* 8945			13320	
6D		3411 3474 3488 3495	4668 4689	5526 5596 5617	6589 6617 6659	8819 8826 8833 8875 8903 8931 8959				
6E	2861 2931*	3411* 3467		5547 5652	6533	8889 8917				
6F	2973 3001*	3481*			6568 6582 6673*		10065* 10081		13280	

Bands Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
7				5498			10033	11335		
7A	2868*					8840			13272*	
7B	2868*					8840			13272*	
7C	2868*					8840			13272*	
7D	2868*					8840			13272*	
7E	2917	3425		5491	6596	8875				
8A										
9								11335 11359 11383		
9A		3404 3418 3453			6610 6638 6652	8938 8952				
9B	2861 2973 3008	3425 3446 3460		5498 5526 5666	6533 6575 6645 6666	8889 8896 8910 8917				17933*
9C	2861 2973	3425 3446 3460		5498 5526 5666	6533	8896 8910 8917 8924 8952 8959				17933*
9D	2917 2938* 2959 3008	3467 3481	4661	5498 5526	6561	8840 8861 8889 8924 8952 8959				17933*

Bandes Bands Bandas MHz Mc/s	.3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
10							10041 10057	11295 11319 11359 11383	13280	
10A	2931 2994*	3411 3446 3481	4668 4696*	5547 5631	6568 6617	8868 8917 8924				
10B	2896 2917 2973 3015	3418 3432 3453	4654 4682	5461 5469 5491 5526 5659	6596	8875 8896 8952		11311*		
10C	2854 2889	3474	4689*	5498 5512 5575	6533 6582 6624 6638 6673	8826		11311*		
10D	2903 3008	3425 3432 3439 3488 3495	4661	5477 5540 5561 5596 5645 5652 5666	6554 6610 6659 6666 6680			11311*		
10E	2882 2924 2938	3460 3495	4682	5454 5505	6631	8854 8903		11311*		

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
12								11351		
12A	2875	3404 3453	4661 4689	5454 5461 5533 5652 5666	6547 6589 6603 6652	8833				
12C	2875	3404 3453 3460	4661 4689	5454 5461 5533 5652 5666	6547 6589 6603 6652	8854	10025 10073 10089			
12D	2861				6575	8924				
12E	2959 3015	3425 3446		5589 5631	6533	8875 8938				
12F	2959 3015	3425 3446		5589 5631	6533	8875 8938				
12G	2959 2980* 3015	3425 3446		5477 5512	6596					
12H	2959 3015	3425 3446		5589	6533					
13									13335	17957
13A										
13B										
13C	2854 2987			5540 5652	6652	8819		11295		
13D	2868 2924	3411 3495		5454 5469	6617 6638	8910 8917 8931	10041			

Bandes Bands Bandas MHz Mc/s	3	3.5	4.7	5.6	6.6	9	10	11.3	13.3	18
Zones Areas Zonas	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s	kHz kc/s
13E	2917		4654			8945				
13F	2952	3439		5666	6624	8896 8952				
13G	2938 2980 2994 3008		4668	5491	6554 6645	8861 8903	10033 10081			
13H	2861 2966	3425		5477 5498 5547		8840 8938		11287 11319	13280	
13I	2931			5659		8924				
13J	2882 2903 2973	3418		5461	6547 6568 6582	8889	10009 10057			
13K	2896 2945	3460	4661	5505 5596	6631	8833 8854	10089			
13L										

Frequency kc/s	Authorized area of use	Remarks
1	2	3
2854	RDARA: 2B, 3B, 3C, 4A, 10C, 13C	In 2B, use limited to North of 40°North and East of 60°East
2861	RDARA: 1E, 3A, 6E, 9B, 9C, 12D, 13H	
2868	MWARA: FE, NA1,NA2 RDARA: 2B, 7A, 7B, 7C, 7D, 13D	In 2B, limited to use on a day-time basis
2875	MWARA: SA RDARA: 2A, 2B, 3A, 12A, 12C	In SA, use limited to South of 30° North
2882	RDARA: 2A, 2C, 3C, 10E, 13J	
2889	MWARA: SAM1 VOLMET: EU-MET RDARA: 6B, 10C	In EU-MET use limited to North of 50° North
2896	MWARA: CWP RDARA: 1D, 10B, 13K	
2903	RDARA: 2A, 2C, 3B, 10D, 13J	
2910	MWARA: EU, NP, SAM2 RDARA: 6A	Common channel to 6A and EU

Frequency kc/s	Authorized area of use	Remarks
1	2	3
2917	RDARA: 2C, 3C, 7E, 9D, 10B, 13E	
2924	RDARA: 2B, 2C, 3A, 4B, 6C, 10E, 13D	
2931	MWARA: NA2, NA3 RDARA: 3B, 6A, 6E, 10A, 13J	Common channel to 6A and 6E
2938	RDARA: 2B, 2C, 3B, 9D, 10E, 13G	
2945	MWARA: NA2, SP RDARA: 6A, 13K	
2952	MWARA: CAR RDARA: 2B, 2C, 6B, 13F	In 6B, use limited to East of 125° East
2959	RDARA: 2C, 3B, 9D, 12E, 12F, 12G, 12H	
2966	MWARA: CAR, NSA2 RDARA: 3B, 5B, 13H	
2973	RDARA: 2A, 6F, 9B, 9C, 10B, 13J	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
2980	VOLMET: EU-MET, PAC-MET RDARA: 2B, 12G, 13G	In 2B, limited to use on a day-time basis In 12G, power limited to 500 watts during night time In 12G, night time protection 12 db
2987	MWARA: FE, NA2, SEA RDARA: 2C, 13C	In 2C, limited to use on a day time basis
2994	RDARA: 1C, 3C, 10A, 13G	In 10A, limited to use on a day time basis
3001	VOLMET: AT-MET, ME-MET RDARA: 6F	In 6F, use limited to East of 120° East
3008	RDARA: 2A, 2C, 3C, 9B, 9D, 10D, 13G	
3015	VOLMET: ME-MET RDARA: 6C, 10B, 12E, 12F, 12G, 12H	
3023.5	World-wide	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
3404	MWARA: ME RDARA: 3B, 9A, 12A, 12C	
3411	MWARA: NSA1 RDARA: 3A, 6A, 6D, 6E, 10A, 13D	In 3A, limited to use on a day time basis In 6A, reduced to 250W during night-time operation In 6E, use limited to West of 82°30'East and reduced to 250W during night-time operation
3418	RDARA: 1D, 2C, 6B, 9A, 10B, 13J	In 1D, use limited to East of 22° East In 6B, use limited to East of 120° East
3425	RDARA: 2A, 2B, 2C, 3C, 7E, 9B, 9C, 10D, 12E, 12F, 12G, 12H, 13H	
3432	MWARA: SA VOLMET: SEA-MET RDARA: 3A, 10B, 10D	
3439	RDARA: 2A, 2B, 2C, 3A, 6C, 10D, 13F	
3446	MWARA: ME RDARA: 9B, 9C, 10A, 12E, 12F, 12G, 12H	
3453	RDARA: 1B, 1C, 3C, 5A, 9A, 10B, 12A, 12C	Common channel to 1B and 1C and use limited to North Sea area
3460	RDARA: 2A, 2B, 2C, 6B, 9B, 9C, 10E, 12C, 13K	In 6B, use limited to East of 120° East

Frequency kc/s	Authorized area of use	Remarks
1	2	3
3467	MWARA: EU, CEP RDARA: 6E, 9D	
3474	RDARA: 2C, 3C, 6D, 10C	In 3C, limited to use on a day-time basis
3481	MWARA: NSA2 RDARA: 3A, 6F, 9D, 10A	In 6F, reduced to 250W during night-time operation
3488	VOLMET: AFI-MET RDARA: 2B, 6D, 10D	
3495	VOLMET: AFI-MET RDARA: 2A, 2C, 3B, 6D 10D, 10E, 13D,	In AFI-MET, use limited to South of the Equator
3499	World-wide	A1 only

Frequency kc/s	Authorized area of use	Remarks
1	2	3
4654	RDARA: 1E, 2B, 2C, 3C, 10B, 13E	In 1E, limited to use on a day-time basis
4661	RDARA: 2A, 2B, 2C, 3A, 3B, 3C, 9D, 10D, 12A, 12C, 13K	Common channel to 2A, 2B, 2C, 3A, 3B and 3C
4668	RDARA: 1D, 2B, 6D, 10A, 13G	In 2B, limited to use on a day-time basis
4675	MWARA: CWP RDARA: 2C, 3A	In 3A, limited to use on a day-time basis
4682	RDARA: 3C, 5B, 5C, 5D, 10B, 10E	In 3C, limited to use on a day-time basis
4689	MWARA: EU RDARA: 3B, 6D, 10C, 12A, 12C	In 3B and 10C, limited to use on a day-time basis
4696	MWARA: SAM1 RDARA: 2A, 2B, 2C, 3C, 10A	In 10A, limited to use on a day-time basis

Frequency kc/s	Authorized area of use	Remarks
1	2	3
5454	RDARA: 10E, 12A, 12C, 13D	Common channel to 12A and 12C
5461	RDARA: 10B, 12A, 12C, 13J	Common channel to 12A and 12C
5469	RDARA: 10B, 13D	
5477	RDARA: 10D, 12G, 13H	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
5484	MWARA: CAR. RDARA: 2B,3B	
5491	RDARA: 2C,6B,7E,10B, 13G.	
5498	RDARA: 2B,3C,7,9B, 9C,9D,10C,13H.	Common channel to 9B, 9C and 9D
5505	MWARA: CWP, NSA2. RDARA: 10E, 13K	
5512	RDARA: 3A,6A,10C, 12G	
5519	MWARA: NSA1, VOLMET: PAC-MET	
5526	RDARA: 3C,5A,6D,9B, 9C,9D,10B	Common channel to 9B, 9C and 9D
5533	VOLMET: EU-MET RDARA: 3B,12A,12C	Common channel to 12A and 12C
5540	RDARA: 2B,3B,10D,13C	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
5547	RDARA: 2C,6A,6E,10A, 13H	Common channel to 6A and 6E
5554	MWARA: EU,CEP RDARA: 3C	In 3C limited to use on a day-time basis
5561	VOLMET: ME-MET RDARA: 10D	
5568	MWARA: CAR RDARA: 2A,3C,6A	
5575	VOLMET: EU-MET RDARA: 3B,10C	
5582	MWARA: SAM2 RDARA: 2C,6A	
5589	MWARA: NP RDARA: 2C,12E,12F,12H	Common channel to 12E, 12F and 12H
5596	RDARA: 2A,2B,2C,6D, 10D,13K	Common channel to 2A, 2B and 2C
5603	MWARA: CEP, ME	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
5610	MWARA: NA2,NA3. RDARA: 6B.	In 6B, use limited to East of 100° EAST.
5617	VOLMET: AT-MET RDARA: 2C, 6D	In 2C, limited to use on a day-time basis.
5624	MWARA: FE,NA1,NA2.	
5631	RDARA: 2C,3A,6B,10A, 12E,12F.	In 6B, use limited to East of 100° East and South of 40° North. Common channel to 12E and 12F.
5638	MWARA: NA2, SP. RDARA: 2B.	In 2B, limited to use on a day-time basis.
5645	MWARA: FE RDARA: 1B,1C,2B,10D.	In 2B, limited to use on a day-time basis. Common channel to 1B and 1C, and limited to use in North Sea area.
5652	RDARA: 2C,6E,10D,12A, 12C,13C	Common channel to 12A and 12C.
5659	RDARA: 1C,3A,5B,5C,5D 6C,10B,13I.	Common channel to 5B, 5C and 5D.
5666	RDARA: 2A,2B,2C,9B,9C, 10D,12A,12C,13F.	Common channel to 2A, 2B and 2C. Common channel to 9B and 9C. Common channel to 12A and 12C.

Frequency kc/s	Authorized area of use	Remarks
1	2	3
5673	MWARA: NA2, SEA.	
5680	WORLD-WIDE	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
6526	World-wide	A1 and A3J only
6533	RDARA: 1C,2B,3B,5D, 6E,9B,9C,10C,12E,12F 12H.	
6540	MWARA: CAR,NSA2. RDARA: 2A,6B.	
6547	RDARA: 1E,3A,5B,5C, 5D,12A,12C 13J.	
6554	RDARA: 2C,6C,10D, 13G.	
6561	MWARA: CAR, NSA2, RDARA: 2A,9D.	
6568	MWARA: EU RDARA: 6F, 10A,13J	
6575	VOLMET: AFI-MET RDARA: 2A,6B,9B, 12D.	
6582	MWARA: EU RDARA: 6F,10C,13J.	
6589	RDARA: 2A,2B,3A,3B, 4B,6D,12A,12C	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
6596	VOLMET: ME-MET RDARA: 7E,10B,12G	
6603	RDARA: 2B,2C,3C,12A, 12C.	
6610	MWARA: SA VOLMET: PAC-MET RDARA: 2A,5A,9A,10D.	In PAC MET, use limited to North of 30° North and West of 160°East
6617	VOLMET: AFIMET RDARA: 2C,3A,6C,6D, 10A,13D.	In AFIMET, use limited to South of the Equator
6624	MWARA: ME RDARA: 3B,10C, 13F.	
6631	MWARA: CWP RDARA: 1D,3A,10E,13K.	
6638	RDARA: 2B,4A,4B,9A, 10C,13D.	
6645	RDARA: 2B,2C,9B,10B, 13G.	
6652	RDARA: 2C,3C,9A,12A, 12C,13C.	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
6659	RDARA: 2C,3B,6D,10D.	
6666	MWARA: SAM1 RDARA: 2C,3C,9B,10D.	
6673	RDARA: 2B,3A,6F,10C.	In 6F, use limited to East of 120° East and South of 43° North
6680	MWARA: SA, VOLMET: SEA-MET RDARA: 3A,10D.	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
8819	VOLMET : ME-MET RDARA : 3B, 6C, 6D, 13C	In 3B, use limited to East of 140° East Common channel to 6C and 6D
8826	MWARA : NSA1, SAM1 RDARA : 3B, 6D, 10C	In 3B, use limited to East of 130° East
8833	VOLMET : EU-MET RDARA : 3B, 6C, 6D, 12A, 13K	In 3B, use limited to North of 50° North Common channel to 6C and 6D
8840	MWARA : CAR, FE RDARA : 2A, 2C, 3A, 7A, 7B, 7C, 7D, 9D, 13H	Common channel to 2A, 2C and 3A
8847	MWARA : ME, SAM2, SP RDARA : 3B	In 3B, use limited to East of 140° East
8854	RDARA : 2A, 2B, 2C, 3A, 3B, 3C, 6C, 10E, 12C, 13K	Common channel to 2A, 2B, 2C, 3A, 3B and 3C In 6C, use limited to South of 10° North
8861	MWARA : CWP, NA2 RDARA : 5B, 9D, 13G	
8868	MWARA : FE, SEA VOLMET : AT-MET RDARA : 2A, 3A, 10A	In 3A, use limited to North of 60° North Common channel to 2A and 3A
8875	MWARA : CEP, EU RDARA : 3B, 6D, 7E, 10B, 12E, 12F	In 3B, use limited to East of 120° East

Frequency kc/s	Authorized area of use	Remarks
1	2	3
8882	MWARA : SA, SEA RDARA : 3A, 3B	Use outside the MWARA SEA boundaries is authorized in India and Pakistan In 3A, use limited to North of 60° North. Common channel to 3A and 3B
8889	MWARA : NA2 RDARA : 3B, 6A, 6E, 9B, 9D, 13J	Common channel to 6A and 6E Common channel to 9B and 9D
8896	RDARA : 3B, 3C, 4A, 5A, 5B, 5C, 9B, 9C, 10B, 13F	Common channel to 3B and 3C Common channel to 4A, 5A, 5B and 5C Common channel to 9B and 9C
8903	VOLMET : PAC-MET RDARA : 2A, 2C, 6D, 10E, 13G	Common channel to 2A and 2C
8910	MWARA : NA1, NA2 RDARA : 3B, 3C, 9B, 9C, 13D	Common channel to 3B and 3C Common channel to 9B and 9C
8917	RDARA : 2A, 2B, 2C, 3A, 6E, 9B, 9C, 10A, 13D	Common channel to 2A, 2B, 2C and 3A In 2C, use limited to West of 40° East Common channel to 9B and 9C
8924	RDARA : 4B, 6A, 9C, 9D, 10A, 12D, 13I	Common channel to 9C and 9D
8931	MWARA : CEP, EU RDARA : 3B, 6D, 13D	In 3B, use limited to West of 180°
8938	MWARA : NP RDARA : 1C, 6A, 9A, 12E, 12F, 13H	Common channel to 12E and 12F

Frequency kc/s	Authorized area of use	Remarks
1	2	3
8945	MWARA : NA2, NA3 RDARA : 3B, 3C, 6C, 13E	In 3B and 3C, use limited to North of 50° North Common channel to 3B and 3C
8952	RDARA : 1D, 6B, 9A, 9C, 9D, 10B, 13F	Common channel to 9A, 9C and 9D
8959	MWARA : NSA2, CAR RDARA : 3A, 6D, 9C, 9D	Common channel to 9C and 9D
8963	WORLD-WIDE	A1 only

Frequency kc/s	Authorized area of use	Remarks
1	2	3
10009	MWARA : ME RDARA : 13J	
10017	MWARA : CAR VOLMET : SEA-MET RDARA : 2A, 2B	Common channel to 2A and 2B
10025	MWARA : NSA 2 RDARA : 3B, 3C 12C	Common channel to 3B and 3C
10033	RDARA : 2, 3, 7 , 13C	Common channel to 2 and 3
10041	RDARA : 2, 10, 13D	
10049	MWARA : SA RDARA : 2A, 6	
10057	RDARA : 2, 10, 13J	
10065	RDARA : 1B, 1C, 1E, 6A, 6F	Common channel to 1B, 1C and 1E Common channel to 6A and 6F
10073	VOLMET : AFI-MET RDARA : 3, 12C	In AFI-MET, use limited to South of the Equator

Frequency kc/s	Authorized area of use	Remarks
1	2	3
10081	RDARA : 1D, 4A, 6F, 13G	
10089	RDARA : 2, 3, 12C, 13L	Common channel to 2 and 3
10093	WORLD-WIDE	A1 and A3J only
10097	WORLD-WIDE	A1 and A3J only

Frequency kc/s	Authorized area of use	Remarks
1	2	3
11279	VOLMET : AFI-MET, PAC-MET	In PAC-MET, use limited to North of 30° North and West of 160° East.
11287	RDARA : 2,13H	
11295	RDARA : 5,10,13C	
11303	MWARA : CWP, EU.	
11311	RDARA : 6, 10B, 10C, 10D, 10E.	Common channel to 10B, 10C, 10D and 10E.
11319	RDARA : 2, 10, 13H	
11327	MWARA : SAM2 RDARA : 3	
11335	RDARA : 2, 7, 9	
11343	MWARA : CAR, SAM1 VOLMET : ME-MET	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
11351	RDARA : 2, 12	
11359	RDARA : 1, 9, 10	
11367	RDARA : 2	
11375	RDARA : 3, 4	
11383	RDARA : 2, 9, 10	
11391	VOLMET : EU-MET RDARA : 3	

Frequency kc/s	Authorized area of use	Remarks
1	2	3
13264	VOLMET: AT-MET RDARA: 3	
13272	MWARA: NP RDARA: 7A, 7B, 7C, 7D	Common channel to 7A, 7B, 7C, 7D
13280	MWARA: NSA2 RDARA: 6F, 10, 13H	
13288	MWARA: FE, NA2, SEA	Use outside the MWARA SEA boundaries is authorized in India and Pakistan, provided that adequate protection is ensured between 300° and 340°. For this purpose, directional anteannae must be used in Pakistan
13296	MWARA: CWP RDARA: 1	
13304	MWARA: CEP, NSA1, SP	
13312	MWARA: FE EU-MET	
13320	MWARA: CAR, SAM2 RDARA: 2, 6C	
13328	MWARA: NA1, NA2, NA3 RDARA: 6	Common channel to NA1, NA2, NA3

Frequency kc/s	Authorized area of use	Remarks
1	2	3
13336	MWARA: ME, NSA2 RDARA: 13	
13344	MWARA: SA PAC-MET	
13352	MWARA: NA2 RDARA: 6	
13356	World-wide	A1 and A3J only

Frequency kc/s	Authorized area of use	Remarks
1	2	3
17909	MWARA: CWP, NP VOLMET: AFI-MET	In AFI-MET, use limited to South of the Equator
17917	MWARA: CAR, ME, SAM1 SAM2	Common channel to SAM1 and SAM2
17925	MWARA: CEP, NSA2	
17933	RDARA: 4, 5, 9B, 9C, 9D	Common channel to 4 and 5 Common channel to 9B, 9C, 9D
17941	MWARA: EU, NA1, NA2 NA3 RDARA: 3	Common channel to NA1, NA2, NA3
17949	MWARA: NSA1, SA, SP	
17957	RDARA: 2, 13	
17965	MWARA: FE, SEA	

CONFERENCE AERONAUTIQUE

Genève, 1966

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28 avril 1966

SEANCE PLENIERE

PROJET - DRAFT - PROYECTO

ADDENDUM N° 2 au Document rose N° II/231
ADDENDUM No. 2 to pink Document No. II/231
ADDENDUM N.° 2 al Documento rosa N.° II/231

Page Pàgina	Fréquence Frequency Frecuencia kHz - kc/s	Voie commune à - Common channel to - Canal común a
R.2/21	3425	2A, 2B, 2C, 3C 12E, 12F, 12G, 12H
	3439	2A, 2B, 2C, 3A
	3446	12E, 12F, 12G, 12H
	3460	2A, 2B, 2C
R.2/22	3495	2A, 2C 10D, 10E
R.2/23	4654	2B, 2C, 3C
R.2/25	5484	2B, 3B
	5498	2B, 3C
	5540	2B, 3B
R.2/26	5568	2A, 3C
R.2/27	5631	2C, 3A
R.2/30	6652	2C, 3C
R.2/31	6666	2C, 3C
R.2/32	8840 8868 8875	7A, 7B, 7C, 7D FE, SEA 12E, 12F
R.2/39	13 288	FE, SEA
R.2/41	17 909	CWP, NP

E.B. POWELL
Président de la Commission 6

AERONAUTICAL CONFERENCE

Geneva, 1966

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COMMITTEE 3

DRAFT

REPORT OF THE BUDGET CONTROL COMMITTEE

The Budget Control Committee, set up in pursuance of Article 5 of Chapter 9 of the General Regulations annexed to the International Telecommunication Convention, Geneva, 1959, held three meetings during the Aeronautical Conference and examined the questions prescribed by its terms of reference.

At its first meeting the Committee set up a Working Group consisting of Mr. R. Monnat (Switzerland) and Mr. Vieira (Portugal), to examine in detail the budget and accounts of the Conference.

Following the Committee's work and in accordance with number 574 of the General Regulations, the present report is submitted to the plenary meeting for consideration.

1. Budget of the Conference (Document No. II/19)

The Committee took note of the budget of the Conference amounting to 1,030,000 Swiss francs, namely 1,000,000 Swiss francs as approved by the Administrative Council at its 20th session in 1965, and 30,000 Swiss francs of additional credits to cover the increase in salaries of supernumerary staff since the last session of the Administrative Council, under the provisions of Additional Protocol I to the International Telecommunication Convention, Montreux, 1965.

2. Position as to expenditure

In accordance with the provisions of Article 5, Chapter 9 of the General Regulations, the Committee herewith submits to the plenary meeting a report showing, as accurately as possible, the estimated expenditure of the Conference.

In pursuance of these provisions, a statement showing the budget of the Aeronautical Conference, the transfers of credits and the expenditure incurred in respect of the Conference, as at 22 April 1966, is submitted to the plenary meeting for consideration. The statement, given in Annex to the present document, also shows commitments to expenditure at that date, as well as the estimated expenditure up to the end of the Conference.

It can be seen that the estimated expenditure is 838,200 Swiss francs, leaving a margin, as compared with the budget, of 191,800 Swiss francs.

In conformity with number 575 of Article 5, Chapter 9 of the General Regulations annexed to the International Telecommunication Convention, Geneva 1959, the present report will be forwarded, together with the observations of the plenary meeting, to the Secretary-General for submission to the Administrative Council at its next session.

3. Remarks

3.1 Accounts of the Conference

It has emerged that, according to the accounts of the Conference, there will probably be a surplus of credits amounting to 20 per cent; the Committee has found that these unused credits are mainly due to the fact that it had not been possible to foresee the volume of the Conference's work with a sufficient degree of accuracy. Moreover, the budget had been calculated for a duration of 8 instead of 7 weeks.

With regard to the number of extra staff recruited by the General Secretariat, because of the existing difficulties of recruitment and the need to issue contracts well in advance, it had not been possible to wait for the amount of work to be known before taking the necessary steps.

As regards the preparatory work carried out by the I.F.R.B., the expenditure on missions charged to the Conference budget relates to preparatory contacts for the establishment of statistics collected by the I.F.R.B., thanks to which it has been possible to expedite considerably the work of the second session of the conference.

3.2 Final Acts of the Conference

The Working Group set up by the Committee, as well as the Committee itself, examined the problem of issuing, at a later date, the printed version of the Final Acts of the Conference, bearing in mind the decision of the plenary meeting to publish the documents for the 1st, 2nd and 3rd readings in mimeographed form.

Following this study, the Committee proposes that 1/3 of the expenditure in connection with the Final Acts to be issued at a later date in printed form, should be charged to the 2nd session of the Aeronautical Conference. This arrangement, provided for in point 20.2 of Administrative Council Resolution No. 83 (amended) will make it possible to offer the Final Acts for sale at a reasonable price and will not prevent appreciable savings being made in relation to the budget of the Conference.

3.3 Reimbursement of extra expenses in respect of professional grade staff detached by the I.T.U. for service in the secretariat of the Conference

The Committee noted that the Budget Control Committee of the 1st session of the Aeronautical Conference examined the question of reimbursement of extra expenses in respect of professional grade staff detached by the I.T.U. for service in the secretariat of the Conference and that that Committee had felt bound to draw the attention of the 1st session of the Aeronautical Conference to the matter so that study might be made of it at the beginning of the second session.

The Committee found that, since it had been decided to hold the second session of the Aeronautical Conference at the Maison des Congrès, no additional expenditure had been incurred in respect of staff detached for the Conference. Consequently, the question of reimbursement of additional expenses did not arise.

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The Plenary Meeting is requested to approve the present report.

Chairman :
Ulrich MOHR

Annex : 1

A N N E X

STATEMENT OF EXPENDITURE FOR THE AERONAUTICAL CONFERENCE AT 22 APRIL 1966

Subheads and items	Budget including additional credits[1]	Transfer of credits: item to item	Transfer of credits: subhead to subhead	Total credits available	Actual expenditure	Commitment to expenditure	Estimated expenditure	Total estimated expenditure
I. Staff								
7.601. Administration								
- Salaries					22,066.30	40,319.70	-	62,386.-
- Travel					634.45	91.35	-	725.80
- Overtime					-	3,500.-	3,000.-	6,500.-
- Miscellaneous					-	-	1,388.20	1,388.20
	95,900	-	-	95,900	22,700.75	43,911.05	4,388.20	71,000.-
7.602. Language Services								
- Salaries					165,896.65	300,062.35	-	465,959.-
- Travel					9,449.90	2,019.25	1,000.-	12,469.15
- Overtime					121.60	7,000.-	4,000.-	11,121.60
- Miscellaneous					-	-	1,450.25	1,450.25
	607,800	-	-	607,800	175,468.15	309,081.60	6,450.25	491,000.-
7.603. Reproduction								
- Salaries					22,753.95	33,095.05	-	55,849.-
- Travel					-	-	-	-
- Overtime					-	3,500.-	2,000.-	5,500.-
- Miscellaneous					-	-	651.-	651.-
	93,800	-	-	93,800	22,753.95	36,595.05	2,651.-	62,000.-
7.604. Insurance								
- Accident Insurance						3,200.-		3,200.-
- Sickness Insurance/ Pension Fund					200.20		599.80	800.-
	6,300	-	-	6,300	200.20	3,200.-	599.80	4,000.-
TOTAL, Subhead I	803,800	-	-	803,800	221,123.05	392,787.70	14,089.25	628,000.-

1) Budget, including additional credits, approved by the 20th Session of the Administrative Council, 1965.

Subheads and items	Budget including additional credits[1]	Transfer of credits: item to item	Transfer of credits: subhead to subhead	Total credits available	Actual expenditure	Commitment to expenditure	Estimated expenditure	Total estimated expenditure
II. Premises and equipment								
7.605. Premises, furniture, machines								
- rent, Maison des Congrès					-	68,200.-	6,200.-	74,400.-
- installation costs					263.55	1,436.45	-	1,700.-
- hire of furniture and machines					2,800.-	7,700.-	-	10.500.-
- upkeep and repair of machines					-	-	500.-	500.-
- electronic computer					-	-	-	-
- miscellaneous					214.-	-	686.-	900.-
	74,000.-	+14.000.-	-	88.000.-	3,277.55	77,336.45	7,386.-	88,000.-
7.606. Document production								
- paper					)			
- stencils					)15,145.70	4,200.-	4,000.-	23,345.70
- ink					)			
- offset workshop					7,210.80	-	6,000.-	13,210.80
- printing, charts, miscellaneous					-	-	15,443.50	15,443.50
	72,000.-	-14,000.-	-	58.000.-	22,356.50	4,200.-	25,443.50	52,000.-
7.607. Office supplies and overheads								
- office supplies					5,194.15	-	5,000.-	10,194.15
- removal expenses					1,220.-	-	1,500.-	2,720.-
- local transport					1,089.90	600.-	900.-	2,589.90
- postage					260.90	-	3,000.-	3,260.90
- telephone calls and telegrams					261.90	-	2,000.-	2,261.90
- guide, badges, etc.					180.-	-	-	180.-
- miscellaneous					1,237.50	-	555.65	1,793.15
	29.000.-	-	-	29.000.-	9,444.35	600.-	12,955.65	23.000.-
7.608. Simultaneous interpretation and other sound equipment								
- hire of equipment								
- magnetic tapes, etc.								
	1,000.-	-	-	1,000.-	-	-	1,000.-	1,000.-

Subheads and items	Budget including additional credits[1]	Transfer of credits: item to item	Transfer of credits: subhead to subhead	Total credits available	Actual expenditure	Commitment to expenditure	Estimated expenditure	Total estimated expenditure
7.609. Unforeseen	5,000	-	-	5,000	3.50	-	996.50	1,000.-
TOTAL, SUBHEAD II	181,000	-	-	181,000	35,081.90	82,136.45	47,781.65	165,000.-
III. Preparatory work								
7.610 I.F.R.B. preparatory work								
- Staff					14,045.10	-	-	14,045.10
- Equipment					8,066.05	-	-	8,066.05
- Mission expenses					10,359.24	-	-	10,359.24
- Postage, telephone calls, telegrams					12,721.75	-	7.86	12,729.61
	45,200	-	-	45,200	45,192.14	-	7.86	45,200.-
TOTAL, SECTION 7.6 AERONAUTICAL CONFERENCE	1,030,000	-	-	1,030,000	301,397.09	474,924.15	61,878.76	838,200.-
Margin compared with the budget								191,800.-