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FINAL ACTS

OF THE
WORLD ADMINISTRATIVE RADIO CONFERENCE
TO DEAL WITH MATTERS RELATING TO THE
MARITIME MOBILE SERVICE

GENEVA, 1967



Published by the
International Telecommunication Union
GENEVA

NOTE DU SECRÉTARIAT GÉNÉRAL

Le Président de la Conférence administrative mondiale des radiocommunications chargée de traiter de questions concernant le service mobile maritime (Genève, 1967) et un certain nombre de pays ont signalé une contradiction existant entre les dispositions de la Résolution N° MAR 12, celles de la Résolution N° MAR 10 et celles de l'Appendice 15 au Règlement des radiocommunications. A leur avis, il aurait été préférable, dans l'Annexe 1 à la Résolution N° MAR 12, de rédiger le texte sous *1^{re} étape* comme suit : « abandon par les stations des navires à faible trafic des fréquences de travail occupant les voies 84 à 98 dans les bandes des 4, 6, 8, 12 et 16 MHz et les voies 41 à 50 dans la bande des 22 MHz ».

(Voir à ce sujet la Lettre-circulaire N° 1 (5029/65/R) du 22 janvier 1968).



SECRÉTARIAT GÉNÉRAL

UNION INTERNATIONALE
DES TÉLÉCOMMUNICATIONS

ADRESSE TÉLÉGRAPHIQUE : BURINTERNA GENÈVE
TÉLÉPHONE 34 70 00
34 80 00

Référence à rappeler dans la réponse : } Circular-letter No.1
When replying, please quote : }
Indique en la respuesta esta referencia : } 5029/65/R

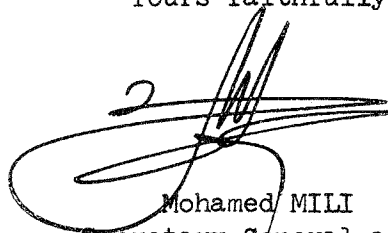
GENÈVE, 22 January 1968
PLACE DES NATIONS

Subject : Final Acts of the World Administrative
Radio Conference to deal with matters
relating to the Maritime Mobile Service
(Geneva, 1967).

Dear Sir,

I have the honour to draw your attention to the attached
letter which I have received from Mr. R.M. Billington, who was
Chairman of the Maritime Conference.

Yours faithfully,



Mohamed MILI
Secretary-General a.i.

Annex : 1

Prière d'adresser toute correspondance officielle à
Please address all official correspondence to
Toda correspondencia oficial debe dirigirse a

Monsieur le Secrétaire général
Union internationale des télécommunications
1211 GENÈVE 20
Suisse - Switzerland - Suiza



GENERAL POST OFFICE
RADIO SERVICES DEPARTMENT

London, 20th December 1967

The Secretary-General
International Telecommunication
Union,
Geneva,
Switzerland

Dear Sir,

Final Acts of the Maritime Conference 1967

I have received a letter from the Danish Administration in my capacity as Chairman of the Conference, drawing my attention to a discrepancy in the Final Acts of the World Administrative Radio Conference to deal with matters relating to the maritime mobile service, which concluded its deliberations on 3rd November 1967.

The discrepancy is between Appendix 15 and Resolution MAR 12, Annex 1. In Resolution MAR 12, Annex 1, under Step 1 it reads :- "vacate low traffic ship working channels 85-98". The 84 channels for low traffic ships in the new Appendix 15 (4-16 Mc/s) were created by taking the 83 lowest channels from Section A of Appendix 15 (Geneva 1959) and adding a new channel at the low frequency end. The low traffic ship working frequencies to be vacated are consequently channels 84-98 (not 85-98) for the bands up to and including 16 Mc/s and for the 22 Mc/s bands the channels to be vacated will be 41-50. In my opinion the Conference intended that Step 1 of Annex 1 to Resolution MAR 12 should bring the frequency usage into conformity with the new Appendix 15. This is supported by the wording of Resolution MAR 10, 'resolves 2' which states "that low traffic ships will discontinue the use of frequencies above 4229 kc/s, 6343.5 kc/s, 8458 kc/s, 12687 kc/s, 16916 kc/s and 22370 kc/s as soon as practicable and in any event not later than 1st February 1970".

It would seem that this error arises from the USA proposal contained in Document No. 281, Annex A (page 3) and was carried into the Final Acts of the Conference without being detected due to the great pressure delegates were working under to complete the work within the time-scale allowed for the Conference. I agree with the Danish Administration that Step 1 in Annex 1 of Resolution MAR 12 requires amendment. However, the Final Acts must be considered final when they have been approved at the second reading in Plenary Meeting (see No. 763 of the Convention) and it would, therefore, not be in order to amend Annex 1 of Resolution MAR 12 to bring it into line with Appendix 15 and Resolution MAR 10. Nevertheless, as this discrepancy will only affect Administrations who will be concerned with clearing the channels and re-allocating them, it is necessary that they should be informed of this discrepancy.

I would be glad if you would therefore circulate this letter to all Administrations so that they may take note of this discrepancy when implementing the decisions of the Conference.

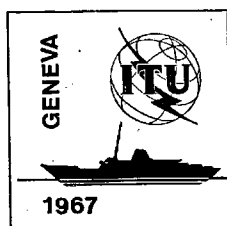
Yours faithfully,

(Sign. :) R.M. BILLINGTON

FINAL ACTS

OF THE
WORLD ADMINISTRATIVE RADIO CONFERENCE
TO DEAL WITH MATTERS RELATING TO THE
MARITIME MOBILE SERVICE

GENEVA, 1967



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ABBREVIATIONS

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

Symbol	Meaning
MOD	Modification
SUP	Suppression
ADD	Addition

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

(MOD)

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Geneva, 1967

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**PARTIAL REVISION
OF THE RADIO REGULATIONS
GENEVA, 1959**

In Resolution No. 20 adopted by the Plenipotentiary Conference, Montreux, 1965, it was decided that a World Administrative Radio Conference to deal with matters relating to the maritime mobile service should be held in Geneva in 1967, and the Administrative Council was invited to draw up the detailed agenda for this Conference and to fix the opening date and the duration thereof at its 1966 annual session. During its 21st Session (1966), the Administrative Council, with the concurrence of a majority of the Members of the Union, adopted Resolution No. 590 which determined the Agenda of the Conference and decided that a World Administrative Radio Conference should be convened in Geneva on 18 September 1967.

* * *

The World Administrative Radio Conference to deal with matters relating to the maritime mobile service accordingly convened on the appointed date, and in accordance with the provisions of Nos. 52 and 54 of the Convention, Montreux, 1965, considered and revised the relevant provisions of the Radio Regulations and of the Additional Radio Regulations, Geneva, 1959. Particulars of the revisions of the Radio Regulations are given in Annexes 1 to 37 hereto.

The revised provisions of the Radio Regulations, Geneva, 1959, shall form an integral part of the Radio Regulations which are annexed to the International Telecommunication Convention. They shall come into force on 1 April 1969 upon which date the provisions of the Radio Regulations, Geneva, 1959, which are cancelled or modified by these revisions shall be abrogated.

* * *

The delegates signing this revision of the Radio Regulations, Geneva, 1959, hereby declare that, should an administration make reservations concern-



ing the application of one or more of the revised provisions of the Radio Regulations, Geneva, 1959, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration.

* * *

Members and Associate Members of the Union shall inform the Secretary-General of their approval of the revision of the Radio Regulations, Geneva, 1959, by the World Administrative Radio Conference to deal with matters relating to the maritime mobile service, Geneva, 1967. The Secretary-General will inform Members and Associate Members of the Union regarding receipt of such notifications of approval as they are received.

In witness whereof the delegates of the Members of the Union represented at the World Administrative Radio Conference to deal with matters relating to the maritime mobile service, Geneva, 1967, have signed in the names of their respective countries this revision of the Radio Regulations, Geneva, 1959, in a single copy which will remain in the archives of the International Telecommunication Union and of which a certified copy will be delivered to each Member and Associate Member of the Union.

Done at Geneva, 3 November, 1967.

Pour l'Algérie (République Algérienne Démocratique et Populaire):

Aouabed

A. Hamadou

Harbi

MOHAMED AOUABED
AHCENE HAMADOU
MOHAMED HARBI

Pour la République Argentine:

Aldo Irrera

Antonio Darino
Horacio
Ferrera

ALDO SANTIAGO IRRERA
ANTONIO DARINO
HORACIO FRANCISCO FERRER
GUSTAVO ALBERTO URRUTIA

Pour le Commonwealth de l'Australie:

Campbell

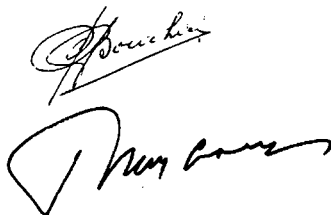
J. D. CAMPBELL

Pour l'Autriche:



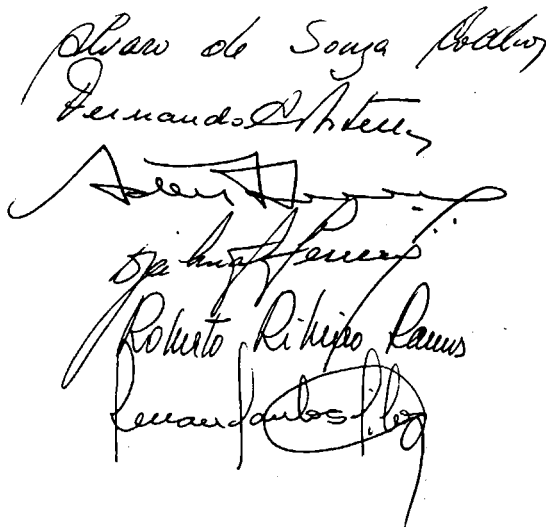
H. PANGRATZ

Pour la Belgique:



PIERRE CHARLES MARIE BOUCHIEF
ROBERT VANCRAEYNST

Pour le Brésil:



ALVARO DE SOUZA COELHO
FERNANDO COTTA PORTELLA
ARTUR DE F. TORRES DE MELO
DJALMA S. FERREIRA
ROBERTO RIBEIRO RAMOS
RENAN DOS SANTOS SILVA

Pour la République Populaire de Bulgarie:



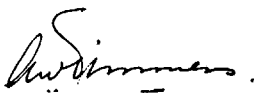
NICOLAY STEPHANOV

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J. JIPGUEP

Pour le Canada:



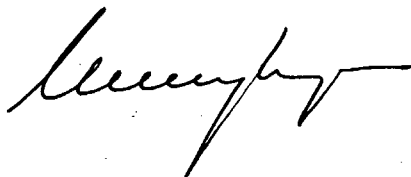
A. G. W. TIMMERS

Pour Ceylan:



F. V. VERNON WATSON

Pour le Chili:



RAMON ARAGAY

Pour la Chine:

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Peter Bei-TeH	裴德德
Timothy L. Wang	王良標
An-Kang Cheng	鄭安康
W. L. Wu	鄧偉烈

PAONAN CHENG
PETER BEI-TEH CHANG
TIMOTHY L. WANG
AN-KANG CHENG
WILLIAM W. L. WU

Pour la République de Chypre:

R. Michaelides

A. E. Embedoklis

R. M. MICHAELIDES
A. E. EMBEDOKLIS

Pour la République de Colombie:

Antonio Oviedo

Jose Villamizar H.
Tte de Navio

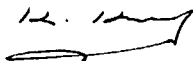
ANTONIO OVIEDO
JOSE ANTONIO VILLAMIZAR H.

Pour la République de Corée:

최준석 J. S. Choy
조재문 J. M. Cho

JOON SHIK CHOY
JAE MOON CHO

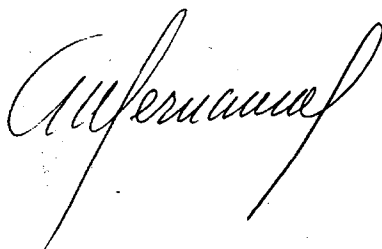
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PIERRE KOPOIN

Pour Cuba:





JOËL RAURELL VIDAL
LUIS SOLÁ VILA
WIGBERTO HERNANDEZ DOMINGUEZ

Pour le Danemark:

Børge Nielsen

Poul Kr. Olesen

A. Lindblad

P. V. Larsen

BØRGE NIELSEN
POUL KR. OLESEN
A. LINDBLAD
P. V. LARSEN

Pour l'Ensemble des Territoires représentés par l'Office français des
postes et télécommunications d'Outre-Mer:



JEAN CONSTANTIN

Pour l'Espagne:

F. Benito
J. Martín
Rogelio Masip
José M. M. Villarejo
Francisco Jiménez Eusebio

FERNANDO BENITO
 VALERIANO MARTÍN
 ROGELIO MASIP
 JOSÉ M. M. VILLAREJO
 FRANCISCO JIMÉNEZ EUSEBIO

Pour les Etats-Unis d'Amérique:

Robert T. Bartley
Gordon L. Huffcutt
Paul D. Miles

ROBERT T. BARTLEY
 GORDON L. HUFFCUTT
 PAUL D. MILES

Pour l'Ethiopie:

Tesfatsion
Sebhatu
Hailu G. Marian

TESFATSION SEBHATU
 HAILU G. MARIAM

Pour la Finlande:

T. Kytöniemi
Arvi Sinkkonen

T. KYTÖNIEMI
 ARVI SINKKONEN

Pour la France:

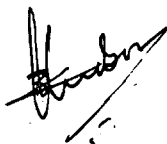
Yves Place
Jean Bes

A. Chassignol

YVES PLACE
 JEAN BES ALBERT CHASSIGNOL

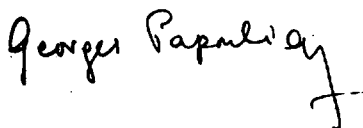
Pour le Ghana:

K. B. Hudson



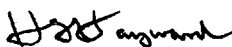
KWEKY B. HUDSON

Pour la Grèce:



GEORGES PAPOULIAS

Pour la Guyane:



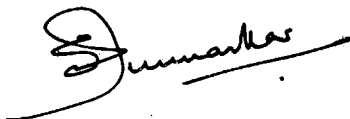
H. L. HAYWARD

Pour la République Populaire Hongroise:

A handwritten signature in cursive script, appearing to read 'Horn', followed by a horizontal line.

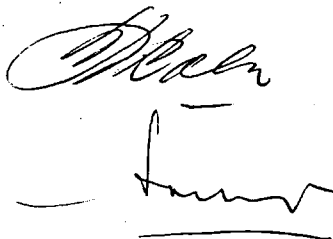
DEZSŐ HORN

Pour la République de l'Inde:

A handwritten signature in cursive script, appearing to read 'V. V. Rao', followed by a horizontal line. Below the line, the date '3. XI. 67' is written.A handwritten signature in cursive script, appearing to read 'S. V. Junnarkar', followed by a horizontal line.

V. V. RAO
S. V. JUNNARKAR

Pour la République d'Indonésie:



The image shows two handwritten signatures. The top signature is in cursive and appears to be 'E. J. S. Lahay'. The bottom signature is also in cursive and appears to be 'R. Soekarnjono'.

E. J. S. LAHAY
R. SOEKARJONO

Pour l'Irlande:



The image shows a handwritten signature in cursive that reads 'J. Malone'.

J. MALONE

Pour l'Islande:



The image shows a handwritten signature in cursive that reads 'S. Thorkelsson'.

S. THORKELSSON

Pour l'Etat d'Israël:

y. Fleminger f.no.

YIRMIYAHU FLEMINGER

Pour l'Italie:

Angelo Petti

ANGELO PETTI

Pour la Jamaïque:

Kenneth B. Scott

K. B. Scott

KENNETH B. SCOTT

Pour le Japon:

大内 三郎 S. Ouchi

二木 實 M. Niki

葛西 義雄 Y. Kasai

S. OUCHI
M. NIKI
Y. KASAI

Pour le Royaume Hachémite de Jordanie:

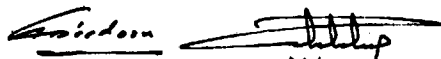
عن الملك الحسين بن عبد الله

Ahmed A. Al-Sáadoon

Signature

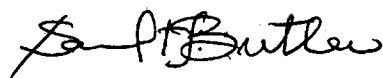
AHMED A. AL-SÁADOON

Pour l'Etat de Koweït:

من دولة الكويت


AHMED A. AL-SÁADOON

Pour la République du Libéria:



SAMUEL H. BUTLER

Pour la Malaisie:



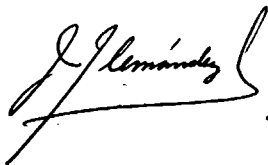
K. P. RAMANATHAN MENON

Pour Malte:



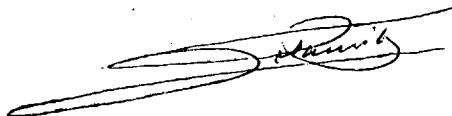
JOSEPH V. GALEA

Pour le Mexique:



J. J. HERNÁNDEZ G.

Pour Monaco:



CESAR CHARLES SOLAMITO

Pour la Norvège:

P. Mortensen

Odd J. Sandvei

John Ragnar Veastad

K. Hammerstrøm

Arne Bøe

PER MORTENSEN
ODD J. SANDVEI
JOHN RAGNAR VEASTAD
K. HAMMERSTRØM
ARNE BØE

Pour la Nouvelle-Zélande:

Derek C. Rose

P. Douglas Scott

DEREK C. ROSE
P. D. SCOTT

Pour le Pakistan:

S. N. Rahim
Akbar Hussain Khan
lt. Col.

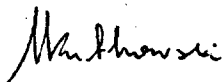
S. N. RAHIM
 AKBAR HUSSAIN KHAN

Pour le Royaume des Pays-Bas:

V. R. Y. Winkelmann
P. E. Willems

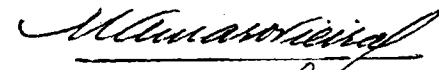

V. R. Y. WINKELMAN
 P. E. WILLEMS

Pour la République Populaire de Pologne:





JERZY RUTKOWSKI

Pour le Portugal:

M. AMARO VIEIRA
CARLOS ALBERTO DE OLIVEIRA
E LEMOS

Pour les Provinces portugaises d'Outre-Mer:

M. AMARO VIEIRA
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Pour la République Fédérale d'Allemagne:

B. Arens W. Kronjaeger

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V. Niculescu
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Pour le Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, les
Iles Anglo-Normandes et l'Ile de Man:

R. M. Billington

P. W. F. Fryer
J. L. Creighton
S. G. Hicks

R. M. BILLINGTON
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J. L. CREIGHTON
S. G. HICKS

Pour la République du Sénégal:

P. KoPIN

PIERRE KOPOIN

Pour la République de Singapour:

Seng Kong Wan

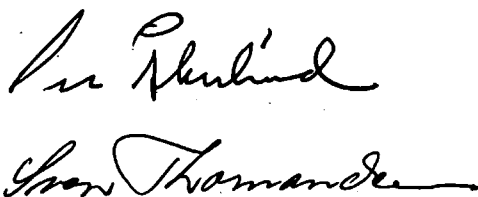
SENG KONG WAN

Pour la République Sudafricaine:



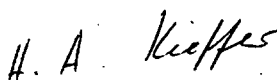
WILLIAM LENNOX BROWNE

Pour la Suède:



PER V. ÅKERLIND
SVEN E. THORNANDER

Pour la Confédération Suisse:



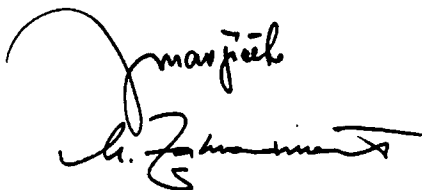
H. A. KIEFFER

Pour la République du Tchad:



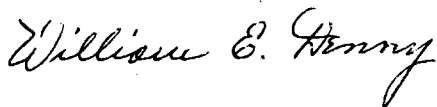
J. JIPGUEP

Pour la République Socialiste Tchécoslovaque:



JAROSLAV MARŠÍČEK
MILAN ZAHRADNÍČEK

Pour les Territoires des Etats-Unis d'Amérique:



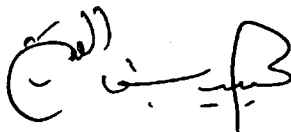
WILLIAM E. DENNY

Pour la République Togolaise:



JEAN CONSTANTIN

Pour la Tunisie:



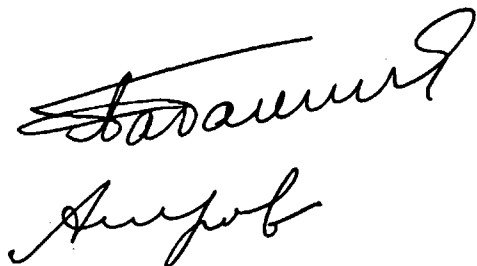
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Pour la Turquie:



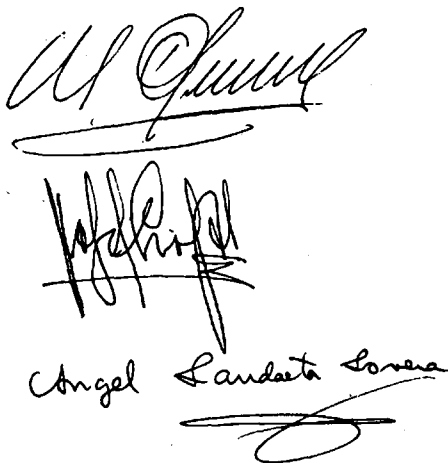

O. GÜLTEKİN GEBİZLİ
Mme. ESEN ATLI

Pour l'Union des Républiques Socialistes Soviétiques:



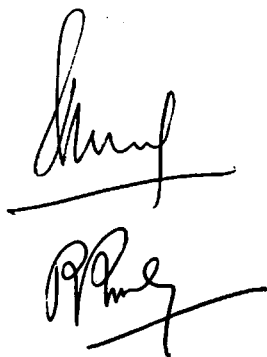
ASHOT BADALOV
JOURI ATSEROV

Pour la République de Venezuela:



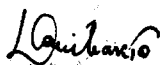
MARIO DELMORAL
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Pour la République du Viet-Nam:



BACH VAN THAM
PHAM VAN TRINH

Pour la République Socialiste Fédérative de Yougoslavie:



MAKSO DAKIĆ

ANNEX 1

Revision of Article 1 of the Radio Regulations

Article 1 of the Radio Regulations shall be amended as follows:

Section II. Radio Systems, Services and Stations

Replace Regulation No. 37 by the following new text:

MOD 37 *Port Operations Service:* A maritime mobile service in or near a port, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons. Messages which are of a public correspondence nature shall be excluded.

After Regulation No. 38, add the following new Regulation:

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

After Regulation No. 68, add the following new Regulation:

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

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ANNEX 2

Revision of Article 5 of the Radio Regulations

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

Section IV. Table of Frequency Allocations — 10 kc/s to 40 Gc/s

Replace Regulations Nos. 158 and 167 by the following new texts:

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

MOD 167 Only classes A1 or F1, A4 or F4 emissions are authorized in the band 90-160 kc/s for stations of the fixed and maritime mobile services. Exceptionally, class A7J emissions is also authorized in the band 90-160 kc/s for stations of the maritime mobile service.

Delete Regulation No 171.

Replace Regulations Nos. 172 and 197 by the following new texts:

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

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

ADD 197.1

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

*Replace Regulation Nos. 199, 200, 201 and 287
by the following new texts:*

- MOD 199** In India, the band 1 800-2 000 kc/s is allocated on a permitted basis to the aeronautical mobile service.¹
- MOD 200** In Region 2, except in Greenland, coast stations and ship stations using radiotelephony shall be limited to class A3A or A3J emissions and to a peak envelope power not exceeding 1 kW. Preferably, the following carrier frequencies should be used: 2 065-0, 2 079-0, 2 082-5, 2 086-0, 2 093-0, 2 096-5, 2 100-0, 2 103-5 kc/s.
- MOD 201** The frequency 2 182 kc/s is the international distress and calling frequency for radiotelephony. The conditions for the use of the band 2 170- 2 194 kc/s are prescribed in Article 35.
- MOD 287** The frequency 156-8 Mc/s is the international safety and calling frequency for the maritime mobile VHF radiotelephone service. Administrations shall ensure that a guard-band on each side of the frequency 156-8 Mc/s is provided. The conditions for the use of this frequency are contained in Article 35.
In the bands 156-025-157-425 Mc/s, 160-625-160-975 Mc/s and 161-475-162-025 Mc/s, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by that administration (see Article 35).
Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiotelephone service.
However, the frequency bands in which priority is given to the maritime mobile service may be used for radiotelephone communications on inland waterways, subject to agreements between interested and affected administrations and taking into account current frequency usage and existing agreements.

ADD 199.1

¹ In India, the stations of the maritime mobile service are authorized to use this band subject to agreements to be reached with administrations whose services, operating in accordance with the Table, may be affected.

ANNEX 3

Revision of Article 7 of the Radio Regulations

Article 7 of the Radio Regulations shall be amended as follows:

Section IV. Maritime Mobile Service

Before Regulation No. 438, add the following new Regulation:

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

After Regulation No. 438, add the following new Regulation:

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

Delete Regulation No. 441.

Replace Regulations Nos. 442 to 444 by the following new texts:

MOD 442 § 11. (1) In Region 1, frequencies assigned to stations of the maritime mobile service operating in the bands between 1 605 and 3 800 kc/s

(see Article 5) should, whenever possible, be in accordance with the following subdivision:

- 1 605 - 1 625 kc/s: Radiotelegraphy exclusively.
- 1 625 - 1 670 kc/s: Low power radiotelephony.
- 1 670 - 1 950 kc/s: Coast stations.
- 1 950 - 2 053 kc/s: Ship stations working to coast stations.
- 2 053 - 2 065 kc/s: Intership working.
- 2 065 - 2 170 kc/s: Ship stations working to coast stations.
- 2 170 - 2 173.5 kc/s: Coast stations calling ship stations (including selective calling) and, exceptionally, coast stations transmitting safety messages.
- 2 173.5 - 2 190.5 kc/s: *Guard-band for the distress and calling frequency 2 182 kc/s.*
- 2 190.5 - 2 194 kc/s: Ship stations calling coast stations.
- 2 194 - 2 440 kc/s: Intership working.
- 2 440 - 2 578 kc/s: Ship stations working to coast stations.
- 2 578 - 2 850 kc/s: Coast stations.
- 3 155 - 3 340 kc/s: Ship stations working to coast stations.
- 3 340 - 3 400 kc/s: Intership working.
- 3 500 - 3 600 kc/s: Intership working.
- 3 600 - 3 800 kc/s: Coast stations.

MOD 443

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

- 7 kc/s when two adjacent frequencies are used for double sideband radiotelephony;
- 3 kc/s when two adjacent frequencies are used for radiotelegraphy;

- 5 kc/s when one frequency is used for double sideband radiotelephony and the adjacent frequency is used for radiotelegraphy.

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

After Regulation No. 444, add the following new Regulations:

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

ADD 444B (5) However, in the case of the intership bands, the carrier frequency of a station operating in the lower half of the double sideband channel is located only 2.5 kc/s below the centre frequency of that channel.

Replace Regulation No. 445 by the following new text:

MOD 445 § 11A. In Regions 2 and 3, the carrier frequencies 2 635 kc/s (assigned frequency 2 636.4 kc/s) and 2 638 kc/s (assigned frequency 2 639.4 kc/s) are used as single sideband intership radiotelephony working frequencies in addition to the frequencies prescribed for common use in certain services. The carrier frequency 2 635 kc/s should be used with class A3A and A3J emissions only. The carrier frequency 2 638 kc/s may be used with class A3, A3H, A3A and A3J emissions. However, after 1 January 1982, class A3 and A3H emissions are no longer authorized. In Region 3 these frequencies are protected by a guard-band between 2 634 and 2 642 kc/s.

After Regulation No. 445, add the following new Regulation:

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

Replace Regulations Nos. 447 to 449 by the following new texts:

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

4 063 - 4 139.5 kc/s
6 200 - 6 210.4 kc/s
8 195 - 8 281.2 kc/s
12 330 - 12 421 kc/s
16 460 - 16 565 kc/s
22 000 - 22 094.5 kc/s

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

4 361 - 4 438 kc/s
6 514 - 6 525 kc/s
8 728.5 - 8 815 kc/s
13 107.5 - 13 200 kc/s
17 255 - 17 360 kc/s
22 624.5 - 22 720 kc/s

MOD 449 *c) Ship stations and coast stations, telephony, simplex operation (single-frequency channels)*

4 139.5 - 4 142.5 kc/s
6 210.4 - 6 216.5 kc/s
8 281.2 - 8 288 kc/s
12 421 - 12 431.5 kc/s
16 565 - 16 576 kc/s
22 094.5 - 22 112 kc/s

Delete Regulation No. 450.

Replace Regulation No. 451 by the following new text:

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

4 142.5 - 4 162.5 kc/s
6 216.5 - 6 244.5 kc/s
8 288 - 8 328 kc/s
12 431.5 - 12 479.5 kc/s
16 576 - 16 636.5 kc/s
22 112 - 22 160.5 kc/s

After Regulation No. 451, add the following new Regulations:

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

4 162.5 - 4 166 kc/s
6 244.5 - 6 248 kc/s
8 328 - 8 331.5 kc/s
12 479.5 - 12 483 kc/s
16 636.5 - 16 640 kc/s
22 160.5 - 22 164 kc/s

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

4 166 - 4 172.25 kc/s
6 248 - 6 258.25 kc/s
8 331.5 - 8 341.75 kc/s
12 483 - 12 503.25 kc/s
16 640 - 16 660.5 kc/s
22 164 - 22 184.5 kc/s

Replace Regulation No. 452 by the following new text:

MOD 452 (h) *Ship stations, telegraphy*

4 172.25 - 4 231 kc/s
 6 258.25 - 6 345.5 kc/s
 8 341.75 - 8 459.5 kc/s
 12 503.25 - 12 689 kc/s
 16 660.5 - 16 917.5 kc/s
 22 184.5 - 22 374 kc/s
 25 070 - 25 110 kc/s

Delete Regulation No. 452.1.

Replace Regulation No. 453 by the following new text:

MOD 453 (i) *Coast stations, wide-band and manual telegraphy, facsimile, special and data transmission systems and direct-printing telegraph systems*

4 231 - 4 361 kc/s
 6 345.5 - 6 514 kc/s
 8 459.5 - 8 728.5 kc/s
 12 689 - 13 107.5 kc/s
 16 917.5 - 17 255 kc/s
 22 374 - 22 624.5 kc/s

After Regulation No. 453, add the following new Regulation:

ADD 453A (1A) Frequencies in the bands 25 010-25 070 kc/s, 25 110-25 600 kc/s and 26 100-27 500 kc/s may be assigned to coast stations.

Delete Regulations Nos. 453.1, 454 and 455.

Replace Regulations Nos. 456 and 457 by the following new texts:

MOD 456 § 13. (1) Appendix 17 shows the radiotelephone channels of the maritime mobile service in the frequency bands listed in Nos. 447, 448 and 449.

MOD 457 (2) Appendix 25 contains the frequency allotment plan for coast radiotelephone stations in the high frequency bands (see, however, Resolution No. MAR 11).

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ANNEX 4

Revision of Article 9 of the Radio Regulations

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

Section III. Recording of Dates and Findings in the Master Register

Replace Regulation No. 573 by the following new text:

MOD 573 § 26. (1) *Frequency Bands:*

10 - 2 850 kc/s
3 155 - 3 400 kc/s
3 500 - 3 900 kc/s in Region 1
3 500 - 4 000 kc/s in Region 2
3 500 - 3 950 kc/s in Region 3
4 231 - 4 361 kc/s
6 345.5 - 6 514 kc/s
8 459.5 - 8 728.5 kc/s
12 689 - 13 107.5 kc/s
16 917.5 - 17 255 kc/s
22 374 - 22 624.5 kc/s

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ANNEX 5

Revision of Article 12 of the Radio Regulations

Article 12 of the Radio Regulations shall be amended as follows:

Replace Regulation No. 677 by the following new text:

MOD 677 § 8. The use of class B emissions is forbidden in all stations.

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ANNEX 6

Revision of Article 19 of the Radio Regulations

Article 19 of the Radio Regulations shall be amended as follows:

Section I. General Provisions

Replace Regulations Nos. 736 and 737 by the following new texts:

MOD 736 (2) However, the requirements of identification need not apply to:

- survival craft stations when transmitting distress signals automatically,
- emergency position-indicating radiobeacons.

MOD 737 § 2. A station shall be identified either by a call sign or other recognized means of identification. Such recognized means of identification may be one or more of the following necessary for complete identification: name of station, location of station, operating agency, official registration mark, flight identification number, ship station selective call number or signal, coast station selective call identification number or signal, characteristic signal, characteristic of emission or other clearly distinguishing features readily recognized internationally.

Section II. Allocation of International Series and Assignment of Call Signs

After Regulation No. 749, add the following new Regulation:

ADD 749A § 10A. As an interim procedure, the Secretary-General shall be responsible for supplying series of selective call numbers or signals (see No. 783H) at the request of the administrations concerned

Replace Regulations Nos. 750 and 751 by the following new texts:

MOD 750 § 11. (1) Each country shall choose the call signs and, if the selective calling system used is in accordance with Appendix 20C, the ship station selective call number and the coast station identification number of its stations from the international series allocated or supplied to it; and shall, in accordance with Article 20, notify this information to the Secretary-General together with the information which is to appear in Lists I to VI inclusive. These notifications do not include call signs assigned to amateur and experimental stations.

MOD 751 (2) The Secretary-General shall ensure that the same call sign, the same selective call number or the same identification number is not assigned more than once and that call signs which might be confused with distress signals, or with other signals of the same nature, are not assigned.

Section III. Formation of Call Signs

Delete Regulation No. 760.

After Regulation No. 768, add the following new Regulation:

ADD *Emergency position-indicating radiobeacon stations*

ADD 768A § 18A. — the Morse letter B and/or the call sign of the parent ship to which the radiobeacon belongs.

Section IV. Identification of Stations using Radiotelephony

Replace Regulation No. 776 by the following new text:

MOD 776

(2) *Ship stations*

- a call sign (see Nos. 765 and 766); or
- the official name of the ship preceded, if necessary, by the name of the owner on condition that there is no possible confusion with distress, urgency and safety signals; or
- its selective call number or signal.

After Regulation No. 777, add the following new Regulation:

ADD 777A

(4) *Emergency position-indicating radiobeacon stations:*

When speech transmission is used (see No. 1476G)

- the name and/or the call sign of the parent ship to which the radiobeacon belongs.

After Section IV, insert the following new Section IVA:

ADD

**Section IVA. Selective Call Numbers
in the Maritime Mobile Service**

ADD 783A § 25A. When stations of the maritime mobile service use selective calling devices in accordance with Appendix 20C, their call numbers shall be assigned by the responsible administrations in accordance with the provisions below.

ADD

*Formation of ship station selective call numbers and coast
station identification numbers*

ADD 783B § 25B. (1) The ten digits from 0 to 9 inclusive shall be used to form selective call numbers.

ADD 783C

(2) However, combinations of numbers commencing with the digits 00 (zero, zero) shall not be used when forming the identification numbers for coast stations.

ADD 783D (3) Ship station selective call numbers and coast station identification numbers in the series are formed as indicated in Nos. 783E, 783F and 783G.

ADD 783E (4) *Coast station identification numbers*
— four digits (see No. 783C).

ADD 783F (5) *Ship station selective call numbers*
— five digits.

ADD 783G (6) *Predetermined groups of ship stations*
— five digits consisting of:
— the same digit repeated five times, or
— two different digits repeated alternately.

ADD *Assignment of ship station selective call numbers and coast station identification numbers*

ADD 783H § 25C. (1) In cases where selective call numbers for ship stations and identification numbers for coast stations are required for use in the maritime mobile service and the selective calling system is in accordance with Appendix 20C, as an interim procedure, the selective call numbers and identification numbers shall be supplied by the Secretary-General on request. Upon notification by an administration of the introduction of selective calling for use in the maritime mobile service:

- selective call numbers for ships will be supplied as required in blocks of 100 (one hundred);
- coast station identification numbers will be supplied in blocks of 10 (ten) to meet actual requirements;
- selective call numbers for selective calling of predetermined groups of ship stations in accordance with No. 783G will be supplied as required as single numbers.

The final procedure shall be determined at a future competent World Administrative Radio Conference.

ADD 783I (2) Each administration shall choose the selective call numbers to be assigned to its ship stations from the blocks of the series supplied to it.

ADD 783J (3) Each administration shall choose the coast station identification numbers to be assigned to its coast stations from the blocks of the series supplied to it.

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ANNEX 7

Revision of Article 20 of the Radio Regulations

Article 20 of the Radio Regulations shall be amended as follows:

Replace Regulations Nos. 805, 806, 809, 815, 824 and 825 by the following new texts:

MOD 805 (IV) *List IV. List of Coast Stations.*

There are annexed to this list a table and a chart showing the zones and hours of service of ships of the second and third categories (see Appendix 12) and a table of inland telegraph rates, limitrophic rates, etc.

MOD 806 (V) *List V. List of Ship Stations.*

This list shall contain particulars of:

- a) ship stations fitted with radiotelegraph installations;
- b) ship stations fitted with radiotelegraph and radiotelephone installations;
- c) ship stations fitted with radiotelephone installations only, which communicate with stations of the maritime mobile service other than those of their own nationality or make international voyages.

This list shall contain a table and a chart showing the zones and hours of service of ships of the second and third categories (see Appendix 12).



MOD 809

a) *List VIIA. Alphabetical List of Call Signs of Stations used by the Maritime Mobile Service (Coast, Ship, Radiotermination and Special Service Stations), Ship Station Selective Call Numbers or Signals and Coast Station Identification Numbers or Signals.*

MOD 815

§ 2. (1) The Secretary-General shall publish the amendments to be made in the documents listed in Nos. 790 to 814 inclusive. Once a month administrations shall inform him, in the form shown for the lists themselves in Appendix 9, of the additions, modifications or deletions to be made in Lists IV, V and VI using for this purpose the appropriate symbols shown in Appendix 10. Furthermore, in order to make the necessary additions, modifications and deletions to Lists I, II, III and VIIIA, he shall use the data provided by the International Frequency Registration Board, obtained from the information received in application of the provisions of Articles 9, 9A and 10. He shall make the requisite amendments to List VII by using the data he has received for Lists I to VI and VIIIA. Lists IV and VI shall be co-ordinated with the information appearing in List I. The Secretary-General shall refer any discrepancies to the administrations concerned.

MOD 824

§ 6. The List of Coast Stations (List IV) shall be republished every two years and kept up to date by recapitulative supplements issued every six months.

MOD 825

§ 7. The List of Ship Stations (List V) shall be republished each year. It shall be kept up to date by means of a half-yearly supplement.

ANNEX 8

Revision of Article 23 of the Radio Regulations

Article 23 of the Radio Regulations shall be amended as follows:

Section II. Classes and Categories of Certificates

After Regulation No. 860, add the following new Regulation:

ADD 860A (3) There is also a radiocommunication operator's general certificate for the maritime mobile service (Resolution No. MAR 16 refers).

Replace Regulations Nos. 861 and 863 by the following new texts:

MOD 861 § 6. (1) The holder of a first or second class radiotelegraph operator's certificate may carry out the radiotelegraph or radiotelephone service of any ship or aircraft station.

MOD 863 (3) The holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any aircraft station, when working on frequencies of the maritime mobile service, provided that:

- the peak envelope power of the transmitter does not exceed 200 watts, or
- the operation of the transmitter requires only the use of simple external switching devices, excluding all manual adjustment of frequency determining elements, with the stability of the frequencies maintained by the transmitter itself within the limits of tolerance specified by Appen-

dix 3, and the peak envelope power of the transmitter does not exceed 1 kilowatt.

After Regulation No. 863, add the following new Regulation:

ADD 863A (3A) However, in the maritime mobile service, the holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any ship station, when working on frequencies of the maritime mobile service, provided that:

- the operation of the transmitter requires only the use of simple external controls, and excludes all manual adjustment of frequency determining elements, with the stability of the frequencies maintained by the transmitter itself within the limits of tolerance specified by Appendix 3, and the peak envelope power of the transmitter does not exceed 1 kilowatt.

Section III. Conditions for the Issue of Operators' Certificates

Replace Regulation No. 903 by the following new text:

MOD 903 (2) For ship radiotelephone stations where the peak envelope power of the transmitter does not exceed 400 watts and for aircraft radiotelephone stations operating on frequencies allocated exclusively to the aeronautical mobile service, each administration may itself fix the conditions for obtaining a restricted radiotelephone operator's certificate, provided that the operation of the transmitter requires only the use of simple external switching devices, excluding all manual adjustment of frequency determining elements, and that the stability of the frequencies is maintained by the transmitter itself within the limits of tolerance specified in Appendix 3. However, in fixing the conditions, administrations shall ensure that the operator

has an adequate knowledge of radiotelephone operation and procedure particularly as far as distress, urgency and safety are concerned. This in no way contravenes the provisions of No. 906.

Section IV. Qualifying Service

Replace Regulations 907 to 909 by the following new texts:

MOD 907 § 17. (1) An operator holding a first or second class radiotelegraph operator's certificate is authorized to embark as chief operator of a ship station of the fourth category (see No. 932).

MOD 908 (2) Before becoming chief operator of a ship station of the second or third category (see Nos. 931 and 931A), an operator holding a first or second class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least six months' experience of which at least three months shall have been on board ship.

MOD 909 (3) Before becoming chief operator of a ship station of the first category (see No. 930), an operator holding a first class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least one year's experience of which at least six months shall have been on board ship.

Delete Regulations Nos. 910 and 911.

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ANNEX 9

Revision of Article 24 of the Radio Regulations

Article 24 of the Radio Regulations shall be amended as follows:

Replace Regulations Nos. 914, 915, 916 and 918 by the following new texts:

- MOD 914** a) ship stations of the first category, except in the case provided for in No. **918**: a chief operator holding a first class radiotelegraph operator's certificate;
- MOD 915** b) ship stations of the second and third categories, except in the case provided for in No. **918**: a chief operator holding a first or second class radiotelegraph operator's certificate;
- MOD 916** c) ship stations of the fourth category, except in the cases provided for in Nos. **917** and **918**: one operator holding a first or a second class radiotelegraph operator's certificate;
- MOD 918** e) ship stations equipped with radiotelephone installation only: one operator holding either a radiotelephone operator's certificate or a radiotelegraph operator's certificate;
-

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ANNEX 10

Revision of Article 25 of the Radio Regulations

Article 25 of the Radio Regulations shall be amended as follows:

Section IV. Ship Stations

Replace Regulations Nos. 929 and 931 by the following new texts:

MOD 929 § 6. (1) For the international public correspondence service, ship stations are divided into four categories:

MOD 931 — Stations of the second category: these stations maintain a service for 16 hours a day.

After Regulation No. 931, add the following new Regulation:

ADD 931A — Stations of the third category: these stations maintain a service for 8 hours a day.

Replace Regulations Nos. 932 to 934 by the following new texts:

MOD 932 — Stations of the fourth category: these stations maintain a service the duration of which is either shorter than that of stations of the third category, or is not fixed by these Regulations.

MOD 933 (2) Each administration shall itself determine the rules under which ship stations subject to it are to be placed in one of the above four categories.

MOD 934 § 7. (1) Ship stations of the second and third categories shall provide service at least during the hours fixed by Appendix 12.

After Regulation No. 935, add the following new Regulation:

ADD 935A § 7A. Ship stations of the fourth category are encouraged to provide service as follows:

- in Zone C, defined in Appendix 12: at least during the first half-hour of the second period of service of ships in the third category;
- in Zone D, defined in Appendix 12: at least during the first half-hour of the first period of service of ships in the third category.

Delete Regulations Nos. 936 to 938.

ANNEX 11

Revision of Article 28 of the Radio Regulations

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

Section I. General Provisions

Replace Regulation No. 955 by the following new text:

(MOD) 955 § 1. Mobile stations shall be established in such a way as to conform to the provisions of Chapter II as regards frequencies and classes of emission.

Delete Regulation No. 956.

After Regulation No. 964, add the following new Regulation:

ADD 964A § 8A. Equipment intended for use on narrow-band direct-printing telegraph systems shall conform to the characteristics specified in Appendix 20B.

Section III. Ship Stations using Radiotelegraphy

Delete title after No. 970 and Regulation No. 971.

Replace Regulations Nos. 974 to 976, 978 and 981 by the following new texts:

MOD 974 a) send class A2 or A2H emissions and receive class A2 and A2H emissions with a carrier frequency of 500 kc/s;

- MOD 975 *b)* send, in addition, class A1 and either A2 or A2H emissions on at least two working frequencies;
- MOD 976 *c)* receive, in addition, class A1, A2 and A2H emissions on all the other frequencies necessary for their service.
- MOD 978 § 17. In Region 2, any radiotelegraph station installed on board a ship which uses frequencies in the band 2 089.5-2 092.5 kc/s for call and reply shall be provided with at least one other frequency in the authorized bands between 1 605 and 2 850 kc/s.
- MOD 981 *b)* changes of frequency in transmitting apparatus shall be effected as quickly as practicable, but within fifteen seconds in any event;

Section IV. Ship Stations using Radiotelephony

Replace Regulations Nos. 984 and 985 by the following new texts:

- MOD 984 *a)* send class A3 or A3H emissions with a carrier frequency of 2 182 kc/s and receive class A3 and A3H emissions on a carrier frequency of 2 182 kc/s. However, after 1 January 1982, it is no longer authorized to send class A3 emissions, except for such apparatus as is referred to in No. 987.

MOD 985

b) send, in addition:

1) class A3 or

2) class A3H, A3A and A3J¹

emissions on at least two working frequencies.² However, after 1 January 1982 class A3 and A3H emissions are no longer authorized on working frequencies;

Replace Regulations Nos. 986 and 988 by the following new texts:

MOD 986

c) receive, in addition:

1) class A3 and A3H or

2) class A3, A3H, A3A and A3J

emissions on all other frequencies necessary for their service. However, after 1 January 1982, the ability to receive class A3 and A3H emissions is no longer required.

MOD 988

§ 21. All ship stations equipped with radiotelephony to work in the authorized bands between 156 and 174 Mc/s (see No. 287 and Appendix 18) shall be able to send and receive class F3 emissions (see Resolution No. MAR 14) on:

MOD 985.1

¹ Up to 1 January 1982 administrations may, in certain areas, reduce this requirement to class A3H and A3J emissions on working frequencies.

ADD 985.2

² In certain areas, administrations may reduce this requirement to one working frequency.

Section V. Aircraft Stations

Replace Regulation No. 992 by the following new text:

- MOD 992 § 22. (1) Any aircraft following a maritime course and required by national or international regulations to communicate for safety purposes with stations of the maritime mobile service, shall be capable of transmitting preferably class A2 or A2H and receiving preferably class A2 and A2H emissions on the carrier frequency of 500 kc/s or, on the carrier frequency of 2 182 kc/s, transmitting class A3 or A3H and receiving class A3 and A3H emissions.

Section VI. Survival Craft Stations

Replace Regulations Nos. 995 to 997 by the following new texts:

- MOD 995 — *in the bands between 405 and 535 kc/s*, be able to transmit with a carrier frequency of 500 kc/s, using class A2 or A2H emissions. If a receiver is provided for any of these bands, it shall be able to receive class A2 and A2H emissions on a carrier frequency of 500 kc/s;
- MOD 996 — *in the bands between 1 605 and 2 850 kc/s*, be able to transmit with a carrier frequency of 2 182 kc/s using class A3 or A3H emissions. If a receiver is provided for any of these bands, it shall be able to receive class A3 and A3H emissions on a carrier frequency of 2 182 kc/s;
- MOD 997 — *in the bands between 4 000 and 27 500 kc/s*, be able to transmit with a carrier frequency of 8 364 kc/s using class A2 or A2H emissions. If a receiver is provided for any of these bands, it shall be able to receive class A1, A2 and A2H emissions throughout the band 8 341.75 to 8 728.5 kc/s;
-

ANNEX 12

Addition of a new Article (Article 28A) to the Radio Regulations

The following new Article shall be added to the Radio Regulations after Article 28:

ADD

ARTICLE 28A

**[International Usage of Selective Calling in the
Maritime Mobile Service**

ADD 999A § 1. The characteristics of the sequential single-frequency code international selective calling system shall be in accordance with Appendix 20C.

Method of Calling

ADD 999B § 2. (1) The call shall consist of:

- the selective call number or signal of the ship station called;
- the identification number or signal of the coast station calling.

However, in VHF the number of the channel to be used for the reply and for [traffic may replace the identification number or signal of the coast station calling.

The call shall be transmitted twice.

ADD 999C (2) When a station called does not reply, the call should not normally be repeated until after an interval of at least ten minutes and should not then normally be renewed until after a further interval of thirty minutes.

Reply to Calls

ADD 999D § 3. The reply to calls should be made in accordance with the provisions of

- Nos. 1022 and 1023 when using radiotelegraphy;
- Nos. 1241 to 1253 when using radiotelephony.

Frequencies to be used

ADD 999E § 4. Selective calls should be sent on one or more of the following calling frequencies:

500 kc/s
2 182 kc/s
2 170·5 kc/s¹
4 434·9 kc/s
6 518·6 kc/s
8 802·4 kc/s
13 182·5 kc/s
17 328·5 kc/s
22 699·0 kc/s
156·8 Mc/s

ADD 999E.1 ¹ This frequency will replace 2 182 kc/s for selective calling not later than 1 April 1977.

ANNEX 13

Revision of Article 29 of the Radio Regulations

Article 29 of the Radio Regulations shall be amended as follows:

Section I. General Provisions

Replace Regulations Nos. 1004 and 1005 by the following new texts:

MOD 1004 § 3. (1) In order to facilitate radiocommunications, stations of the mobile service, other than the maritime mobile service, shall use the service abbreviations given in Appendix 13.

MOD 1005 (2) In the maritime mobile service, only the service abbreviations given in Appendix 13A are to be used.

Section II. Preliminary Operations

Delete Regulation No. 1006.

Section III. Calls, Reply to Calls and Signals Preparatory to Traffic

After Regulation No. 1013, add the following new Regulations:

ADD 1013A (3) The procedure described in No. **1013** is not applicable to the maritime mobile service.

ADD 1013AA (4) When selective calling is used in the maritime mobile service, the procedures prescribed in Nos. **999B**, **999C** and **999D** shall be observed.

ADD *Method of Calling in the Maritime Mobile Service Bands between 4 000 kc/s and 27 500 kc/s*

ADD **1013B** § 6A (1) The call consists of:

- the call sign of the station called, not more than three times;
- the word DE;
- the call sign of the calling station, not more than three times;
- the signal — --- — (separation sign);
- the call sign of the station called, once only;
- the letter K.

ADD **1013C** (2) For normal calling, when the requirements of No. **1162** have been met, the call specified in No. **1013B** may be repeated at intervals of not less than one minute for a period not exceeding five minutes and shall not be renewed until after an interval of ten minutes.

ADD **1013D** (3) When, however, the conditions of establishing contact are difficult, the call sign may be transmitted not more than ten times in succession. The call shall consist of:

- the call sign of the station called, not more than ten times;
- the word DE;
- the call sign of the calling station, not more than three times;
- the signal — ---- — (separation sign);
- the call sign of the station called, once only;
- the letter K.

If necessary, this call may be transmitted a second time (see No. **1079**). The call or group of two consecutive calls may be repeated three times at intervals of two minutes; thereafter it shall not be repeated until an interval of ten minutes has elapsed.

ADD 1013E (4) When calling a coast station which has indicated a watch¹ on the special calling frequencies 4 186.5, 6 279.75, 8 373, 12 559.5, 16 746 and 22 262.5 kc/s, ship stations do not apply the calling method contained in Nos. **1013B**, **1013C** and **1013D**. In these circumstances the call consists of:

- the call sign of the station called, not more than once;
- the word DE;
- the call sign of the calling station, not more than once.

This call may be transmitted three times at intervals of one minute; thereafter it shall not be repeated until after an interval of three minutes.

After Regulation No. 1015, add the following new Regulation:

ADD 1015A (3) However, when using direct-printing telegraphy or similar systems, the call may, by prior arrangement, be made on a working frequency in the bands reserved for such systems.

Replace Regulations Nos. 1017 and 1018 by the following new texts:

MOD 1017 (2) When, in the aeronautical mobile service, as an exception to this rule, the call is not followed by an indication of the frequency to be used for the traffic, this indicates:

MOD 1018 a) where the calling station is a land station, that it proposes to use for traffic its normal working frequency shown in the appropriate document;

ADD 1013E.1 ¹ Administrations whose coast stations keep watch on the special calling frequencies provided for the study of the new calling procedure, shall ensure that watch is also maintained on normal calling bands (see No. **1174**) which they have indicated in accordance with No. **1168**.

After Regulation No. 1019, add the following new Regulation:

ADD 1019A (3) When, in the maritime mobile service, as an exception to No. 1016, the call by a coast station is not followed by an indication of the frequency to be used for the traffic, this indicates that the coast station proposes to use for traffic its normal working frequency shown in the List of Coast Stations.

Replace Regulation No. 1023 by the following new text:

MOD 1023 § 11. (1) Except as otherwise provided in these Regulations, for transmitting the reply to calls and to preparatory signals, the station called shall use the frequency on which the calling station keeps watch, unless the calling station has specified a frequency for the reply.

Delete Regulations Nos. 1024 to 1026.

ANNEX 14

Revision of Article 30 of the Radio Regulations

Article 30 of the Radio Regulations shall be amended as follows:

After Regulation No. 1068, add the following new Regulation:

ADD 1068A (2A) However, in the bands between 4 000 and 27 500 kc/s, a coast station may transmit its call sign at intervals, using Type 1 transmission, to enable mobile stations to select the calling band with the most favourable propagation characteristics for reliable communication (see No. **1162**).

Replace Regulations Nos. 1069 to 1071 by the following new texts:

MOD 1069 (3) Coast stations shall transmit their traffic lists on their normal working frequencies in the appropriate bands. This transmission shall be preceded by a general call to all stations (CQ).

MOD 1070 (4) The call to all stations announcing the traffic list may be sent on a calling frequency in the following form:

- CQ, not more than three times;
- the word DE;
- the call sign of the calling station, not more than three times;
- QSW followed by the indication of the working frequency or frequencies on which the traffic list is about to be sent.

In no case may this preamble be repeated.

MOD 1071 (5) The provisions of No. 1070:

After Regulation No. 1071, add the following new Regulation:

ADD 1071A a) are obligatory when 500 kc/s is used;

Replace Regulations Nos. 1072 and 1086 by the following new texts:

(MOD) 1072 b) do not apply when frequencies in the bands between 4 000 and 27 500 kc/s are used.

MOD 1086 (2) The information referred to in Nos. 1083 to 1085, preceded by the abbreviation TR, should be furnished by mobile stations, whenever this seems appropriate, without prior request from the coast station. The provision of this information is authorized only by the master or person responsible for the ship, aircraft or other vehicle carrying the mobile station.

Delete Regulation No. 1087.

ANNEX 15

Revision of Article 32 of the Radio Regulations

Article 32 of the Radio Regulations shall be amended as follows:

Replace the title of Section I by the following:

MOD

Section I. General

After the new title of Section I, add the following new Regulation:

ADD 1094A §1 Whenever the class of emission A2 or A2H is mentioned in the present Regulations for use in the maritime mobile service, the type of transmission shall, except for selective calling purposes, be telegraphy by on-off keying of the modulated emission, to the exclusion of on-off keying of the modulating audio frequencies only.

Delete Regulations Nos. 1095 to 1105 (including the titles of sub-sections A. and B.).

Section II. Bands between 405 and 535 kc/s

Replace Regulations Nos. 1111 and 1113 by the following new texts:

MOD 1111

b) by coast stations to announce the transmission of their traffic lists under the conditions provided for in Nos. 1070, 1071 and 1071A.

- MOD 1113** (5) In order to facilitate the reception of distress calls, other transmissions on the frequency 500 kc/s shall be reduced to a minimum, and in any case shall not exceed one minute.

After Regulation No. 1113, add the following new Regulations:

- ADD 1113A** (6) Before transmitting on 500 kc/s, stations in the mobile service must listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see No. **1007**).

- ADD 1113B** (7) The provisions of No. **1113A** do not apply to stations in distress.

After Regulation No. 1115, add the following new Regulations:

- ADD 1115A** § 7A (1) A ship station calling a coast station shall, wherever possible and particularly in regions of heavy traffic, indicate to the coast station that it is ready to receive on the working frequency of that station.

- ADD 1115B** (2) The ship station should make sure beforehand that this frequency is not already being used by the coast station.

Replace Regulations Nos. 1116, 1117, 1121 and 1122 by the following new texts:

- MOD 1116** § 8. (1) The frequency for replying to a call sent on the general calling frequency (see No. **1114**) shall be as follows:

- either 500 kc/s,
- or the frequency specified by the calling station (see Nos. **1023** and **1115A**).

- MOD 1117** (2) In regions of heavy traffic, coast stations may answer calls made by ship stations of their own nationality in accordance with special arrangements made by the administration concerned (see No. **1023**).

MOD 1121 (4) In regions of heavy traffic, coast stations and ship stations should use class A1 emission on their working frequencies.

MOD 1122 § 10. As an exception to the provisions of Nos. **1107, 1109, 1110** and **1111** and on condition that signals of distress, urgency and safety, and calls and replies are not interfered with, 500 kc/s may be used outside regions of heavy traffic for direction-finding but with discretion.

Delete Regulation No. 1122.1.

Replace Regulations Nos. 1123 to 1125 and 1134 by the following new texts:

MOD 1123 § 11. (1) Ship stations operating in the authorized bands between 405 and 535 kc/s shall use working frequencies chosen from the following: 425, 454, 468, 480 and 512 kc/s, except as permitted by No. **418**.

MOD 1124 (2) Coast stations are prohibited from transmitting on the working frequencies designated for the use of ship stations on a world-wide basis.

MOD 1125 (3) The frequency 512 kc/s may be used by ship stations as a supplementary calling frequency when 500 kc/s is being used for distress.

MOD 1134 § 13. (1) Stations of the maritime mobile service open to public correspondence and using frequencies in the authorized bands between 405 and 535 kc/s shall, during their hours of service, remain on watch on 500 kc/s. This watch is obligatory only for class A2 and A2H emissions.

Section III. Bands between 1 605 and 4 000 kc/s

Delete Regulation No. 1137.

Replace Regulation No. 1138 by the following new text:

MOD 1138 § 15. In Region 2, the frequencies in the band 2 068.5 to 2 078.5 kc/s are assigned to ship stations using wide-band telegraphy, facsimile and special transmission systems. The provisions of No. 1146 are applicable.

Replace the title of Section IV and Nos. 1139 to 1142 by the following new texts:

**MOD Section IV. Additional Provisions Applicable in Region 3 Areas
North of the Equator Only**

MOD 1139 § 16. (1) The band 2 089.5-2 092.5 kc/s is the calling and safety band for the maritime mobile service of radiotelegraphy in those parts of the bands between 1 605 and 2 850 kc/s in which radiotelegraphy is authorized.

MOD 1140 (2) Frequencies in the band 2 089.5-2 092.5 kc/s may be used for calls, replies and safety. These frequencies may also be used for messages preceded by the urgency or safety signals.

MOD 1141 (3) Each coast station using the calling band 2 089.5-2 092.5 kc/s shall, as far as possible, maintain watch on this band during its working hours.

MOD 1142 (4) Coast stations which use frequencies in the band 2 089.5-2 092.5 kc/s for calling shall be able to use at least one other frequency in those parts of the bands between 1 605 and 2 850 kc/s in which the maritime mobile service of radiotelegraphy is authorized.

Section V. Bands between 4 000 and 27 500 kc/s

Replace Regulations Nos. 1145 to 1148 by the following new texts:

MOD 1145 § 17. (1) Mobile radiotelegraph stations equipped to operate in the bands specified in Nos. **1174**, **1192** and **1196** shall employ only class A1 emissions. In the bands specified in No. **1192**, stations may use manual or automatic A1 Morse telegraphy at speeds not exceeding 40 bauds. Survival craft stations may use class A2 or A2H emissions in these bands (see Nos. **994** and **997**).

MOD 1146 (2) Mobile stations equipped for wide-band telegraphy, facsimile and special transmission systems may, in the frequency bands reserved for such use, employ any class of emission provided that such emissions can be contained within the wide-band channels indicated in Appendix 15. However, manual Morse and telephony are excluded, except for circuit alignment purposes.

MOD 1147 (3) Except as provided for in No. **1352A.1**, coast radiotelegraph stations operating in the maritime mobile exclusive bands between 4 000 and 27 500 kc/s shall not use Type 2 emissions. (See No. **1094A**.)

MOD 1148 (4) Coast radiotelegraph stations employing single-channel class A1 or F1 emissions and operating in the maritime mobile exclusive bands between 4 000 and 27 500 kc/s shall at no time use a mean power in excess of the following:

<i>Band</i>	<i>Maximum mean power</i>
4 Mc/s	5 kW
6 Mc/s	5 kW
8 Mc/s	10 kW

<i>Band</i>	<i>Maximum mean power</i>
12 Mc/s	15 kW
16 Mc/s	15 kW
22 Mc/s	15 kW

After Regulation No. 1148, add the following new Regulation:

ADD 1148A (5) Coast radiotelegraph stations employing multichannel telegraph emissions and operating in the maritime mobile exclusive bands between 4 000 and 27 500 kc/s shall at no time use a mean power in excess of 2.5 kW per 500 c/s bandwidth.

Replace Regulation No. 1149 by the following new text:

MOD 1149 § 18. (1) Each of the bands reserved for ship radiotelegraph stations, except for the band 25 070 to 25 110 kc/s, shall be divided into six parts, beginning at the low frequency end:

After Regulation No. 1150, add the following new Regulations:

ADD 1150A *b)* a band of working frequencies for oceanographic data transmissions;

ADD 1150B *c)* a band of working frequencies for ship stations using narrow-band direct-printing telegraph and data transmission systems.

Replace Regulations Nos. 1151 to 1154 by the following new texts:

(MOD) 1151 *d)* a band of working frequencies for the use of high traffic ship stations;

(MOD) 1152 *e)* a band of calling frequencies for the use of all ship and aircraft stations entering into communication with stations of the maritime mobile service;

(MOD) 1153 *f)* a band of working frequencies for the use of low traffic ship stations.

MOD 1154 (2) The bands 25 070 to 25 082.5 kc/s and 25 082.5 to 25 110 kc/s are allocated, respectively for calling and working by ship radiotelegraph stations on ships of all categories which employ A1 or F1 emissions (see No. 224).

Delete Regulation No. 1155.

Replace Regulation No. 1156 by the following new text:

MOD 1156 § 20. (1) Ship stations shall, at the discretion of the administration controlling the station concerned, use either the high traffic band (see No. 1151) or the low traffic band (see No. 1153), depending on their traffic requirements.

Delete Regulation No. 1157.

Replace Regulations Nos. 1158, 1173 to 1178 and 1180 by the following new texts:

MOD 1158 (3) The arrangement of the frequencies in the ship radiotelegraph bands is illustrated graphically in Appendix 15.

MOD 1173 (3) Working frequencies assignable to coast stations using the bands between 4 000 and 27 500 kc/s are included within the following band limits:

4 231 to 4 361 kc/s
6 345.5 to 6 514 kc/s
8 459.5 to 8 728.5 kc/s
12 689 to 13 107.5 kc/s
16 917.5 to 17 255 kc/s
22 374 to 22 624.5 kc/s

(See also No. 453A.)

1. Calling Frequencies of Ship Stations

MOD 1174 § 29. (1) The calling frequencies assignable to ship stations are included within the following band limits:

4 178	to	4 187	kc/s
6 267	to	6 280.5	kc/s
8 356	to	8 374	kc/s
12 534	to	12 561	kc/s
16 712	to	16 748	kc/s
22 222.5	to	22 267.5	kc/s
25 070	to	25 082.5	kc/s

MOD 1175 (2) In the band 4 178 to 4 187 kc/s, the calling frequencies are spaced 0.5 kc/s apart. The extreme frequencies assignable are 4 178.5 and 4 186.5 kc/s as indicated in Appendix 15.

MOD 1176 (3) In each of the other maritime mobile service bands between 4 000 and 18 000 kc/s, the calling frequencies shall be in harmonic relationship with those in the band 4 178 to 4 187 kc/s. In the bands 22 222.5 to 22 267.5 kc/s and 25 070 to 25 082.5 kc/s the spacing of calling frequencies is 2.5 kc/s and 1.5 kc/s respectively. The extreme frequencies assignable are 22 225 and 22 265 kc/s, and 25 073.5 and 25 081 kc/s, respectively.

MOD 1177 § 30. The administration to which a ship station is subject shall assign to it a series of calling frequencies including one frequency in each of the bands in which the station is equipped to transmit. Administrations may, however, assign a supplementary series of calling frequencies for use in the event of interference. In the bands between 4 000 and 18 000 kc/s, the frequencies assigned to each ship station shall be in harmonic relationship. Each administration shall take the necessary steps to assign such harmonic series of calling frequencies to ships in accordance with an orderly system of rotation so as to distribute these frequencies uniformly throughout the calling bands. The same system of uniform distribution shall be applied in the assignment of calling frequencies in the bands 22 222.5 to 22 267.5 kc/s and 25 070 to 25 082.5 kc/s. Administrations may also assign to their ship stations the special calling frequencies appearing in the footnote indicated by *d*) in Appendix 15.

MOD 1178 § 31. (1) One calling frequency in each of the calling bands indicated in No. 1174 (except in the 25 Mc/s band) shall be reserved as far as possible for the use of aircraft desiring to communicate with stations of the maritime mobile service. These frequencies are the following: 4 182, 6 273, 8 364, 12 546, 16 728 and 22 245 kc/s.

MOD 1180 § 32. In all bands the working frequencies for ship stations equipped to use wide-band telegraphy, facsimile and special transmission systems are spaced 4 kc/s apart. The frequencies assignable are shown in Appendix 15.

After Regulation No. 1180, add the following new Regulations:

ADD 1180A § 32A. In all bands, the frequencies assignable for oceanographic data transmissions are spaced 0.3 kc/s apart. The frequencies assignable are shown in Appendix 15.

ADD 1180B § 32B. The working frequencies for ship stations using narrow-band direct-printing telegraph and data transmission systems are spaced 0.5 kc/s apart in the 4, 6 and 8 Mc/s bands and 1.0 kc/s apart in the 12, 16 and 22 Mc/s bands. The frequencies assignable are shown in Appendix 15.

Replace Regulations Nos. 1181 to 1189 and 1191 by the following new texts:

MOD 1181 § 33. (1) The working frequencies for high traffic ships in the band 4 172.25 to 4 178 kc/s are spaced 0.5 kc/s apart, the extreme frequencies assignable being 4 172.5 and 4 177.5 kc/s as shown in Appendix 15.

MOD 1182 (2) In the band 4 187 to 4 231 kc/s, the working frequencies for low traffic ships are spaced 0.5 kc/s apart, the extreme frequencies assignable being 4 187.5 and 4 229 kc/s as shown in Appendix 15.

MOD 1183 § 34. The working frequencies assigned to each ship station in the 6, 8, 12 and 16 Mc/s bands shall be harmonically related to those assigned in the 4 Mc/s band in all cases where such a relationship is provided in Appendix 15.

MOD 1184 § 35. In the 22 Mc/s band, which is not in harmonic relationship with the other bands, the frequencies are spaced as follows, as shown in Appendix 15:

MOD 1185 a) in the high traffic band, the working frequencies are spaced 2 kc/s apart, the extreme frequencies assignable being 22 187 and 22 221 kc/s;

MOD 1186 b) in the low traffic band, the working frequencies are spaced 2.5 kc/s apart, the extreme frequencies assignable being 22 270 and 22 370 kc/s.

MOD 1187 § 36. In the 25 Mc/s band, the working frequencies are spaced 1.5 kc/s apart. The extreme frequencies assignable are 25 084 and 25 106.5 kc/s, as shown in Appendix 15.

MOD 1188 § 37. The working frequencies assignable for ship stations using wide-band telegraphy, facsimile and special transmission systems are included within the following band limits:

4 142.5 to 4 162.5 kc/s
6 216.5 to 6 244.5 kc/s
8 288 to 8 328 kc/s
12 431.5 to 12 479.5 kc/s
16 576 to 16 636.5 kc/s
22 112 to 22 160.5 kc/s

MOD 1189 § 38.(1) Each administration shall assign to each ship station under its jurisdiction and employing wide-band telegraphy, facsimile and special transmission systems, one or more series of the working frequencies reserved for this purpose and shown in Appendix 15. The total number of series assigned to each ship shall be determined by traffic requirements.

MOD 1191 (3) However, within the limits of the bands given in No. **1188**, administrations may, to meet the needs of specific systems, assign frequencies in a different manner from that shown in Appendix 15. Nevertheless, administrations shall take into account, as far as possible, the provisions of Appendix 15 concerning channelling and 4 kc/s spacing.

After Regulation No. 1191, add the following new sub-title and Regulations:

ADD c) *Working Frequencies for Oceanographic Data Stations*

ADD 1191A § 38A. The working frequencies assignable to ship stations for oceanographic data transmissions are included within the following band limits:

4 162.5 to	4 166	kc/s
6 244.5 to	6 248	kc/s
8 328	to 8 331.5	kc/s
12 479.5 to	12 483	kc/s
16 636.5 to	16 640	kc/s
22 160.5 to	22 164	kc/s

ADD 1191B § 38B. The frequency bands in No. **1191A** may also be used by buoy stations for oceanographic data transmission and by stations interrogating these buoys.

ADD 1191C § 38C. Each administration may assign to each station under its jurisdiction of a type specified in Nos. **1191A** and **1191B** one or more of the assignable frequencies designated in Appendix 15.

After new Regulation No. 1191C, add the following new sub-title and Regulations:

ADD *d) Working Frequencies for Ship Stations using Narrow-Band Direct-Printing Telegraph and Data Transmission Systems*

ADD 1191D § 38D. Working frequencies assignable to ship stations using narrow-band direct-printing telegraph and data transmission systems are included within the following band limits:

4 166	to	4 172.25	kc/s
6 248	to	6 258.25	kc/s
8 331.5	to	8 341.75	kc/s
12 483	to	12 503.25	kc/s
16 640	to	16 660.5	kc/s
22 164	to	22 184.5	kc/s

ADD 1191E § 38E. When assigning frequencies listed in Appendix 15 for narrow-band direct-printing telegraph and data transmission systems, administrations shall take due account of the information entries in the Master Register resulting from the notification procedure contained in Resolution No. MAR 8.

Replace Regulation No. 1192, the preceding title and Regulation No. 1193, by the following new texts:

(MOD) *e) Working Frequencies for High Traffic Ship Stations*

MOD 1192 § 39. The working frequencies assignable to high traffic ship stations are included within the following band limits:

4 172.25	to	4 178	kc/s
6 258.25	to	6 267	kc/s
8 341.75	to	8 356	kc/s
12 503.25	to	12 534	kc/s
16 660.5	to	16 712	kc/s
22 184.5	to	22 222.5	kc/s

MOD 1193 § 40. (1) Each administration shall assign to each high traffic ship station under its jurisdiction two or more of the series of working frequencies shown in Appendix 15 for vessels of this class. The total number of series of frequencies assigned to each ship station should be determined by the traffic requirements.

Replace Regulation No. 1196 and the preceding title and Nos. 1197 to 1199 by the following new texts:

(MOD) *f) Working Frequencies for Low Traffic Ship Stations*

MOD 1196 § 42. Working frequencies assigned to low traffic ship stations shall be included within the following band limits:

4 187	to	4 231	kc/s
6 280.5	to	6 345.5	kc/s
8 374	to	8 459.5	kc/s
12 561	to	12 689	kc/s
16 748	to	16 917.5	kc/s
22 267.5	to	22 374	kc/s

MOD 1197 § 43. (1) In each of the low traffic bands, the assignable frequencies are divided into two equal Groups A and B, Group A comprising the frequencies in the lower half of the band and Group B the frequencies in the upper half (see Appendix 15).

MOD 1198 (2) Each administration shall assign to each of the low traffic ship stations under its jurisdiction two series of working frequencies, one in Group A and the other in Group B. In each band, the two working frequencies of each station are separated, as far as practicable, by half the width of the assignable band.

MOD 1199 (3) For example, if one of the frequencies assigned to a ship station is the lowest frequency assignable in Group A, the other should be the lowest frequency assignable in Group B. If one of the frequencies assigned is the second frequency from the low frequency end of Group A, then the other frequency assigned should be the second frequency from the low frequency end of Group B, etc.

Replace Regulation No. 1202 and the preceding title by the following new texts:

(MOD) *g) Working Frequencies Available for Use by Ships of all Categories*

MOD 1202 § 44. The working frequencies in the bands specified in No. **1191D** for narrow-band direct-printing telegraph and data transmission systems, and also those in the band 25 082·5 to 25 110 kc/s, may be assigned to ships of all categories.

Replace the title preceding No. 1203 by the following:

(MOD) *h) Abbreviations for the Indication of Working Frequencies*

ANNEX 16

Revision of Article 33 of the Radio Regulations

Article 33 of the Radio Regulations shall be amended as follows:

Section I. General Provisions

Replace Regulation No. 1216 by the following new text:

(MOD) **1216** § 5. (1) Stations of the maritime mobile service equipped for radiotelephony may transmit and receive radiotelegrams by means of radiotelephony.

After Regulation No. 1216, add the following new Regulations:

ADD 1216A (2) To facilitate radiocommunications the service abbreviations given in Appendix 13A may be used.

ADD 1216B (3) When it is necessary to spell out certain expressions, difficult words, service abbreviations, figures, etc., the phonetic spelling tables in Appendix 16 shall be used.

Section III. Calls, Reply to Calls and Signals Preparatory to Traffic

Replace Regulations Nos. 1222 and 1224 by the following new texts:

MOD 1222 § 7. (1) The call consists of:

- the call sign or other identification of the station called, not more than three times;
- the words **THIS IS** (or **DE** spoken as **DELTA ECHO** in case of language difficulties);
- the call sign or other identification of the calling station, not more than three times.

MOD 1224

(3) When the coast station is fitted with equipment for selective calling and the ship station is fitted with equipment for receiving selective calls, the coast station shall call the ship by transmitting the appropriate code signals. The ship station shall call the coast station by speech in the manner given in No. **1222**. (See also Article 28A.)

After Regulation No. 1224, add the following new Regulations:

ADD 1224A § 7A. Calls for internal communications on board ship when in territorial waters shall consist of:

ADD 1224B a) From the master station:

- the name of the ship followed by a single letter (**ALFA**, **BRAVO**, **CHARLIE**, etc.) indicating the sub-station not more than three times;
- the words **THIS IS**;
- the name of the ship followed by the word **CONTROL**;

ADD 1224C b) From the sub-station:

- the name of the ship followed by the word **CONTROL** not more than three times;
- the words **THIS IS**;
- the name of the ship followed by a single letter (**ALFA**, **BRAVO**, **CHARLIE**, etc.) indicating the sub-station.

Replace Regulation No. 1226 by the following new text:

MOD 1226 a) the carrier frequency 2 182 kc/s;

After Regulation No. 1227, add the following new Regulation:

ADD 1227A c) in Regions 1 and 3 and in Greenland, the carrier frequency 2 191.0 kc/s (assigned frequency 2 192.4 kc/s) when a carrier frequency of 2 182 kc/s is being used for distress.

Replace Regulations Nos. 1228, 1230, 1232 to 1235 by the following new texts:

MOD 1228 (2) A ship radiotelephone station calling a coast station of another nationality should, as a general rule, use the carrier frequency 2 182 kc/s or, in Regions 1 and 3 and in Greenland, the carrier frequency 2 191.0 kc/s (assigned frequency 2 192.4 kc/s) when a carrier frequency of 2 182 kc/s is being used for distress. However, where so agreed by administrations, the ship station may use a working frequency on which watch is kept by that coast station.

MOD 1230 a) the carrier frequency 2 182 kc/s;

MOD 1232 (4) An aircraft station calling a coast station or a ship station may use the carrier frequency 2 182 kc/s.

MOD 1233 (5) Subject to the provisions of No. 1235A, coast stations shall, in accordance with the requirements of their own country, call ship stations of their own nationality either on a working frequency, or, when calls to individual ships are made, on the carrier frequency 2 182 kc/s.

MOD 1234 (6) However, a ship station which keeps watch simultaneously on the carrier frequency 2 182 kc/s and a working frequency should be called on the working frequency.

- MOD 1235** (7) As a general rule, coast stations should call radiotelephone ship stations of another nationality on the carrier frequency 2 182 kc/s.

After Regulation No. 1235, add the following new Regulation:

- ADD 1235A** (8) Coast stations may call ship stations equipped to receive selective calls in accordance with the provisions of Article 28A.

Replace Regulations Nos. 1236 and 1237 by the following new texts:

- MOD 1236** § 9. (1) A ship station calling a coast station by radiotelephony shall use either one of the calling frequencies mentioned in No. 1352 or the working frequency associated with that of the coast station in accordance with Appendix 17, Sections A and B.

- MOD 1237** (2) A coast station calling a ship station by radiotelephony shall use one of the calling frequencies mentioned in No. 1352A, or one of its working frequencies shown in the List of Coast Stations.

After Regulation No. 1238, add the following new Regulation:

- ADD 1238A** (4) The provisions of Nos. 1236 and 1237 do not apply to communication between ship stations and coast stations using the simplex frequencies specified in Appendix 17, Section C.

Replace Regulations Nos. 1239, 1241 and 1242 by the following new texts:

- MOD 1239** § 10. (1) In the bands between 156 Mc/s and 174 Mc/s used for the maritime mobile services, coast and ship stations should, as a general rule, call on 156.80 Mc/s. However, calling may be conducted on a working channel or on a two-frequency calling channel which has been implemented in accordance with No. 1361.

- MOD 1241 § 11. The reply to calls consists of:
- the call sign or other identification of the calling station, not more than three times;
 - the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
 - the call sign or other identification of the station called, not more than three times.

- MOD 1242 § 12. (1) When a ship station is called on the carrier frequency 2 182 kc/s it should reply on the same carrier frequency unless another frequency is indicated by the calling station.

After Regulation No. 1242, add the following new Regulation:

- ADD 1242A (1A) When a ship station is called by selective calling it shall reply on a frequency on which the coast station keeps watch.

Replace Regulations Nos. 1244 and 1247 by the following new texts:

- MOD 1244 (3) When calling a coast station or another ship station, a ship station shall indicate the frequency on which a reply is required if this frequency is not the normal one associated with the frequency used for the call.

- MOD 1247 a) on the carrier frequency 2 182 kc/s to calls made on the carrier frequency 2 182 kc/s, unless another frequency is indicated by the calling station;

After Regulation No. 1248, add the following new Regulation:

ADD 1248A c) on a working frequency to calls made in Regions 1 and 3 and in Greenland on the carrier frequency 2 191·0 kc/s (assigned frequency 2 192·4 kc/s).

Replace Regulations Nos. 1249 and 1250 by the following new texts:

MOD 1249 § 13. (1) A ship station called by a coast station shall reply on either one of the calling frequencies mentioned in No. **1352** or on the working frequency associated with that of the coast station, in accordance with Appendix 17, Sections A and B.

MOD 1250 (2) A coast station called by a ship station shall reply on one of the calling frequencies mentioned in No. **1352A**, or on one of its working frequencies shown in the List of Coast Stations.

After Regulation No. 1251, add the following new Regulation:

ADD 1251A (4) The provisions of Nos. **1249** and **1250** do not apply to communication between ship stations and coast stations using the simplex frequencies specified in Appendix 17, Section C.

Replace Regulation No. 1254 by the following new text:

MOD 1254 § 15. If contact is established on the carrier frequency 2 182 kc/s, coast and ship stations shall transfer to working frequencies for the exchange of traffic.

After Regulation No. 1258, add the following new Regulations:

ADD 1258A (4) However, a brief exchange of traffic concerning the safety of navigation need not be transmitted on a working frequency when it is important that all ships within range receive the transmission.

ADD 1258B (5) Stations hearing a transmission concerning the safety of navigation shall listen to the message until they are satisfied that the message is of no concern to them. They shall not make any transmission likely to interfere with the message.

Replace Regulation No. 1266 by the following new text:

MOD 1266 § 20. (1) If the station called is unable to accept traffic immediately, it should reply to the call as indicated in No. 1241 followed by "Wait . . . minutes" (or \overline{AS} spoken as ALFA SIERRA . . . (minutes) in case of language difficulties), indicating the probable duration of waiting time in minutes. If the probable duration exceeds ten minutes the reason for the delay shall be given. Alternatively the station called may indicate, by any appropriate means, that it is not ready to receive traffic immediately.

Section IV. Forwarding (Routing) of Traffic

Replace Regulations Nos. 1273 and 1280 by the following new texts:

MOD 1273

- the call sign or other identification of the station called;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the calling station.

(MOD) 1280 *(This modification concerns the French version only)*

Delete Regulation No. 1284.

Replace Regulations Nos. 1285, 1287 and 1289 by the following new texts:

MOD 1285 (6) In transmitting groups of figures each figure shall be spoken separately and the transmission of each group or series of groups shall be preceded by the words "in figures".

MOD 1287 § 24. (1) The acknowledgement of receipt of a radiotelegram or a series of radiotelegrams shall be given by the receiving station in the following manner:

- the call sign or other identification of the sending station;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the receiving station;

- “Your No... received, over” (or R spoken as ROMEO... (number), K spoken as KILO in case of language difficulties); or
- “Your No... to No... received, over” (or R spoken as ROMEO... (numbers), K spoken as KILO in case of language difficulties).

MOD 1289

(3) The end of work between two stations shall be indicated by each of them by means of the word “Out” (or \overline{VA} spoken as VICTOR ALFA in case of language difficulties).

Section V. Duration and Control of Working

Replace Regulation No. 1290 by the following new text:

MOD 1290

§ 25. (1) Calling, and signals preparatory to traffic, shall not exceed two minutes when made on the carrier frequency 2 182 kc/s or on 156·80 Mc/s, except in cases of distress, urgency or safety to which the provisions of Article 36 apply.

Section VI. Tests

Replace Regulation No. 1295 by the following new text:

MOD 1295

(2) Any signals sent for testing shall be kept to a minimum, particularly:

- on the carrier frequency 2 182 kc/s;
 - on the frequency 156·80 Mc/s;
 - in the zone lying between the parallels 33° North and 57° South, on the carrier frequency 4 136·3 kc/s;
 - in the zone of Regions 1 and 3 lying between the parallels 33° North and 57° South, on the carrier frequency 6 204 kc/s.
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ANNEX 17

Revision of Article 34 of the Radio Regulations

Article 34 of the Radio Regulations shall be amended as follows:

Replace Regulations Nos. 1301 and 1302 by the following new texts:

MOD 1301 (2) Coast stations shall transmit their traffic lists on their normal working frequencies in the appropriate bands. The transmission shall be preceded by a general call to all stations.

MOD 1302 (3) The general call to all stations announcing the traffic lists may be sent on a calling frequency in the following form:

- “Hello all ships” or CQ (spoken as CHARLIE QUEBEC) not more than three times;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- “... Radio” not more than three times;
- “Listen for my traffic list on...kc/s”.

In no case may this preamble be repeated.

After Regulation No. 1308, add the following new Regulation:

ADD 1308A (1A) However, in the maritime mobile service, when a station called does not reply, the call may be repeated at three-minute intervals.

Replace Regulation No. 1309 by the following new text:

- (MOD) 1309 (2) In the case of a communication between a station of the maritime mobile service and an aircraft station, calling may be renewed after an interval of five minutes.

After Regulation No. 1311, add the following new Regulation:

- ADD 1311A (5) However, in the maritime mobile service, before renewing the call, the calling station shall ascertain that further calling is unlikely to cause interference to other communications in progress and that the station called is not in communication with another station.

Replace Regulations Nos. 1314 and 1317 by the following new texts:

- MOD 1314 § 8. (1) The land station may, by means of the abbreviation TR (spoken as TANGO ROMEO), ask the mobile station to furnish it with the following information:

- MOD 1317 (2) The information referred to in Nos. 1314 to 1316, preceded by the abbreviation TR, should be furnished by mobile stations, whenever this seems appropriate, without prior request from the coast station. The provision of this information is authorized only by the master or the person responsible for the ship, aircraft or other vehicle carrying the mobile station.

Delete Regulation No. 1318.

ANNEX 18

Revision of Article 35 of the Radio Regulations

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

Section I. General Provisions

After Regulation No. 1321, add the following new Regulation:

ADD 1321A § 1A. Frequencies on which single sideband emissions are sent shall be designated by the carrier frequency. This may be followed, in brackets, by the assigned frequency.

After Regulation No. 1322, add the following new Regulation:

ADD 1322A § 2A. Single sideband apparatus in radiotelephone stations of the maritime mobile service operating in the bands between 1 605 and 4 000 kc/s allocated to this service and in the bands allocated exclusively to this service between 4 000 and 23 000 kc/s shall satisfy the technical and operational conditions specified in Appendix 17A and Resolution No. MAR 4.

Section II. Bands between 1 605 and 4 000 kc/s

Add the following sub-section as first sub-section of Section II:

ADD *A. Mode of Operation of Stations*

ADD 1322B § 2B. (1) Except in the cases specified in Nos. 984, 1322D and 1323, the classes of emissions to be used in the bands between 1 605 and 4 000 kc/s shall be:

- a) A3 or
- b) A3H, A3A and A3J¹.

However, unless otherwise specified in the present Regulations (see Nos. 984, 996, 1322D, 1323 and 1337):

- after 1 January 1975, class A3 emissions shall no longer be authorized for coast stations and
- after 1 January 1982, class A3H emissions for coast stations and class A3 and A3H emissions for ship stations shall no longer be authorized.

ADD 1322C (2) The normal mode of operation for each coast station shall be indicated in the List of Coast Stations.

ADD 1322D (3) Transmissions in the bands 2 170-2 173.5 kc/s and 2 190.5-2 194 kc/s with the carrier frequency 2 170.5 kc/s (assigned frequency 2 171.9 kc/s) and the carrier frequency 2 191 kc/s (assigned frequency 2 192.4 kc/s) respectively are limited to class A3A and A3J emissions and are limited to a peak envelope power of 400 watts. However, on the carrier frequency 2 170.5 kc/s and with the same power limits², coast stations may use classes A2H, A2A and A2J emissions for selective calling³ and, exceptionally, in Regions 1 and 3 and in Greenland, may also use class A3H emissions for safety messages.

ADD 1322B.1 ¹ See also Resolution No. MAR 3.

ADD 1322D.1 ² The application of this power limit to selective calling systems, as well as the transfer of selective calling systems from 2 182 to 2 170.5 kc/s on 1 April 1977 (see 999E), may be reconsidered, in the light of experience, by the next competent World Administrative Radio Conference.

ADD 1322D.2 ³ See also No. 1329A.

Replace the heading of sub-section A as well as Regulations Nos. 1323, 1325 and 1326 by the following:

(MOD)

B. Distress

MOD 1323 § 3. (1) The frequency 2 182 kc/s¹ is the international distress frequency for radiotelephony; it shall be used for this purpose by ship, aircraft and survival craft stations and by emergency position-indicating radiobeacons using frequencies in the authorized bands between 1 605 and 4 000 kc/s when requesting assistance from the maritime services. It is used for the distress call and distress traffic, for signals of emergency position-indicating radiobeacons, for the urgency signal and urgency messages and for the safety signal. Safety messages shall be transmitted, where practicable, on a working frequency after a preliminary announcement on 2 182 kc/s. The class of emission to be used for radiotelephony on the frequency 2 182 kc/s shall be A3 or A3H (see No. 984). The class of emission to be used by emergency position-indicating radiobeacons shall be as specified in Appendix 20A, (see also 1476G).

MOD 1325 (3) Except for transmissions authorized on the carrier frequency 2 182 kc/s, all transmissions on the frequencies between 2 173.5 and 2 190.5 kc/s are forbidden.

MOD 1326 (4) Any coast station using the carrier frequency 2 182 kc/s for distress purposes shall be able to transmit the radiotelephone alarm signal described in No. 1465 (see also Nos. 1471, 1472 and 1473).

ADD 1323.1

¹ Whatever the class of emission used, the frequency 2 182 kc/s always designates the carrier frequency of the emission.



After Regulation No. 1326, add the following new Regulations:

ADD 1326A (5) Before transmitting on the carrier frequency 2 182 kc/s, a station in the mobile service should listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see No. 1217).

ADD 1326B (6) The provisions of No. 1326A do not apply to stations in distress.

After the new Regulation 1326B, add the following new heading and Regulation:

ADD

C. Search and Rescue

ADD 1326C § 3A. The frequency 3 023.5 kc/s may be used for intercommunication between mobile stations engaged in co-ordinated search and rescue operations, including communication between these stations and participating land stations, in accordance with the provisions of paragraph 4 of No. 27/196 of Appendix 27 (Frequency Allotment Plan for the Aeronautical Mobile (R) Service).

The heading of sub-section B is replaced by the following:

(MOD)

D. Call and Reply

Replace Regulation No. 1329 by the following new text:

(MOD) 1329 b) by coast stations to announce the transmission, on another frequency, of traffic lists (see Nos. 1301 to 1304);

After Regulation No. 1329, add the following new Regulation:

ADD 1329A c) coast stations for selective calling with classes of emission A2H, A2A and A2J until 1 April 1977¹ (see No. 999E).

ADD 1329A.1

¹ Class of emission A2 permitted until 1 January 1975.

The headings of sub-sections C and D are replaced by the following:

(MOD)

E. Watch

(MOD)

F. Traffic

After Regulation No. 1336, add the following new Regulation:

ADD 1336A (1A) Coast stations authorized to use radiotelephony on one or more frequencies other than 2 182 kc/s in the authorized bands between 1 605 and 2 850 kc/s shall be capable of transmitting on those frequencies class A3 emissions or class A3H, A3A and A3J emissions.¹ However, after 1 January 1975, class A3 emissions shall no longer be authorized, and after 1 January 1982 class A3H emissions also shall no longer be authorized, except on the frequency 2 182 kc/s (see also No. **1322D**).

Replace Regulation No. 1337 by the following new text:

MOD 1337 (2) Coast stations open to the public correspondence service on one or more frequencies between 1 605 and 2 850 kc/s shall also be capable of transmitting class A3H² emissions with a carrier frequency of 2 182 kc/s, and of receiving class A3 and A3H emissions with a carrier frequency of 2 182 kc/s.

ADD 1336A.1 ¹ See also Resolution No. MAR 3.

ADD 1337.1 ² Coast stations are authorized to transmit class A3 emissions in lieu of class A3H emissions until 1 January 1975.

The heading of sub-section E as well as Regulations Nos. 1341, 1342, 1344 and 1345 are replaced by the following:

(MOD) *G. Additional Provisions Applying to Region 1*

MOD 1341 (2) The peak envelope power of mobile radiotelephone stations operating in the authorized bands between 1 605 and 2 850 kc/s shall not exceed 400 watts.

MOD 1342 (3) The peak envelope power of coast radiotelephone stations operating in the authorized bands between 1 605 and 3 800 kc/s shall not exceed:

- 8 kilowatts for coast stations located north of latitude 32° N;
- 14 kilowatts for coast stations located south of latitude 32° N.

MOD 1344 a) the following ship-shore working frequencies, if required by their service:

- carrier frequency 2 046 kc/s (assigned frequency 2 047.4 kc/s) and carrier frequency 2 049 kc/s (assigned frequency 2 050.4 kc/s) for class A3A and A3J emissions;
- carrier frequency 2 049 kc/s also for class A3 and A3H emissions until 1 January 1982.

MOD 1345 b) the following intership frequencies, if required by their service:

- carrier frequency 2 053 kc/s (assigned frequency 2 054.4 kc/s) and carrier frequency 2 056 kc/s (assigned frequency 2 057.4 kc/s) for class A3A and A3J emissions;
- carrier frequency 2 056 kc/s also for class A3 and A3H emissions until 1 January 1982.

These frequencies may be used as additional ship-shore frequencies.

Delete Regulation No. 1347.

Replace Regulation No. 1348 by the following new text:

(MOD) 1348 § 11. (1) Ships frequently exchanging correspondence with a coast station of a nationality other than their own may use the same frequencies as ships of the nationality of the coast station where mutually agreed by the administrations concerned.

After Regulation No. 1348, add the following new Regulation:

ADD 1348A (2) In exceptional circumstances, if frequency usage according to Nos. 1343 to 1345 or No. 1348 is not possible, a ship station may use one of its own assigned national ship-to-shore frequencies for communication with a coast station of another nationality, under the express condition that the coast station as well as the ship station take precautions (see No. 1217) to ensure that the use of such a frequency will not cause harmful interference to the service for which the frequency in question is authorized.

The headings of sub-sections F and G as well as Regulations Nos. 1350 and 1351 are replaced by the following:

(MOD) *H. Additional Provisions Applying to Regions 1 and 3*

MOD 1350 (2) During the periods mentioned above, except for the transmissions provided for in Article 36, transmission shall cease within the band 2 173.5-2 190.5 kc/s.

(MOD)

I. Additional Provisions Applying to Regions 2 and 3

MOD 1351 § 13. All stations on ships making international voyages should, if required by their service, be able to use the intership carrier frequencies:

2 635 kc/s (assigned frequency 2 636.4 kc/s)

2 638 kc/s (assigned frequency 2 639.4 kc/s)

The conditions of use of these frequencies are specified in No. 445.

Section III. Bands between 4 000 and 23 000 kc/s

Add the following new sub-section as first sub-section of Section III:

ADD

A. Mode of Operation of Stations

ADD 1351A § 13A. (1) The classes of emission to be used for radiotelephony in the maritime mobile service bands between 4 000 and 23 000 kc/s are:

a) class A3¹, or

b) class A3H², A3A and A3J.³

However, unless otherwise* specified in these Regulations (see No. 1353A):

— after 1 January 1972, class A3 emissions shall no longer be authorized for coast stations, and

— after 1 January 1978, class A3H emissions for coast stations and class A3 and A3H emissions for ship stations shall no longer be authorized.

ADD 1351B (2) The normal mode of operation of each coast station is indicated in the List of Coast Stations.

ADD 1351A.1 ¹ For the use of class A3B emissions, see Resolution No. MAR 13.

ADD 1351A.2 ² The conditions of use of class A3H emissions are specified in Appendix 17 and in Resolution No. MAR 6.

ADD 1351A.3 ³ See also Resolution No. MAR 3.

The heading of sub-section A as well as Regulation No. 1352 are replaced by the following:

(MOD)

B. Call, Reply and Safety

MOD 1352 § 14. (1) Ship stations may use the following carrier frequencies for calling in radiotelephony:

4 136.3 kc/s¹
6 204.0 kc/s
8 268.4 kc/s
12 403.5 kc/s
16 533.5 kc/s
22 073.5 kc/s

After Regulation No. 1352, add the following new Regulations:

ADD 1352A (2) Coast stations may use the following carrier frequencies for calling in radiotelephony²:

4 434.9 kc/s³
6 518.6 kc/s³
8 802.4 kc/s
13 182.5 kc/s
17 328.5 kc/s
22 699.0 kc/s

ADD 1352.1 ¹ In Region 2, the frequency 4 136.3 kc/s is also authorized for common use by coast and ship stations for single sideband radiotelephony on a simplex basis, provided the peak envelope power of such stations does not exceed 1 kW (see also No. 1352A.2).

ADD 1352A.1 ² These frequencies may also be used for selective calling purposes by coast radiotelegraph stations (see Nos. 1147 and 1224).

ADD 1352A.2 ³ In Region 2, the frequencies 4 434.9 and 6 518.6 kc/s are also authorized for common use by coast and ship stations for single sideband radiotelephony on a simplex basis, provided the peak envelope power of such stations does not exceed 1 kW. The use of 6 518.6 kc/s for this purpose should be limited to daytime use (see also No. 1352.1).

ADD 1352B § 15. (1) In the zone lying between the parallels 33° North and 57° South, the carrier frequency 4 136.3 kc/s is designated for call, reply and safety purposes. It may also be used for messages preceded by the urgency or safety signals and, if necessary, for distress messages.

Replace Regulation No. 1353 by the following new text:

MOD 1353 (2) In the zone of Regions 1 and 3 lying between the parallels 33° North and 57° South, the carrier frequency 6 204 kc/s is designated for call, reply and safety purposes. It may also be used for messages preceded by the urgency or safety signals and, if necessary, for distress messages.

After Regulation No. 1353, add the following new Regulation:

ADD 1353A (3) Stations using the frequencies 4 136.3 kc/s and 6 204 kc/s in the conditions specified in Nos. **1352B** and **1353** may continue to use class A3H emissions beyond 1 January 1978.

After new Regulation No. 1353A, add the following new sub-section:

ADD *C. Search and Rescue*

ADD 1353B § 15A. The frequency 5 680 kc/s may be used for intercommunication between mobile stations engaged in co-ordinated search and rescue operations, including communication between these stations and participating land stations, in accordance with No. **27/201**, paragraph 4 of Appendix 27 (Frequency Allotment Plan for the Aeronautical Mobile (R) Service).

Replace the heading of sub-section B and Regulation No. 1354 by the following new texts:

(MOD) *D. Watch*

MOD 1354 § 16. The hours of service of coast stations open to public correspondence and the frequency or frequencies on which watch is maintained shall be indicated in the List of Coast Stations.

Replace the heading of sub-section C and Regulations Nos. 1355 to 1358 by the following new texts:

(MOD)

E. Traffic

- MOD 1355 § 17. (1) For the conduct of duplex telephony, the transmitting frequencies of the coast stations and of the corresponding ship stations shall be associated in pairs, as far as possible, as indicated in Appendix 17, Sections A and B.
- MOD 1356 (2) The frequencies to be used for the conduct of simplex radiotelephony are shown in Appendix 17, Section C. In these cases, the peak envelope power of the coast station transmitter shall not exceed 1 kW.
- MOD 1357 (3) The frequencies indicated in Appendix 17, Sections A, B and C, for ship station transmissions may be used by ships of any category according to traffic requirements.
- MOD 1358 (4) The technical characteristics of transmitters used for radiotelephony in the maritime mobile service in the bands between 4 000 and 23 000 kc/s are specified in Appendix 17A.

Section IV. Bands between 156 and 174 Mc/s

After Regulation No. 1359, add the following new Regulation:

- ADD 1359A (1A) The frequency 156·80 Mc/s may be used by coast stations for selective calls to ships.

Replace Regulation No. 1363 by the following new text:

- (MOD) 1363 (5) All emissions in the band 156·725-156·875 Mc/s¹ capable of causing harmful interference to the authorized transmissions of stations of the maritime mobile service on 156·80 Mc/s are forbidden.

- ADD 1363.1 ¹ After 1 January 1983 this band is reduced to 156·7625-156·8375 Mc/s (see Resolution No. MAR 14).

After Regulation No. 1367, add the following new Regulation:

- ADD 1367A** (5) However, ship stations, when in communication with a port station may, on an exceptional basis and subject to the agreement of the administration concerned, continue to maintain watch, on the appropriate port operations frequency only, provided that watch on 156.8 Mc/s is being maintained by the port station.

Replace Regulations Nos. 1370, 1371 and 1373 by the following new texts:

- MOD 1370** (2) The method of working (single-frequency or two-frequency) specified in Appendix 18 for each channel should be used in the international services (see Resolution No. MAR 14).

- MOD 1371** § 22. Communications on port operations channels shall be restricted to those relating to operational handling, the movement and the safety of ships and, in emergency, to the safety of persons. Public correspondence messages are excluded.

- MOD 1373** (2) In the band 156 to 174 Mc/s, administrations shall, where practicable, assign frequencies to coast and ship stations in accordance with the Table of Transmitting Frequencies given in Appendix 18 for such international services as administrations consider necessary (see Resolution No. MAR 14).

After Regulation No. 1373, add the following new Regulations:

- ADD 1373A** (3) The normal sequence in which channels should be put into use by stations of the maritime mobile service in the band 156-174 Mc/s is indicated by the figures in the relevant columns of Appendix 18.

ADD 1373B (4) Administrations should, as far as possible, arrange that ship stations fitted with the channels corresponding to the figures in a circle in Appendix 18 can obtain a reasonably adequate use of available services.

ADD 1373C (5) During ice seasons, ship stations shall avoid harmful interference to communications on 156-300 Mc/s (Channel 06 of Appendix 18) between icebreakers and assisted ships.

Replace Regulations Nos. 1374, 1375 and 1377 by the following new texts:

(MOD) 1374 (6) In assigning frequencies to their coast stations, administrations should collaborate in cases where harmful interference might occur.

MOD 1375 (7) Channels are designated by numbers in the Table of Transmitting Frequencies given in Appendix 18 (see Resolution No. MAR 14).

MOD 1377 (2) The use of channels for maritime mobile purposes other than those indicated in the Table of Transmitting Frequencies given in Appendix 18 shall not cause harmful interference to services which operate in accordance with that Table and shall not prejudice the future development of such services (see Resolution No. MAR 14).

Delete Regulation No. 1378.

Replace Regulation No. 1379 by the following new text:

MOD 1379 § 25. The carrier power of ship station transmitters shall not exceed 25 watts for equipment brought into service after 1 January, 1970.

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ANNEX 19

Revision of Article 36 of the Radio Regulations

Article 36 of the Radio Regulations shall be amended as follows:

Section I. General

After Regulation No. 1386, add the following new Regulation:

ADD 1386A § 4A. The abbreviations and signals of Appendix 13A and the Phonetic Alphabet and Figure Code in Appendix 16 should be used where applicable and, where language difficulties exist, the use of the International Code of Signals also is recommended.

After Regulation No. 1388, add the following new Regulation:

ADD 1388A § 5A. Information concerning the characteristics of the emergency position-indicating radiobeacon signals is given in Nos. **1476B**, **1476C** and **1476D**.

Section III. Distress Call and Message

Replace Regulation No. 1393 by the following new text:

- MOD 1393** (2) The distress call sent by radiotelephony consists of:
- the distress signal MAYDAY, spoken three times;
 - the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
 - the call sign or other identification of the mobile station in distress, spoken three times.

Section IV. Distress Call and Message Transmission Procedure

Replace Regulation No. 1408 by the following new text:

MOD 1408 (2) However, when time is vital, the second step of this procedure (No. 1403) or even the first and second steps (Nos. 1402 and 1403), may be omitted or shortened. These two steps of the distress procedure may also be omitted in circumstances where transmission of the alarm signal is considered unnecessary.

Section V. Acknowledgement of Receipt of a Distress Message

Replace Regulation No. 1426 by the following new text:

MOD 1426 (2) However, in areas where reliable communications with one or more coast stations are practicable, ship stations should defer this acknowledgement for a short interval so that a coast station may acknowledge receipt.

After Regulation No. 1427, add the following new Regulation:

ADD 1427A (4) However, stations in the maritime mobile service which receive a distress message from a mobile station which, beyond any possible doubt, is a long distance away need not acknowledge receipt of messages except as specified in No. 1455.

Replace Regulations Nos. 1430 to 1432 by the following new texts:

MOD 1430

b) Radiotelephony:

- the call sign or other identification of the station sending the distress message, spoken three times;
- the words **THIS IS** (or **DE** spoken as **DELTA ECHO** in case of language difficulties);
- the call sign or other identification of the station acknowledging receipt, spoken three times;
- the word **RECEIVED** (or **RRR** spoken as **ROMEO ROMEO ROMEO** in case of language difficulties);
- the distress signal.

MOD 1431

§ 23. (1) Every mobile station which acknowledges receipt of a distress message shall, on the order of the master or person responsible for the ship, aircraft or other vehicle, transmit, as soon as possible, the following information in the order shown:

- its name;
- its position in the form prescribed in Nos. **1397**, **1399** and **1400**;
- the speed at which it is proceeding towards, and the approximate time it will take to reach, the mobile station in distress;
- additionally, if the position of the ship in distress appears doubtful, ship stations should also transmit, when available, the true bearing of the ship in distress preceded by the abbreviation **QTE** (for classification of bearings, see Appendix 23).

MOD 1432

(2) Before transmitting the message specified in No. **1431**, the station shall ensure that it will not interfere with the emissions of other stations better situated to render immediate assistance to the station in distress.

Section VI. Distress Traffic

Replace Regulations Nos. 1436, 1449 and 1451 by the following new texts:

- MOD 1436** § 27. The station in distress or the station in control of distress traffic may impose silence either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions "to all stations" (CQ) or to one station only, according to circumstances. In either case, it shall use:
- MOD 1449** § 34. (1) When distress traffic has ceased, or when silence is no longer necessary on a frequency which has been used for distress traffic, the station which has controlled this traffic shall transmit on that frequency a message addressed "to all stations" (CQ) indicating that normal working may be resumed.
- MOD 1451** (3) In radiotelephony, this message consists of:
- the distress signal MAYDAY;
 - the call "Hello all stations" or CQ (spoken as CHARLIE QUEBEC) spoken three times;
 - the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
 - the call sign or other identification of the station sending the message;
 - the time of handing in of the message;
 - the name and call sign of the mobile station which was in distress;
 - the words SEELONCE FEENEE pronounced as the French words "silencé fini".

After Regulation No. 1451, add the following new Regulation:

ADD 1451A § 34A. When a station in distress has delegated control of distress working to another station, the person in charge of the station in distress should, when he considers silence no longer justified, immediately inform the controlling station, which will act in accordance with the provisions of No. 1449.

Section VII. Transmission of a Distress Message by a Station not itself in Distress

Replace Regulation No. 1460 by the following new text:

MOD 1460

b) Radiotelephony:

- the signal MAYDAY RELAY pronounced as the French expression “m’aider relais”, spoken three times;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the transmitting station, spoken three times.

After Regulation No. 1462, add the following new Regulation:

ADD 1462A § 38A. A ship station should not acknowledge receipt of a distress message transmitted by a coast station under the conditions mentioned in Nos. 1452 to 1455 until the master or person responsible has confirmed that the ship station concerned is in a position to render assistance.

Section VIII. Radiotelegraph and Radiotelephone Alarm Signals

After Regulation No. 1466, add the following new Regulation:

ADD 1466A (3) The use of the radiotelephone alarm signal (see No. 1465) by emergency position-indicating radiobeacons is indicated in Article 36, Section VIIIA.

Replace Regulation No. 1472 by the following new text:

MOD 1472

(b) the transmission of an urgent cyclone warning, which should be preceded by the safety signal (see Nos. **1488** and **1489**). In this case they may only be used by coast stations duly authorized by their government; or

After Regulation No. 1473, add the following new Regulation:

ADD 1473A

(2) The radiotelephone alarm signal may be used by emergency position-indicating radiobeacons of Type H (see No. **1476C**).

Replace Regulation No. 1474 by the following new text:

MOD 1474

(3) In the cases referred to in Nos. **1472** and **1473**, an interval of two minutes should, if possible, separate the end of the radiotelegraph alarm signal and the beginning of the warning or the message.

Add the following new section after Section VIII:

ADD Section VIIIA. Emergency position-indicating radiobeacon signals

ADD 1476A § 44A.(1) The emergency position-indicating radiobeacon signal consists of:

ADD 1476B

a) for medium frequencies, i.e. 2 182 kc/s¹

- 1) a keyed emission modulated by a tone of 1 300 cycles per second, and having a ratio of the period of the emission to the period of silence equal to or greater than one, and an emission duration between one and five seconds;

or

ADD 1476B.1

¹ In Japan, there are emergency position-indicating radiobeacons which transmit the distress signal and identification on frequencies between 2 089.5 kc/s and 2 092.5 kc/s using class A₁ emissions.

- ADD 1476C** 2) the radiotelephone alarm signal (see No. **1465**) followed by the Morse letter B and/or the call sign of the ship to which the radio-beacon belongs transmitted by keying a carrier modulated by a tone of either 1 300 or 2200 cycles per second;
- ADD 1476D** *b)* for very high frequencies, i.e. 121.5 Mc/s and 243 Mc/s, the signal characteristics shall be in accordance with those recommended by the Organizations mentioned in Resolution No. MAR 7.
- ADD 1476E** (2) Only the signal specified in No. **1476B** shall be used by low power radiobeacons (Type L) and it shall be transmitted continuously.
- ADD 1476F** (3) High power radiobeacons (Type H) may transmit either of the signals specified in Nos. **1476B** or **1476C** with a keying cycle which consists of the keying signal for between thirty and fifty seconds followed by a period of silence of between thirty and sixty seconds.
- ADD 1476G** (4) However, the keying cycles in Nos. **1476E** and **1476F** may be interrupted for speech transmission if administrations so desire.
- ADD 1476H** (5) The essential purpose of the emergency position-indicating radiobeacon signals is to facilitate determining the position of survivors in search and rescue operations.
- ADD 1476I** (6) These signals shall indicate that one or more persons are in distress, may no longer be on board a ship or an aircraft, and that receiving facilities may not be available.
- ADD 1476J** (7) Any mobile service station receiving one of these signals, while no distress or urgent traffic is being passed, shall consider that the provisions of Nos. **1452** and **1453** are applicable.

ADD 1476K (8) Equipment designed to transmit emergency position-indicating radiobeacon signals on the carrier frequency 2 182 kc/s shall meet the requirements specified in Appendix 20A.

ADD 1476L (9) Equipment designed to transmit emergency position-indicating radiobeacon signals on very high frequencies shall be in agreement with the recommendations and standards recommended by the Organizations mentioned in Resolution No. MAR 7.

Section IX. Urgency Signal

Replace Regulation No. 1482 by the following new text:

(MOD) 1482 (2) The urgency signal and the message following it shall be sent on one of the international distress frequencies (500 kc/s or 2 182 kc/s) or on one of the frequencies which may be used in case of distress.

After Regulation No. 1482, add the following new Regulation:

ADD 1482A (2A) However, in the maritime mobile service, in areas of heavy traffic or in the case of a long message or a medical call, the message should be transmitted on a working frequency. An indication to this effect should be given at the end of the call.

After Regulation No. 1483, add the following new Regulation:

ADD 1483A (4) In the maritime mobile service, urgency messages may be addressed either to all stations or to a particular station.

Replace Regulation No. 1485 by the following new text:

MOD 1485 § 49. (1) Mobile stations which hear the urgency signal shall continue to listen for at least three minutes. At the end of this period, if no urgency message has been heard, a land station should, if possible, be notified of the receipt of the urgency signal. Thereafter, normal working may be resumed.

Section X. Safety Signal

Replace Regulations Nos. 1491 and 1492 by the following new texts:

(MOD) 1491 (2) The safety signal and call shall be sent on the distress frequency or one of the frequencies which may be used in case of distress.

MOD 1492 (3) Wherever possible, the safety message which follows the call should be sent on a working frequency, particularly in areas of heavy traffic. A suitable announcement to this effect shall be made at the end of the call.

After Regulation No. 1492, add the following new Regulation:

ADD 1492A (4) In the maritime mobile service, safety messages shall generally be addressed to all stations. In some cases, however, they may be addressed to a particular station.

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ANNEX 20

Revision of Article 40 of the Radio Regulations

Article 40 of the Radio Regulations shall be amended as follows:

Section III. Establishment of Accounts for Radiotelephone Calls

Replace Regulation No. 1530 by the following:

(MOD) 1530

(This modification concerns the French and Spanish versions only)

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ANNEX 21

Revision of Appendix 3 to the Radio Regulations

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

APPENDIX 3

Table of Frequency Tolerances ★
(See Article 12)

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

	<i>Band: 1 605 to 4 000 kc/s</i>		

MOD	2. <i>Land Stations</i>		
	— power 200 W or less	100	100 h)
	— power above 200 W	50	50 h)
MOD	3. <i>Mobile Stations</i>		
	a) Ship Stations	200	200 i)
	b)		
ADD	b A) Emergency Position- Indicating Radiobeacons	—	300

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

MOD

MOD

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1966*, to transmitters in use and to those to be installed before 1st January, 1964	Tolerances applicable to new transmitters installed after 1st January, 1964, and to all transmitters after 1st January, 1966*
* 1st January, 1970, in the case of all tolerances marked with an asterisk.		
<p><i>Band: 4 to 29.7 Mc/s</i></p> <p>.....</p> <p>2. <i>Land Stations:</i></p> <p>a) <i>Coast Stations:</i></p> <p>— power 500 W or less</p> <p>— power above 500 W and less than or equal to 5 kW</p> <p>— power above 5 kW</p> <p>.....</p> <p>3. <i>Mobile Stations:</i></p> <p>a) <i>Ship Stations:</i></p> <p>1) <i>Class A1 emissions</i></p> <p>— low traffic ships</p> <p>— high traffic ships</p> <p>2) <i>Emissions other than Class A1</i></p> <p>— power 50 W or less</p> <p>— power above 50 W</p> <p>.....</p>	<p>.....</p> <p>50</p> <p>50 *</p> <p>50</p> <p>.....</p> <p>200</p> <p>—</p> <p>50 c)</p> <p>50</p> <p>.....</p>	<p>.....</p> <p>50 h) l)</p> <p>30 * h) l)</p> <p>15 h) l)</p> <p>.....</p> <p>200 j)</p> <p>50 j) m)</p> <p>50 c) i) k)</p> <p>50 i) k)</p> <p>.....</p>

MOD

MOD

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1966*, to transmitters in use and to those to be installed before 1st January, 1964	Tolerances applicable to new transmitters installed after 1st January, 1964, and to all transmitters after 1st January, 1966*
	* 1st January, 1970, in the case of all tolerances marked with an asterisk.	
<i>Band: 100 to 470 Mc/s</i>
2. <i>Land Stations:</i>		
a) <i>Coast Stations</i>	100	20 n)
3. <i>Mobile Stations:</i>		
a) <i>Ship Stations and Survival Craft Stations: — in the band 156-174 Mc/s</i>	100	20 n)

Notes Referring to Table of Frequency Tolerances

.....

ADD h) For coast station single sideband radiotelephone transmitters the tolerance is 20 c/s.

ADD i) For ship station single sideband radiotelephone transmitters the tolerance is 100 c/s (see also Appendix 17A).

ADD j) A frequency tolerance of 50 parts in 10⁶ shall be applicable, in the case of assignments made after 1 April 1969, to ship stations using the lowest or highest series of:
1) calling frequencies;
2) working frequencies for low traffic and high traffic ships (see Appendix 15).

ADD k) For ship station transmitters used for direct-printing telegraphy or for data transmissions, the tolerance is 100 c/s (with a maximum deviation of 40 c/s for short periods of the order of 15 minutes).

- ADD** *l)* For coast station transmitters used for direct-printing telegraphy and for data transmissions the tolerance is 40 c/s.
- ADD** *m)* Applicable to new transmitters installed after 1 April 1969. Ship station transmitters installed before this date may continue to have a tolerance of 200 parts in 10^6 until 1 January 1973 from which date all high traffic ship station transmitters shall have a tolerance of 50 parts in 10^6 .
- ADD** *n)* For coast and ship station transmitters put into service after 1 January 1973 a tolerance of 10 parts in 10^6 shall apply. This tolerance is applicable to all transmitters, including survival craft stations, after 1 January 1983.
-

ANNEX 22

Revision of Appendix 9 to the Radio Regulations

Appendix 9 to the Radio Regulations shall be amended as follows:

APPENDIX 9

Service Documents

(See Articles 8, 9, 10 and 20)

.....

List IV. List of Coast Stations

.....

Part B. Particulars of coast stations.

.....

.....	
	Call sign ⁸	
.....	2

MOD
(Column 2)

ADD

.....
⁸ The call sign of the station shall be followed, where appropriate, by the identification number or signal, in brackets, that the station uses when sending selective calling signals.

MOD

List V. List of Ship Stations*Particulars of ship stations*

The information concerning these stations shall be published as shown below:

Name of ship	Call sign	Country	Auxiliary installations	Class of ship	Nature of service	Hours of service	Telegraph transmission frequency bands	Telephone transmission frequency bands	Ship charge per word for radiotelegrams	Ship charge for a radiotelephone call of three minutes	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

Column 1 The stations shall be arranged in alphabetical order of the names of the ships, irrespective of nationality. In the case of duplication of names, the name of the ship shall be followed by the call sign (separated from the name by a fraction bar).

Column 2 Call sign. This column also contains the selective call number or signal, where appropriate.

Column 3 Country having jurisdiction over the station (indicated by the appropriate symbol).

Column 4 Auxiliary installations, including information concerning:

a) number of lifeboats fitted with radio apparatus, and

- b) types and number of emergency position-indicating radio-beacons (optional), the operating frequency being indicated by one of the following letters:

A = 2 182 kc/s
 B = 121.5 Mc/s
 C = 243 Mc/s

A figure following the letter indicates the number of radio-beacons. The letter "X" signifies that the number of radio-beacons has not been communicated.

Columns 5 to 7 In the form of service symbols (see Appendix 10). In addition, the list of the symbols used in column 5 to designate the class of ship is given in the Preface to the List.

Columns 8 and 9 Indication of the frequency bands and class of emission by means of the following symbols:

<i>Radiotelegraphy</i>	<i>Radiotelephony</i>
W = 110 - 150 kc/s	T = 1 605 - 4 000 kc/s
X = 405 - 535 kc/s	U = 4 000 - 23 000 kc/s
Y = 1 605 - 3 800 kc/s	V = 156 - 174 Mc/s
Z = 4 000 - 25 110 kc/s	

These symbols should, if necessary, be followed by references to brief notes and indications of the frequencies for which the transmitters are adjusted, which shall appear at the end of the List.

Column 10 Basic ship charge per word for radiotelegrams¹.

Column 11 Minimum charge for a radiotelephone call of three minutes¹. The information in columns 10 and 11 shall be followed by a note reference to indicate the administration or private enterprise to which the accounts should be sent. In case of

¹ These charges are fixed or approved by each administration.

a change of address of the operating authority, a second note reference after the charge should give the new address and the date from which the change will take effect.

Column 12 When two or more ship stations of the same nationality bear the same name, or if the accounts for charges should be sent direct to the owner of the ship, the name of the shipping line or the firm to which the ship belongs shall be given in this column.

In addition, if there is no room in the appropriate column, further information relating to columns 1 to 11 may be given in column 12 by means of a note reference. This column may comprise several lines.

.....

ANNEX 23

Revision of Appendix 10 to the Radio Regulations

Appendix 10 to the Radio Regulations shall be amended as follows:

APPENDIX 10

Service Document Symbols

(See Article 20 and Appendix 9)

Delete symbols ✕ and ☹

Replace the symbols [], ▼, Ca, H8 and Pa by the following:

MOD	[]	A ship which carries lifeboats fitted with radio apparatus; a number inside the square brackets shows the number of such lifeboats ("S") ¹
MOD	△	High traffic ship ("HS") ¹
MOD	CA	Cargo ship
MOD	H8	8-hour service provided by a ship station of the third category
MOD	PA	Passenger ship

Add, in alphabetical order, the following new symbols:

ADD	GS	Station on board a warship or a military or naval aircraft
ADD	OD	Oceanographic data station
ADD	OE	Oceanographic data interrogating station

MOD ¹ The symbol shown in parenthesis may be used in notifications and service documents.

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ANNEX 24

Revision of Appendix 11 to the Radio Regulations

Appendix 11 to the Radio Regulations shall be amended as follows:

APPENDIX 11

Documents with which Ship and Aircraft Stations shall be Provided

(See Articles 18, 20, 21, 23, 28, and Appendix 9)

Section I. Ship Stations for which a Radiotelegraph Installation is Required by International Agreement

Replace Nos. 6 and 8 by the following new texts:

- MOD 6. List of Ship Stations (the carriage of the supplement is optional);
- MOD 8. Manual for Use by the Maritime Mobile Service;

Section III. Ship Stations for which a Radiotelephone Installation is Required by International Agreement

Replace No. 5 by the following new text:

- MOD 5. the provisions of the Radio Regulations and Additional Radio Regulations applicable to the maritime mobile radiotelephone service, or the Manual for Use by the Maritime Mobile Service.
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ANNEX 25

Revision of Appendix 12 to the Radio Regulations

The title of Appendix 12 to the Radio Regulations shall be amended as follows:

MOD Hours of Service for Ship Stations of the Second and Third Categories
(See Articles 20 and 25)

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ANNEX 26

Revision of Appendix 13 to the Radio Regulations

The title of Appendix 13 to the Radio Regulations shall be amended as follows:

**MOD Miscellaneous Abbreviations and Signals to be used in Radiotelegraphy
 Communications except in the Maritime Mobile Service
 (See Article 29)**

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ANNEX 27

Addition of a new Appendix (Appendix 13A) to the Radio Regulations

The following new Appendix shall be added to the Radio Regulations after Appendix 13:

ADD

APPENDIX 13A

Miscellaneous Abbreviations and Signals to be used for Radiocommunications in the Maritime Mobile Service

(See Articles 29, 33 and 36)

SECTION I. Q CODE

Introduction

1. The series of groups listed in this Appendix range from QOA to QVZ.
2. The QOA to QQZ series are reserved for the maritime mobile service.
3. Certain Q code abbreviations may be given an affirmative or negative sense by sending, immediately following the abbreviation, the letter C or the letters NO (in radiotelephony spoken as : CHARLIE or NO).
4. The meanings assigned to Q code abbreviations may be amplified or completed by the appropriate addition of other groups, call signs, place names, figures, numbers, etc. It is optional to fill in the blanks shown in parentheses. Any data which is filled in where blanks appear shall be sent in the same order as shown in the text of the following tables.
5. Q code abbreviations are given the form of a question when followed by a questionmark in radiotelegraphy and RQ (ROMEO QUEBEC)

in radiotelephony. When an abbreviation is used as a question and is followed by additional or complementary information, the question mark (or RQ) should follow this information.

6. Q code abbreviations with numbered alternative significations shall be followed by the appropriate figure to indicate the exact meaning intended. This figure shall be sent immediately following the abbreviation.

7. All times shall be given in Greenwich Mean Time (G.M.T.) unless otherwise indicated in the question or reply.

8. An asterisk * following a Q code abbreviation means that this signal has a meaning similar to a signal appearing in the International Code of Signals.

Abbreviations Available for the Maritime Mobile Service

A. List of Abbreviations in Alphabetical Order

Abbreviation	Question	Answer or Advice
QOA	Can you communicate by radio-telegraphy (500 kc/s)?	I can communicate by radio-telegraphy (500 kc/s).
QOB	Can you communicate by radio-telephony (2 182 kc/s)?	I can communicate by radio-telephony (2 182 kc/s).
QOC	Can you communicate by radio-telephony (channel 16 - frequency 156-80 Mc/s)?	I can communicate by radio-telephony (channel 16 - frequency 156-80 Mc/s).
QOD	Can you communicate with me in... 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish?	I can communicate with you in... 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish.
QOE	Have you received the safety signal sent by... (<i>name and/or call sign</i>)?	I have received the safety signal sent by... (<i>name and/or call sign</i>).
QOF	What is the commercial quality of my signals?	The quality of your signals is... 1. not commercial 2. marginally commercial 3. commercial.
QOG	How many tapes have you to send?	I have... tapes to send.
QOH	Shall I send a phasing signal for... seconds?	Send a phasing signal for... seconds.
QOI	Shall I send my tape?	Send your tape.
QOJ	Will you listen on...kc/s (<i>or</i> Mc/s) for signals of emergency position-indicating radiobeacons?	I am listening on...kc/s (<i>or</i> Mc/s) for signals of emergency position-indicating radiobeacons.

Abbreviation	Question	Answer or Advice
QOK	Have you received the signals of an emergency position-indicating radiobeacon on... <i>kc/s (or Mc/s)</i> ?	I have received the signals of an emergency position-indicating radiobeacon on... <i>kc/s (or Mc/s)</i> .
QRA	What is the name of your vessel (<i>or station</i>)?	The name of my vessel (<i>or station</i>) is...
QRB	How far approximately are you from my station?	The approximate distance between our stations is... nautical miles (<i>or kilometres</i>).
QRC	By what private enterprise (<i>or State Administration</i>) are the accounts for charges for your station settled?	The accounts for charges of my station are settled by the private enterprise... (<i>or State Administration</i>).
QRD	Where are you bound for and where are you from?	I am bound for... from...
QRE	What is your estimated time of arrival at... (<i>or over...</i>) (<i>place</i>)?	My estimated time of arrival at... (<i>or over...</i>) (<i>place</i>) is... hours.
QRF	Are you returning to... (<i>place</i>)?	I am returning to... (<i>place</i>). <i>or</i> Return to... (<i>place</i>).
QRG	Will you tell me my exact frequency (<i>or that of...</i>)?	Your exact frequency (<i>or that of...</i>) is... <i>kc/s (or Mc/s)</i> .
QRH	Does my frequency vary?	Your frequency varies.
QRI	How is the tone of my transmission?	The tone of your transmission is... 1. good 2. variable 3. bad.
QRJ	How many radiotelephone calls have you to book?	I have... radiotelephone calls to book.

Abbreviation	Question	Answer or Advice
QRK	What is the intelligibility of my signals (<i>or those of... (name and/or call sign)</i>)?	The intelligibility of your signals (<i>or those of... (name and/or call sign)</i>) is... 1. bad. 2. poor 3. fair 4. good 5. excellent.
QRL	Are you busy?	I am busy (<i>or I am busy with... (name and/or call sign)</i>). Please do not interfere.
QRM	Is my transmission being interfered with?	Your transmission is being interfered with... 1. nil 2. slightly 3. moderately 4. severely 5. extremely.
QRN	Are you troubled by static?	I am troubled by static... 1. nil 2. slightly 3. moderately 4. severely 5. extremely
QRO	Shall I increase transmitter power?	Increase transmitter power.
QRP	Shall I decrease transmitter power?	Decrease transmitter power.
QRQ	Shall I send faster?	Send faster (... words per minute).
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at... words per minute.

Abbreviation	Question	Answer or Advice
QRS	Shall I send more slowly?	Send more slowly (... words per minute).
QRT	Shall I stop sending?	Stop sending.
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready.
QRW	Shall I inform... that you are calling him on...kc/s (or Mc/s)?	Please inform... that I am calling him on...kc/s (or Mc/s).
QRX	When will you call me again?	I will call you again at... hours (on...kc/s (or Mc/s)).
QRY	What is my turn? (Relates to communication)	Your turn is Number... (or according to any other indication). (Relates to communication).
QRZ	Who is calling me?	You are being called by... (on ...kc/s (or Mc/s)).
QSA	What is the strength of my signals (or those of... (name and/or call sign))?	The strength of your signals (or those of... (name and/or call sign)) is... 1. scarcely perceptible 2. weak 3. fairly good 4. good 5. very good.
QSB	Are my signals fading?	Your signals are fading.
QSC	Are you a low traffic ship station? (see Article 32, Section V)	I am a low traffic ship station.
QSD	Are my signals mutilated?	Your signals are mutilated.
QSE*	What is the estimated drift of the survival craft?	The estimated drift of the survival craft is... (figures and units).

Abbreviation	Question	Answer or Advice
QSF*	Have you effected rescue?	I have effected rescue and am proceeding to... base (with... persons injured requiring ambulance).
QSG	Shall I send... telegrams at a time?	Send... telegrams at a time.
QSH	Are you able to home with your direction-finding equipment?	I am able to home with my direction-finding equipment (on... <i>(name and/or call sign)</i>).
QSI		I have been unable to break in on your transmission. <i>or</i> Will you inform... <i>(name and/or call sign)</i> that I have been unable to break in on his transmission (on...kc/s <i>(or</i> Mc/s)).
QSJ	What is the charge to be collected to... including your internal charge?	The charge to be collected to... including my internal charge is... francs.
QSK	Can you hear me between your signals and if so may I break in on your transmission?	I can hear you between my signals; break in on my transmission.
QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last telegram which I sent you <i>(or</i> some previous telegram)?	Repeat the last telegram which you sent me <i>(or</i> telegram(s) number(s)...).
QSN	Did you hear me <i>(or</i> ... <i>(name and/or call sign)</i>) on...kc/s <i>(or</i> Mc/s)?	I did hear you <i>(or</i> ... <i>(name and/or call sign)</i>) on...kc/s <i>(or</i> Mc/s).

Abbreviation	Question	Answer or Advice
QSO	Can you communicate with... <i>(name and/or call sign)</i> direct <i>(or by relay)</i> ?	I can communicate with... <i>(name and/or call sign)</i> direct <i>(or by relay through...)</i> .
QSP	Will you relay to... <i>(name and/or call sign)</i> free of charge?	I will relay to... <i>(name and/or call sign)</i> free of charge.
QSQ	Have you a doctor on board <i>(or is... (name of person) on board)</i> ?	I have a doctor on board <i>(or... (name of person) is on board)</i> .
QSR	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you <i>(or have interference)</i> .
QSS	What working frequency will you use?	I will use the working frequency ...kc/s <i>(or Mc/s)</i> <i>(in the high frequency bands normally only the last three figures of the frequency need be given)</i> .
QSU	Shall I send or reply on this frequency <i>(or on...kc/s (or Mc/s))</i> <i>(with emissions of class...)</i> ?	Send or reply on this frequency <i>(or on...kc/s (or Mc/s))</i> <i>(with emissions of class...)</i> .
QSV	Shall I send a series of V's <i>(or signs)</i> for adjustment on this frequency <i>(or on...kc/s (or Mc/s))</i> ?	Send a series of V's <i>(or signs)</i> for adjustment on this frequency <i>(or on...kc/s (or Mc/s))</i> .
QSW	Will you send on this frequency <i>(or on...kc/s (or Mc/s))</i> <i>(with emissions of class...)</i> ?	I am going to send on this frequency <i>(or on...kc/s (or Mc/s))</i> <i>(with emissions of class...)</i> .
QSX	Will you listen to... <i>(name and/or call sign(s))</i> on...kc/s <i>(or Mc/s)</i> ?	I am listening to... <i>(name and/or call sign(s))</i> on...kc/s <i>(or Mc/s)</i> .
QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency <i>(or on...kc/s (or Mc/s))</i> .

Abbreviation	Question	Answer or Advice
QSZ	Shall I send each word or group more than once?	Send each word or group twice (<i>or... times</i>).
QTA	Shall I cancel telegram (<i>or message</i>) number...?	Cancel telegram (<i>or message</i>) number...
QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QTC	How many telegrams have you to send?	I have... telegrams for you (<i>or for... (name and/or call sign)</i>).
QTD*	What has the rescue vessel or rescue aircraft recovered?	... (<i>identification</i>) has recovered... 1. ... (<i>number</i>) survivors 2. wreckage 3. ... (<i>number</i>) bodies.
QTE	What is my TRUE bearing from you?	Your TRUE bearing from me is... degrees at... hours.
	<i>or</i> What is my TRUE bearing from... (<i>name and/or call sign</i>)?	<i>or</i> Your TRUE bearing from... (<i>name and/or call sign</i>) was... degrees at... hours.
	<i>or</i> What is the TRUE bearing of... (<i>name and/or call sign</i>) from... (<i>name and/or call sign</i>)?	<i>or</i> The TRUE bearing of... (<i>name and/or call sign</i>) from... (<i>name and/or call sign</i>) was... degrees at... hours.
QTF	Will you give me my position according to the bearings taken by the direction-finding stations which you control?	Your position according to the bearings taken by the direction-finding stations which I control was... latitude... longitude (<i>or other indication of position</i>), class... at... hours.

Abbreviation	Question	Answer or Advice
QTG	<p>Will you send two dashes of ten seconds each (<i>or carrier</i>) followed by your call sign (<i>or name</i>) (repeated... times) on...kc/s (<i>or Mc/s</i>)?</p> <p style="text-align: center;"><i>or</i></p> <p>Will you request... (<i>name and/or call sign</i>) to send two dashes of ten seconds each (<i>or carrier</i>) followed by his call sign (<i>and/or name</i>) (repeated... times) on... kc/s (<i>or Mc/s</i>)?</p>	<p>I am going to send two dashes of ten seconds each (<i>or carrier</i>) followed by my call sign (<i>or name</i>) (repeated... times) on... kc/s (<i>or Mc/s</i>).</p> <p style="text-align: center;"><i>or</i></p> <p>I have requested... (<i>name and/or call sign</i>) to send two dashes of ten seconds each (<i>or carrier</i>) followed by his call sign (<i>and/or name</i>) (repeated... times) on... kc/s (<i>or Mc/s</i>).</p>
QTH	What is your position in latitude and longitude (<i>or according to any other indication</i>)?	My position is... latitude... longitude (<i>or according to any other indication</i>).
QTI*	What is your TRUE course?	My TRUE course is... degrees.
QTIJ*	<p>What is your speed?</p> <p>(<i>Requests the speed of a ship or aircraft through the water or air respectively</i>).</p>	<p>My speed is... knots (<i>or kilometres per hour or... statute miles per hour</i>).</p> <p>(<i>Indicates the speed of a ship or aircraft through the water or air respectively</i>).</p>
QTK*	What is the speed of your aircraft in relation to the surface of the earth?	The speed of my aircraft in relation to the surface of the earth is... knots (<i>or... kilometres per hour or... statute miles per hour</i>).
QTL*	What is your TRUE heading?	My TRUE heading is... degrees.

Abbreviation	Question	Answer or Advice
QTM*	What is your MAGNETIC heading?	My MAGNETIC heading is... degrees.
QTN	At what time did you depart from ... (<i>place</i>)?	I departed from... (<i>place</i>) at... hours.
QTO	Have you left dock (<i>or port</i>)? <i>or</i> Are you airborne?	I have left dock (<i>or port</i>). <i>or</i> I am airborne.
QTP	Are you going to enter dock (<i>or port</i>)? <i>or</i> Are you going to alight (<i>or land</i>)?	I am going to enter dock (<i>or port</i>). <i>or</i> I am going to alight (<i>or land</i>).
QTO	Can you communicate with my station by means of the International Code of Signals (INTERCO)?	I am going to communicate with your station by means of the International Code of Signals (INTERCO).
QTR	What is the correct time?	The correct time is... hours.
QTS	Will you send your call sign (<i>and/or name</i>) for... seconds?	I will send my call sign (<i>and/or name</i>) for... seconds.
QTT		The identification signal which follows is superimposed on another transmission.
QTU	What are the hours during which your station is open?	My station is open from... to... hours.
QTV	Shall I stand guard for you on the frequency of...kc/s (<i>or Mc/s</i>) (from... to... hours)?	Stand guard for me on the frequency of...kc/s (<i>or Mc/s</i>) (from... to... hours).
QTW*	What is the condition of survivors?	Survivors are in... condition and urgently need...



Abbreviation	Question	Answer or Advice
QTX	Will you keep your station open for further communication with me until further notice (<i>or</i> until ...hours)?	I will keep my station open for further communication with you until further notice (<i>or</i> until... hours).
QTY*	Are you proceeding to the position of incident and if so when do you expect to arrive?	I am proceeding to the position of incident and expect to arrive at... hours (on... date).
QTZ*	Are you continuing the search?	I am continuing the search for... (aircraft, ship, survival craft, survivors or wreckage).
QUA	Have you news of... (<i>name and/or call sign</i>)?	Here is news of... (<i>name and/or call sign</i>).
QUB*	Can you give me in the following order information concerning: the direction in degrees TRUE and speed of the surface wind; visibility; present weather; and amount, type and height of base of cloud above surface elevation at... (<i>place of observation</i>)?	Here is the information requested: ... (<i>The units used for speed and distances should be indicated</i>).
QUC	What is the number (<i>or other indication</i>) of the last message you received from me (<i>or</i> from... (<i>name and/or call sign</i>)?)	The number (<i>or other indication</i>) of the last message I received from you (<i>or</i> from... (<i>name and/or call sign</i>)) is...
QUD	Have you received the urgency signal sent by... (<i>name and/or call sign</i>)?	I have received the urgency signal sent by... (<i>name and/or call sign</i>) at... hours.
QUE	Can you speak in... (<i>language</i>), with interpreter if necessary; if so, on what frequencies?	I can speak in... (<i>language</i>) on ...kc/s (<i>or</i> Mc/s).
QUF	Have you received the distress signal sent by... (<i>name and/or call sign</i>)?	I have received the distress signal sent by... (<i>name and/or call sign</i>) at... hours.

Abbreviation	Question	Answer or Advice
QUH*	Will you give me the present barometric pressure at sea level?	The present barometric pressure at sea level is... (<i>units</i>).
QUM	May I resume normal working?	Normal working may be resumed.
QUN	1. <i>When directed to all stations:</i> Will vessels in my immediate vicinity... <i>or</i> (in the vicinity of... latitude... longitude) <i>or</i> (in the vicinity of...) please indicate their position, TRUE course and speed? 2. <i>When directed to a single station:</i> Please indicate your position, TRUE course and speed?	My position, TRUE course and speed are...
QUO*	Shall I search for... 1. aircraft 2. ship 3. survival craft in the vicinity of... latitude... longitude (<i>or according to any other indication</i>)?	Please search for... 1. aircraft 2. ship 3. survival craft in the vicinity of... latitude... longitude (<i>or according to any other indication</i>).
QUP*	Will you indicate your position by... 1. searchlight 2. black smoke trail 3. pyrotechnic lights?	My position is indicated by... 1. searchlight 2. black smoke trail 3. pyrotechnic lights.
QUR*	Have survivors... 1. received survival equipment 2. been picked up by rescue vessel 3. been reached by ground rescue party?	Survivors... 1. are in possession of survival equipment dropped by... 2. have been picked up by rescue vessel 3. have been reached by ground rescue party.
QUS*	Have you sighted survivors or wreckage? If so, in what position?	Have sighted... 1. survivors in water 2. survivors on rafts 3. wreckage in position... latitude... longitude (<i>or according to any other indication</i>).

Abbreviation	Question	Answer or Advice
QUT*	Is position of incident marked?	Position of incident is marked by... 1. flame or smoke float 2. sea marker 3. sea marker dye 4. ... (<i>specify other marking</i>).
QUU*	Shall I home ship or aircraft to my position?	Home ship or aircraft... (<i>name and/or call sign</i>)... 1. to your position by sending your call sign and long dashes on...kc/s (<i>or</i> Mc/s) 2. by sending on...kc/s (<i>or</i> Mc/s) TRUE track to reach you.
QUW*	Are you in the search area designated as... (<i>designator or latitude and longitude</i>)?	I am in the... (<i>designation</i>) search area.
QUY*	Is position of survival craft marked?	Position of survival craft was marked at... hours by... 1. flame or smoke float 2. sea marker 3. sea marker dye 4. ... (<i>specify other marking</i>).

B. List of Signals according to the Nature of Questions, Answer or Advice

Abbreviation	Question	Answer or Advice
	Name	
QRA	What is the name of your vessel (<i>or</i> station)?	The name of my vessel (<i>or</i> station) is...
	Route	
QRD	Where are you bound for and where are you from?	I am bound for... from...
	Position	
QRB	How far approximately are you from my station?	The approximate distance between our stations is... nautical miles (<i>or</i> kilometres).
QTH	What is your position in latitude and longitude (<i>or according to any other indication</i>)?	My position is... latitude... longitude (<i>or according to any other indication</i>).
QTN	At what time did you depart from ... (<i>place</i>)?	I departed from... (<i>place</i>) at... hours.
	Quality of Signals	
QOF	What is the commercial quality of my signals?	The quality of your signals is... 1. not commercial 2. marginally commercial 3. commercial.
QRI	How is the tone of my transmission?	The tone of your transmission is... 1. good 2. variable 3. bad.
QRK	What is the intelligibility of my signals (<i>or</i> those of... (<i>name and/or call sign</i>))?	The intelligibility of your signals (<i>or</i> those of... (<i>name and/or call sign</i>)) is... 1. bad 2. poor 3. fair 4. good 5. excellent.

Abbreviation	Question	Answer or Advice
Strength of Signals		
QRO	Shall I increase transmitter power ?	Increase transmitter power.
QRP	Shall I decrease transmitter power?	Decrease transmitter power.
QSA	What is the strength of my signals (or those of... <i>(name and/or call sign)</i>)?	The strength of your signals (or those of... <i>(name and/or call sign)</i>) is... 1. scarcely perceptible 2. weak 3. fairly good 4. good 5. very good.
QSB	Are my signals fading?	Your signals are fading.
Keying		
QRQ	Shall I send faster?	Send faster (... words per minute).
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at... words per minute.
QRS	Shall I send more slowly?	Send more slowly (... words per minute).
QSD	Are my signals mutilated?	Your signals are mutilated.
Interference		
QRM	Is my transmission being interfered with?	Your transmission is being interfered with... 1. nil 2. slightly 3. moderately 4. severely 5. extremely.

Abbreviation	Question	Answer or Advice
	Interference (cont.)	
QRN	Are you troubled by static?	I am troubled by static... 1. nil 2. slightly 3. moderately 4. severely 5. extremely.
	Adjustment of Frequency	
QRG	Will you tell me my exact frequency (or that of...)?	Your exact frequency (or that of...) is... kc/s (or Mc/s).
QRH	Does my frequency vary?	Your frequency varies.
QTS	Will you send your call sign (and/or name) for... seconds?	I will send my call sign (and/or name) for... seconds.
	Choice of Frequency and / or Class of Emission	
QSN	Did you hear me (or... (name and/or call sign)) on...kc/s (or Mc/s)?	I did hear you (or... (name and/or call sign)) on...kc/s (or Mc/s).
QSS	What working frequency will you use?	I will use the working frequency ...kc/s (or Mc/s) (in the high frequency bands normally only the last three figures of the frequency need be given).
QSU	Shall I send or reply on this frequency (or on...kc/s (or Mc/s)) (with emissions of class...)?	Send or reply on this frequency (or on...kc/s (or Mc/s)) (with emissions of class...).
QSV	Shall I send a series of V's (or signs) for adjustment on this frequency (or...kc/s (or Mc/s))?	Send a series of V's (or signs) for adjustment on this frequency (or...kc/s (or Mc/s)).

Abbreviation	Question	Answer or Advice
	Choice of Frequency and/or Class of Emission (cont.)	
QSW	Will you send on this frequency (<i>or on... kc/s (or Mc/s)</i>) (with emissions of class...)?	I am going to send on this frequency (<i>or on...kc/s (or Mc/s)</i>) (with emissions of class...).
QSX	Will you listen to... (<i>name and/or call sign(s)</i>) on...kc/s (<i>or Mc/s</i>)?	I am listening to... (<i>name and/or call sign(s)</i>) on...kc/s (<i>or Mc/s</i>).
	Change of Frequency	
QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency (<i>or on... kc/s (or Mc/s)</i>).
	Establishing Communication	
QOA	Can you communicate by radio-telegraphy (500 kc/s)?	I can communicate by radio-telegraphy (500 kc/s).
QOB	Can you communicate by radio-telephony (2 182 kc/s)?	I can communicate by radio-telephony (2 182 kc/s).
QOC	Can you communicate by radio-telephony (channel 16-frequency 156·80 Mc/s)?	I can communicate by radio-telephony (channel 16-frequency 156·80Mc/s).
QOD	Can you communicate with me in... 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish?	I can communicate with you in... 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish.
QRL	Are you busy?	I am busy (<i>or I am busy with... (name and/or call sign)</i>). Please do not interfere.
QRV	Are you ready?	I am ready.

Abbreviation	Question	Answer or Advice
	Establishing Communication (cont.)	
QRX	When will you call me again?	I will call you again at... hours (on...kc/s (or Mc/s)).
QRY	What is my turn? (Relates to communication)	Your turn is Number.... (or according to any other indication). (Relates to communication)
QRZ	Who is calling me?	You are being called by... (on ...kc/s (or Mc/s)).
QSC	Are you a low traffic ship station? (see Article 32, Section V)	I am a low traffic ship station.
QSR	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you (or have interference).
QTQ	Can you communicate with my station by means of the International Code of Signals (INTERCO)?	I am going to communicate with your station by means of the International Code of Signals (INTERCO).
QUE	Can you speak in... (language), with interpreter if necessary; if so, on what frequencies?	I can speak in... (language) on...kc/s (or Mc/s).
	Time	
QTR	What is the correct time?	The correct time is... hours.
QTU	What are the hours during which your station is open?	My station is open from... to... hours.
	Charges	
QRC	By what private enterprise (or State Administration) are the accounts for charges for your station settled?	The accounts for charges of my station are settled by the private enterprise... (or State Administration).

Abbreviation	Question	Answer or Advice
	Charges (cont.)	
QSJ	What is the charge to be collected to... including your internal charge?	The charge to be collected to... including my internal charge is... francs.
	Transit	
QRW	Shall I inform... that you are calling him on...kc/s (or Mc/s)?	Please inform... that I am calling him on...kc/s (or Mc/s).
QSO	Can you communicate with... (name and/or call sign) direct (or by relay)?	I can communicate with... (name and/or call sign) direct (or by relay through...).
QSP	Will you relay to... (name and/or call sign) free of charge?	I will relay to... (name and/or call sign) free of charge.
QSQ	Have you a doctor on board (or is... (name of person) on board)?	I have a doctor on board (or... (name of person) is on board).
QUA	Have you news of... (name and/or call sign)?	Here is news of... (name and/or call sign).
QUC	What is the number (or other indication) of the last message you received from me (or from... (name and/or call sign))?	The number (or other indication) of the last message I received from you (or from... (name and/or call sign)) is...
	Exchange of Correspondence	
QOG	How many tapes have you to send?	I have... tapes to send.
QOH	Shall I send a phasing signal for... seconds?	Send a phasing signal for... seconds.
QOI	Shall I send my tape?	Send your tape.
QRJ	How many radiotelephone calls have you to book?	I have... radiotelephone calls to book.

Abbreviation	Question	Answer or Advice
	Exchange of Correspondence (cont.)	
QRU	Have you anything for me?	I have nothing for you.
QSG	Shall I send... telegrams at a time?	Send... telegrams at a time.
QSI		I have been unable to break in on your transmission. <i>or</i> Will you inform... (<i>name and/or call sign</i>) that I have been unable to break in on his transmission (on...kc/s (<i>or</i> Mc/s)).
QSK	Can you hear me between your signals and if so may I break in on your transmission?	I can hear you between my signals; break in on my transmission.
QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last telegram which I sent you (<i>or</i> some previous telegram)?	Repeat the last telegram which you sent me (<i>or</i> telegram(s) number(s)...).
QSZ	Shall I send each word or group more than once?	Send each word or group twice (<i>or</i> ... times).
QTA	Shall I cancel telegram (<i>or</i> message) number...?	Cancel telegram (<i>or</i> message) number...
QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QTC	How many telegrams have you to send?	I have... telegrams for you (<i>or</i> for... (<i>name and/or call sign</i>)).

Abbreviation	Question	Answer or Advice
	Exchange of Correspondence (cont.)	
QTV	Shall I stand guard for you on the frequency of...kc/s (or Mc/s) (from... to... hours)?	Stand guard for me on the frequency of...kc/s (or Mc/s) (from ... to... hours).
QTX	Will you keep your station open for further communication with me until further notice (or until ...hours)?	I will keep my station open for further communication with you until further notice (or until... hours).
	Movement	
QRE	What is your estimated time of arrival at...(or over...) (place)?	My estimated time of arrival at... (or over...) (place) is... hours.
QRF	Are you returning to... (place)?	I am returning to... (place). or Return to... (place).
QSH	Are you able to home with your direction-finding equipment?	I am able to home with my direction-finding equipment (on... (name and/or call sign)).
QTI*	What is your TRUE course?	My TRUE course is... degrees.
QTI*	What is your speed? (Requests the speed of a ship or aircraft through the water or air respectively.)	My speed is... knots (or... kilometres per hour or... statute miles per hour). (Indicates the speed of a ship or aircraft through the water or air respectively.)
QTK*	What is the speed of your aircraft in relation to the surface of the earth?	The speed of my aircraft in relation to the surface of the earth is... knots (or... kilometres per hour or... statute miles per hour).

Abbreviation	Question	Answer or Advice
	Movement (cont.)	
QTL*	What is your TRUE heading?	My TRUE heading is... degrees.
QTM*	What is your MAGNETIC heading?	My MAGNETIC heading is... degrees.
QTN	At what time did you depart from ... <i>(place)</i> ?	I departed from... <i>(place)</i> at... hours.
QTO	Have you left dock <i>(or port)</i> ? <i>or</i> Are you airborne?	I have left dock <i>(or port)</i> . <i>or</i> I am airborne.
QTP	Are you going to enter dock <i>(or port)</i> ? <i>or</i> Are you going to alight <i>(or land)</i> ?	I am going to enter dock <i>(or port)</i> . <i>or</i> I am going to alight <i>(or land)</i> .
QUN	1. <i>When directed to all stations:</i> Will vessels in my immediate vicinity... <i>or</i> (in the vicinity of... latitude... longitude) <i>or</i> (in the vicinity of...) please indicate their position, TRUE course and speed? 2. <i>When directed to a single station:</i> Please indicate your position, TRUE course and speed?	My position, TRUE course and speed are...
	Meteorology	
QUB*	Can you give me in the following order information concerning: the direction in degrees TRUE and speed of the surface wind; visibility; present weather; and amount, type and height of base of cloud above surface elevation at... <i>(place of observation)</i> ?	Here is the information requested: ... <i>(The units used for speed and distances should be indicated).</i>
QUH*	Will you give me the present barometric pressure at sea level?	The present barometric pressure at sea level is... <i>(units)</i> .

Abbreviation	Question	Answer or Advice
QTE	Radio Direction-Finding	
	What is my TRUE bearing from you? <i>or</i>	Your TRUE bearing from me is... degrees at... hours. <i>or</i>
	What is my TRUE bearing from... (name and/or call sign)? <i>or</i>	Your TRUE bearing from... (name and/or call sign) was... degrees at... hours. <i>or</i>
	What is the TRUE bearing of... (name and/or call sign) from... (name and/or call sign)?	The TRUE bearing of... (name and/or call sign) from... (name and/or call sign) was... degrees at... hours.
QTF	Will you give me my position according to the bearings taken by the direction-finding stations which you control?	Your position according to the bearings taken by the direction-finding stations which I control was... latitude... longitude (or other indication of position), class... at... hours.
QTG	Will you send two dashes of ten seconds each (or carrier) followed by your call sign (or name) (repeated... times) (on... kc/s (or Mc/s))? <i>or</i>	I am going to send two dashes of ten seconds each (or carrier) followed by my call sign (or name) (repeated... times) (on... kc/s (or Mc/s)). <i>or</i>
	Will you request... (name and/or call sign) to send two dashes of ten seconds each (or carrier) followed by his call sign (and/or name) (repeated... times) on... kc/s (or Mc/s)?	I have requested... (name and/or call sign) to send two dashes of ten seconds each (or carrier) followed by his call sign (and/or name) (repeated... times) on... kc/s (or Mc/s).

Abbreviation	Question	Answer or Advice
	Suspension of Work	
QRT	Shall I stop sending?	Stop sending.
QUM	May I resume normal working?	Normal working may be resumed.
	Safety	
QOE	Have you received the safety signal sent by... (<i>name and/or call sign</i>)?	I have received the safety signal sent by... (<i>name and/or call sign</i>).
	Urgency	
QUD	Have you received the urgency signal sent by... (<i>name and/or call sign</i>)?	I have received the urgency signal sent by... (<i>name and/or call sign</i>) at... hours.
	Distress	
QOJ	Will you listen on... kc/s (<i>or</i> Mc/s) for signals of emergency position-indicating radiobeacons?	I am listening on... kc/s (<i>or</i> Mc/s) for signals of emergency position-indicating radiobeacons.
QOK	Have you received the signals of an emergency position-indicating radiobeacon on... kc/s (<i>or</i> Mc/s)?	I have received the signals of an emergency position-indicating radiobeacon on... kc/s (<i>or</i> Mc/s).
QUF	Have you received the distress signal sent by... (<i>name and/or call sign</i>)?	I have received the distress signal sent by... (<i>name and/or call sign</i>) at... hours.
QUM	May I resume normal working?	Normal working may be resumed.
	Search and Rescue	
QSE*	What is the estimated drift of the survival craft?	The estimated drift of the survival craft is... (<i>figures and units</i>).
QSF*	Have you effected rescue?	I have effected rescue and am proceeding to... base (with... persons injured requiring ambulance).

Abbreviation	Question	Answer or Advice
	Search and Rescue (cont.)	
QTD*	What has the rescue vessel or rescue aircraft recovered?	... (<i>identification</i>) has recovered... 1. ... (<i>number</i>) survivors 2. wreckage 3. ... (<i>number</i>) bodies.
QTW*	What is the condition of survivors?	Survivors are in... condition and urgently need...
QTY*	Are you proceeding to the position of incident and if so when do you expect to arrive?	I am proceeding to the position of incident and expect to arrive at... hours (on... <i>date</i>).
QTZ*	Are you continuing the search?	I am continuing the search for... (aircraft, ship, survival craft, survivors or wreckage).
QUN	1. <i>When directed to all stations:</i> Will vessels in my immediate vicinity... <i>or</i> (in the vicinity of... latitude... longitude) <i>or</i> (in the vicinity of...) please indicate their position, TRUE course and speed? 2. <i>When directed to a single station:</i> Please indicate your position, TRUE course and speed?	My position, TRUE course and speed are...
QUO*	Shall I search for... 1. aircraft 2. ship 3. survival craft in the vicinity of... latitude... longitude (<i>or according to any other indication</i>)?	Please search for... 1. aircraft 2. ship 3. survival craft in the vicinity of... latitude... longitude (<i>or according to any other indication</i>).
QUP*	Will you indicate your position by... 1. searchlight 2. black smoke trail 3. pyrotechnic lights?	My position is indicated by... 1. searchlight 2. black smoke trail 3. pyrotechnic lights.

Abbreviation	Question	Answer or Advice
	Search and Rescue (cont.)	
QUR*	Have survivors... 1. received survival equipment 2. been picked up by rescue vessel 3. been reached by ground rescue party?	Survivors... 1. are in possession of survival equipment dropped by... 2. have been picked up by rescue vessel 3. have been reached by ground rescue party.
QUS*	Have you sighted survivors or wreckage? If so, in what position?	Have sighted... 1. survivors in water 2. survivors on rafts 3. wreckage in position... latitude... longitude (<i>or according to any other indication</i>).
QUT*	Is position of incident marked?	Position of incident is marked by... 1. flame or smoke float 2. sea marker 3. sea marker dye 4. ... (<i>specify other marking</i>).
QUU*	Shall I home ship or aircraft to my position?	Home ship or aircraft... (<i>name and/or call sign</i>)... 1. to your position by sending your call sign and long dashes on...kc/s (<i>or</i> Mc/s) 2. by sending on...kc/s (<i>or</i> Mc/s) TRUE track to reach you.
QUW*	Are you in the search area designated as... (<i>designator or latitude and longitude</i>)?	I am in the... (<i>designation</i>) search area.
QUY*	Is position of survival craft marked?	Position of survival craft was marked at... hours by... 1. flame or smoke float 2. sea marker 3. sea marker dye 4. ... (<i>specify other marking</i>).

Abbreviation	Question	Answer or Advice
QTT	Identification	The identification signal which follows is superimposed on another transmission.

SECTION II. MISCELLANEOUS ABBREVIATIONS AND SIGNALS

Abbreviation or Signal	Definition
AA	All after... (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
AB	All before... (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
ADS	Address (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
<u>AR</u>	End of transmission.
<u>AS</u>	Waiting period.
BK	Signal used to interrupt a transmission in progress.
BN	All between... and... (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
BQ	A reply to an RQ.
<u>BT</u>	Signal to mark the separation between different parts of the same transmission.
C	Yes or "The significance of the previous group should be read in the affirmative".
CFM	Confirm (<i>or I confirm</i>).
CL	I am closing my station.
COL	Collate (<i>or I collate</i>).
CORREC- TION	Cancel my last word or group. The correct word or group follows (<i>used in radiotelephony, spoken as KOR-REK-SHUN</i>).

Note: When used in radiotelegraphy a bar over the letters composing a signal denotes that the letters are to be sent as one signal.

Abbreviation or Signal	Definition
CP	General call to two or more specified stations (<i>see Article 31</i>).
CQ	General call to all stations.
CS	Call sign (<i>used to request a call sign</i>).
DE	"from..." (<i>used to precede the name or other identification of the calling station</i>).
DF	Your bearing at... hours was... degrees, in the doubtful sector of this station, with a possible error of... degrees.
DO	Bearing doubtful. Ask for another bearing later (<i>or at... hours</i>).
E	East (Cardinal point) (<i>see No. 1400</i>).
ETA	Estimated time of arrival.
INTERCO	International Code of Signals groups follow (<i>used in radiotelephony, spoken as IN-TER-CO</i>).
K	Invitation to transmit.
KA	Starting signal.
KTS	Nautical miles per hour (<i>Knots</i>).
MIN	Minute (<i>or Minutes</i>).
MSG	Prefix indicating a message to or from the master of a ship concerning its operation or navigation.
N	North (Cardinal point) (<i>see No. 1400</i>).
NIL	I have nothing to send to you.
NO	No (<i>Negative</i>).
NW	Now.
NX	Notice to Mariners (<i>or Notice to Mariners follows</i>).
OK	We agree (<i>or It is correct</i>).
OL	Ocean Letter.
P	Prefix indicating a private radiotelegram.
PBL	Preamble (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
PSE	Please.
R	Received.
REF	Reference to... (<i>or Refer to...</i>).
RPT	Repeat (<i>or I repeat</i>) (<i>or Repeat...</i>).

Abbreviation or Signal	Definition
RQ	Indication of a request.
S	South (Cardinal point) (<i>see No. 1400</i>).
SIG	Signature (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
SLT	Radiomaritime Letter.
SVC	Prefix indicating a service telegram.
SYS	Refer to your service telegram.
TFC	Traffic.
TR	Used by a land station to request the position and next port of call of a mobile station (<i>see Nos. 1083 and 1314</i>); used also as a prefix to the reply.
TU	Thank you.
TXT	Text (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
<u>VA</u>	End of work.
W	West (Cardinal point) (<i>see No. 1400</i>).
WA	Word after... (<i>used after a question mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
WB	Word before... (<i>used after a question-mark in radiotelegraphy or after RQ in radiotelephony (in case of language difficulties) or after RPT, to request a repetition</i>).
WD	Word(s) or Group(s).
WX	Weather report (<i>or Weather report follows</i>).
XQ	Prefix used to indicate the transmission of a service note.
YZ	The words which follow are in plain language.

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ANNEX 28

Revision of Appendix 15 to the Radio Regulations

Appendix 15 to the Radio Regulations shall be amended as follows:

MOD

APPENDIX 15

**Table of Frequencies to be used by Ship Radiotelegraph Stations in
the Bands Between 4 and 27.5 Mc/s Allocated Exclusively to the Maritime
Mobile Service**

(See Article 32)

In the Table:

- a) the assignable frequencies in a given band for each usage are:
 - indicated by the lowest and highest frequency, in heavy type, assigned in that band;
 - regularly spaced, the number of assignable frequencies and the spacing in kc/s being indicated in italics;
- b) the vertical arrows indicate the harmonic relationship between the frequencies assigned in the different bands.

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Frequencies Assignable to Ship Radiotelegraph Stations Using
the Maritime Mobile Service Bands between 4 and 27.5 Mc/s

(kc/s)														
Bands Mc/s	Limits	Assignable frequencies for wide-band telegraphy, facsimile and special transmission systems	Limits	Oceanographic data transmission a)	Limits	Assignable frequencies for narrow-band direct-printing telegraph and data transmission systems	Limits	Assignable working frequencies for high traffic ships b)	Limits	Calling frequencies d)	Limits	Assignable working frequencies for low traffic ships		Limits
												GROUP A	GROUP B	
4	4 142.5	4 144.5 --- 4 160.5 5 frequencies spaced 4	4 162.5	4 162.9 --- 4 165.6 10 frequencies spaced 0.3	4 166	4 166.5 --- 4 172 12 frequencies spaced 0.5	4 172.25	4 172.5 -- 4 177.5 11 frequencies spaced 0.5 ↓ ↓	4 178	4 178.5 --- 4 186.5 17 frequencies spaced 0.5 ↓ ↓	4 187	4 187.5 -- 4 208 4 208.5 -- 4 229 84 frequencies spaced 0.5 ↓ ↓	4 231	
6	6 216.5	6 218.5 --- 6 242.5 7 frequencies spaced 4	6 244.5	6 244.9 --- 6 247.6 10 frequencies spaced 0.3	6 248	6 248.5 --- 6 258 20 frequencies spaced 0.5	6 258.25	6 258.75 -- 6 266.25 11 frequencies spaced 0.75 ↓ ↓	6 267	6 267.75 -- 6 279.75 17 frequencies spaced 0.75 ↓ ↓	6 280.5	6 281.25 -- 6 312 6 312.75 -- 6 343.5 84 frequencies spaced 0.75 ↓ ↓	6 345.5	
8	8 288	8 290 --- 8 326 10 frequencies spaced 4	8 328	8 328.4 --- 8 331.1 10 frequencies spaced 0.3	8 331.5	8 332 --- 8 341.5 20 frequencies spaced 0.5	8 341.75	8 342 -- 8 345 -- 8 355 14 frequencies spaced 1 ↓ ↓ ↓	8 356	8 357 -- c) -- 8 373 17 frequencies spaced 1 ↓ ↓	8 374	8 375 -- 8 416 8 417 -- 8 458 84 frequencies spaced 1 ↓ ↓	8 459.5	
12	12 431.5	12 433.5 -- 12 477.5 12 frequencies spaced 4	12 479.5	12 479.9 -- 12 482.6 10 frequencies spaced 0.3	12 483	12 484 -- 12 503 20 frequencies spaced 1	12 503.25	12 504 -- 12 513 -- 12 517.5 -- 12 532.5 20 frequencies spaced 1.5 ↓ ↓ ↓ ↓	12 534	12 535.5 -- 12 559.5 17 frequencies spaced 1.5 ↓ ↓	12 561	12 562.5 -- 12 624 12 625.5 -- 12 687 84 frequencies spaced 1.5 ↓ ↓	12 689	
16	16 576	16 578 --- 16 634 15 frequencies spaced 4	16 636.5	16 636.9 -- 16 639.6 10 frequencies spaced 0.3	16 640	16 641 --- 16 660 20 frequencies spaced 1	16 660.5	16 662 -- 16 672 -- 16 684 -- 16 690 -- 16 710 25 frequencies spaced 2	16 712	16 714 --- 16 746 17 frequencies spaced 2	16 748	16 750 -- 16 832 16 834 -- 16 916 84 frequencies spaced 2	16 917.5	
22	22 112	22 114 --- 22 158 12 frequencies spaced 4	22 160.5	22 160.9 -- 22 163.6 10 frequencies spaced 0.3	22 164	22 165 --- 22 184 20 frequencies spaced 1	22 184.5	22 187 ----- 22 221 18 frequencies spaced 2	22 222.5	22 225 --- 22 265 17 frequencies spaced 2.5	22 267.5	22 270 -- 22 320 22 322.5 -- 22 370 41 frequencies spaced 2.5	22 374	

Assignable Frequencies to Ships of all Categories

	Limit	Calling frequencies	Limit	Working frequencies	Limit
25	25 070	25 073.5 ----- 25 081 6 frequencies spaced 1.5	25 082.5	25 084 ----- 25 106.5 16 frequencies spaced 1.5	25 110

a) The frequency bands may also be used by buoy stations for oceanographic data transmission and by stations interrogating these buoys, in accordance with the conditions set forth in Resolution No. MAR 20.

b) Manual or automatic A1 Morse telegraphy at speeds not exceeding 40 bauds.

c) For the conditions of use of 8 364 kc/s, see No. 1179.

d) The frequencies 4 186.5, 6 279.75, 8 373, 12 559.5, 16 746 and 22 262.5 kc/s may also be assigned as special calling frequencies. Administrations should, if possible, abstain from assigning these frequencies as normal calling frequencies (See Nos. 1013E and 1013E.1).

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ANNEX 29

Revision of Appendix 16 to the Radio Regulations

Appendix 16 to the Radio Regulations shall be amended as follows:

MOD

APPENDIX 16

Phonetic Alphabet and Figure Code

(See Articles 33 and 36)

1. When it is necessary to spell out call signs, service abbreviations and words, the following letter spelling table shall be used:

Letter to be transmitted	Word to be used	Spoken as *
A	Alfa	<u>AL</u> FAH
B	Bravo	<u>BRAH</u> VOH
C	Charlie	<u>CHAR</u> LEE or <u>SHAR</u> LEE
D	Delta	<u>DELL</u> TAH
E	Echo	<u>ECK</u> OH
F	Foxtrot	<u>FOKS</u> TROT
G	Golf	GOLF
H	Hotel	HOH <u>TELL</u>
I	India	<u>IN</u> DEE AH
J	Juliett	<u>JEW</u> LEE <u>ETT</u>
K	Kilo	<u>KEY</u> LOH
L	Lima	<u>LEE</u> MAH

* The syllables to be emphasized are underlined.

Letter to be transmitted	Word to be used	Spoken as *
M	Mike	MIKE
N	November	NO <u>VEM</u> BER
O	Oscar	<u>OSS</u> CAH
P	Papa	PAH <u>PAH</u>
Q	Quebec	KEH <u>BECK</u>
R	Romeo	<u>ROW</u> ME OH
S	Sierra	SEE <u>AIR</u> RAH
T	Tango	<u>TANG</u> GO
U	Uniform	<u>YOU</u> NEE FORM or <u>OO</u> NEE FORM
V	Victor	<u>VIK</u> TAH
W	Whiskey	<u>WISS</u> KEY
X	X-ray	<u>ECKS</u> <u>RAY</u>
Y	Yankee	<u>YANG</u> KEY
Z	Zulu	<u>ZOO</u> LOO

2. When it is necessary to spell out figures or marks, the following table shall be used:

Figure or mark to be transmitted	Code word to be used	Spoken as **
0	NADAZERO	NAH-DAH-ZAY-ROH
1	UNAONE	OO-NAH-WUN
2	BISSOTWO	BEE-SOH-TOO
3	TERRATHREE	TAY-RAH-TREE
4	KARTEFOUR	KAR-TAY-FOWER
5	PANTAFIVE	PAN-TAH-FIVE
6	SOXISIX	SOK-SEE-SIX

* The syllables to be emphasized are underlined.

** Each syllable should be equally emphasized.

Figure or mark to be transmitted	Code word to be used	Spoken as **
7	SETTESEVEN	SAY-TAY-SEVEN
8	OKTOEIGHT	OK-TOH-AIT
9	NOVENINE	NO-VAY-NINER
Decimal point	DECIMAL	DAY-SEE-MAL
Full stop	STOP	STOP

3. However, stations of the same country, when communicating between themselves, may use any other table recognized by their administration.

** Each syllable should be equally emphasized.

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ANNEX 30

Revision of Appendix 17 to the Radio Regulations

Appendix 17 to the Radio Regulations shall be amended as follows:

MOD

APPENDIX 17

**Channelling of the Maritime Mobile Radiotelephone Bands
between 4 000 and 23 000 kc/s**

(See Article 35)

1. Channelling arrangements for the frequencies to be used by coast and ship stations in the bands allocated to the maritime mobile radiotelephone service are indicated in three sections as follows:

Section A — Table of double sideband transmitting frequencies for duplex (two-frequency) operation (in kc/s).

Section B — Table of single sideband transmitting frequencies for duplex (two-frequency) operation (in kc/s).

Section C — Table of single sideband transmitting frequencies for simplex (single-frequency) operation (in kc/s).

2. The technical characteristics for single sideband transmitters are specified in Appendix 17A.

3. One or more series of frequencies from Sections A or B (with the exception of those frequencies of Section B mentioned in paragraph 5 below) are assigned to each coast station, which uses these frequencies associated, as far as possible, in pairs; each pair comprises a transmitting and a receiving frequency. The series shall be selected with due regard

to the areas served and so as to avoid, as far as possible, harmful interference between the services of different coast stations.

4. The frequencies in Section C are provided for world-wide common use by ships of all categories, according to traffic requirements, for ship transmissions to coast stations and for intership communication. They are also authorized for world-wide common use for transmissions by coast stations (simplex operation) provided the peak envelope power does not exceed 1 kW.

5. a) The following series of frequencies in Section B are allocated for calling purposes:

- Series No. 24 in the 4 Mc/s and 8 Mc/s bands;
- Series No. 2 in the 6 Mc/s band;
- Series No. 22 in the 12, 16 and 22 Mc/s bands.

The remaining frequencies in Sections A, B and C are working frequencies.

b) Use of the double sideband calling frequencies 8 269, 12 403.5, 16 533.5 and 22 074 kc/s should, as far as possible, cease by 1 March 1970 to permit the use of the new single sideband channels. In any event, the use of these frequencies for double sideband calling shall cease by 1 January 1978.

6. Stations utilizing double sideband emissions shall operate only on the frequencies in Section A subject to No. 1351A and on the frequencies mentioned in paragraph 5 b) above.

7. a) Stations using single sideband emissions shall operate only on the carrier frequencies shown in Sections B and C in conformity with the technical characteristics specified in Appendix 17A. The upper sideband mode shall always be employed.

b) Stations employing the single sideband mode shall use only class A3A and A3J emissions. However, administrations should

endeavour, as far as possible, to restrict to class A3J emissions, the use of the Series No. 1 frequencies from Section B. Until 1 January 1978 class A3H emissions (in accordance with No. 1351A) are permitted only on those carrier frequencies shown in Section B which are coincident with, or within 100 c/s of, the frequencies shown in Section A. However, on the calling frequencies for coast stations class A3H emissions may be used until 1 January 1978.

8. During the transition period (see Resolution No. MAR 13) assignments to stations using independent sideband emissions shall be considered to be in accordance with the Table in Section A if the necessary bandwidth does not extend beyond the upper or lower limits of the bandwidth provided for double sideband emissions.

9. If an administration authorizes the use of frequencies other than those indicated in Sections A, B and C, its radiotelephone service shall not cause harmful interference to radiotelephone stations of the maritime mobile service which use frequencies in accordance with the following Tables.

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SECTION A

Table of Double Sideband Transmitting Frequencies for Duplex (two-frequency) Operation (in kc/s)

Series No.	4 Mc/s Band		8 Mc/s Band		12 Mc/s Band		16 Mc/s Band		22 Mc/s Band	
	Coast station frequency	Ship station frequency	Coast station frequency	Ship station frequency	Coast station frequency	Ship station frequency	Coast station frequency	Ship station frequency	Coast station frequency	Ship station frequency
1	4 364.7	4 066.1	8 732.1	8 198.1	13 112.5	12 333.5	17 258.5	16 463.5	22 629.0	22 003.5
2	4 371.0	4 072.4	8 738.4	8 204.4	13 119.5	12 340.5	17 265.5	16 470.5	22 636.0	22 010.5
3	4 377.4	4 078.8	8 744.8	8 210.8	13 126.5	12 347.5	17 272.5	16 477.5	22 643.0	22 017.5
4	4 383.8	4 085.2	8 751.2	8 217.2	13 133.5	12 354.5	17 279.5	16 484.5	22 650.0	22 024.5
5	4 390.2	4 091.6	8 757.6	8 223.6	13 140.5	12 361.5	17 286.5	16 491.5	22 657.0	22 031.5
6	4 396.6	4 098.0	8 764.0	8 230.0	13 147.5	12 368.5	17 293.5	16 498.5	22 664.0	22 038.5
7	4 403.0	4 104.4	8 770.4	8 236.4	13 154.5	12 375.5	17 300.5	16 505.5	22 671.0	22 045.5
8	4 409.4	4 110.8	8 776.8	8 242.8	13 161.5	12 382.5	17 307.5	16 512.5	22 678.0	22 052.5
9	4 415.8	4 117.2	8 783.2	8 249.2	13 168.5	12 389.5	17 314.5	16 519.5	22 685.0	22 059.5
10	4 422.2	4 123.6	8 789.6	8 255.6	13 175.5	12 396.5	17 321.5	16 526.5	22 692.0	22 066.5
11	4 428.6	4 129.9	8 796.0	8 261.9						

SECTION B

Table of Single Sideband Transmitting Frequencies for Duplex (two-frequency) Operation (in kc/s)

Series No.	4 Mc/s Band				6 Mc/s Band			
	Coast stations		Ship stations		Coast stations		Ship stations	
	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency
1	4 361·6	4 363·0	4 063·0	4 064·4	6 515·4	6 516·8	6 200·8	6 202·2
2	4 364·7	4 366·1	4 066·1	4 067·5	6 518·6 *	6 520·0 *	6 204·0 * ¹	6 205·4 *
3	4 367·8	4 369·2	4 069·2	4 070·6	6 521·8	6 523·2	6 207·2	6 208·6
4	4 371·0	4 372·4	4 072·4	4 073·8				
5	4 374·2	4 375·6	4 075·6	4 077·0				
6	4 377·4	4 378·8	4 078·8	4 080·2				
7	4 380·6	4 382·0	4 082·0	4 083·4				
8	4 383·8	4 385·2	4 085·2	4 086·6				
9	4 387·0	4 388·4	4 088·4	4 089·8				
10	4 390·2	4 391·6	4 091·6	4 093·0				
11	4 393·4	4 394·8	4 094·8	4 096·2				
12	4 396·6	4 398·0	4 098·0	4 099·4				
13	4 399·8	4 401·2	4 101·2	4 102·6				
14	4 403·0	4 404·4	4 104·4	4 105·8				
15	4 406·2	4 407·6	4 107·6	4 109·0				
16	4 409·4	4 410·8	4 110·8	4 112·2				
17	4 412·6	4 414·0	4 114·0	4 115·4				
18	4 415·8	4 417·2	4 117·2	4 118·6				
19	4 419·0	4 420·4	4 120·4	4 121·8				
20	4 422·2	4 423·6	4 123·6	4 125·0				
21	4 425·4	4 426·8	4 126·8	4 128·2				
22	4 428·6	4 430·0	4 130·0	4 131·4				
23	4 431·8	4 433·2	4 133·2	4 134·6				
24	4 434·9 *	4 436·3 *	4 136·3 * ¹	4 137·7 *				
25								
26								
27								
28								
29								
30								

* The frequencies followed by an asterisk are calling frequencies (see Nos. 1352 and 1352A).

¹ For the conditions of use of frequencies 4 136·3 and 6 204·0 kc/s, see Nos. 1352B and 1353 respectively.

SECTION B (continued)

Table of Single Sideband Transmitting Frequencies for Duplex (two-frequency) Operation (in kc/s)

Series No.	8 Mc/s Band				12 Mc/s Band			
	Coast stations		Ship stations		Coast stations		Ship stations	
	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency
1	8 729.0	8 730.4	8 195.0	8 196.4	13 109.0	13 110.4	12 330.0	12 331.4
2	8 732.1	8 733.5	8 198.1	8 199.5	13 112.5	13 113.9	12 333.5	12 334.9
3	8 735.2	8 736.6	8 201.2	8 202.6	13 116.0	13 117.4	12 337.0	12 338.4
4	8 738.4	8 739.8	8 204.4	8 205.8	13 119.5	13 120.9	12 340.5	12 341.9
5	8 741.6	8 743.0	8 207.6	8 209.0	13 123.0	13 124.4	12 344.0	12 345.4
6	8 744.8	8 746.2	8 210.8	8 212.2	13 126.5	13 127.9	12 347.5	12 348.9
7	8 748.0	8 749.4	8 214.0	8 215.4	13 130.0	13 131.4	12 351.0	12 352.4
8	8 751.2	8 752.6	8 217.2	8 218.6	13 133.5	13 134.9	12 354.5	12 355.9
9	8 754.4	8 755.8	8 220.4	8 221.8	13 137.0	13 138.4	12 358.0	12 359.4
10	8 757.6	8 759.0	8 223.6	8 225.0	13 140.5	13 141.9	12 361.5	12 362.9
11	8 760.8	8 762.2	8 226.8	8 228.2	13 144.0	13 145.4	12 365.0	12 366.4
12	8 764.0	8 765.4	8 230.0	8 231.4	13 147.5	13 148.9	12 368.5	12 369.9
13	8 767.2	8 768.6	8 233.2	8 234.6	13 151.0	13 152.4	12 372.0	12 373.4
14	8 770.4	8 771.8	8 236.4	8 237.8	13 154.5	13 155.9	12 375.5	12 376.9
15	8 773.6	8 775.0	8 239.6	8 241.0	13 158.0	13 159.4	12 379.0	12 380.4
16	8 776.8	8 778.2	8 242.8	8 244.2	13 161.5	13 162.9	12 382.5	12 383.9
17	8 780.0	8 781.4	8 246.0	8 247.4	13 165.0	13 166.4	12 386.0	12 387.4
18	8 783.2	8 784.6	8 249.2	8 250.6	13 168.5	13 169.9	12 389.5	12 390.9
19	8 786.4	8 787.8	8 252.4	8 253.8	13 172.0	13 173.4	12 393.0	12 394.4
20	8 789.6	8 791.0	8 255.6	8 257.0	13 175.5	13 176.9	12 396.5	12 397.9
21	8 792.8	8 794.2	8 258.8	8 260.2	13 179.0	13 180.4	12 400.0	12 401.4
22	8 796.0	8 797.4	8 262.0	8 263.4	13 182.5 *	13 183.9 *	12 403.5 *	12 404.9 *
23	8 799.2	8 800.6	8 265.2	8 266.6	13 186.0	13 187.4	12 407.0	12 408.4
24	8 802.4 *	8 803.8 *	8 268.4 *	8 269.8 *	13 189.5	13 190.9	12 410.5	12 411.9
25	8 805.6	8 807.0	8 271.6	8 273.0	13 193.0	13 194.4	12 414.0	12 415.4
26	8 808.8	8 810.2	8 274.8	8 276.2	13 196.5	13 197.9	12 417.5	12 418.9
27	8 812.0	8 813.4	8 278.0	8 279.4				
28								
29								
30								

* The frequencies followed by an asterisk are calling frequencies (see Nos. 1352 and 1352A).

SECTION B (continued)

Table of Single Sideband Transmitting Frequencies for Duplex (two-frequency) Operation (in kc/s)

Series No.	16 Mc/s Band				22 Mc/s Band			
	Coast stations		Ship stations		Coast stations		Ship stations	
	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency
1	17 255.0	17 256.4	16 460.0	16 461.4	22 625.5	22 626.9	22 000.0	22 001.4
2	17 258.5	17 259.9	16 463.5	16 464.9	22 629.0	22 630.4	22 003.5	22 004.9
3	17 262.0	17 263.4	16 467.0	16 468.4	22 632.5	22 633.9	22 007.0	22 008.4
4	17 265.5	17 266.9	16 470.5	16 471.9	22 636.0	22 637.4	22 010.5	22 011.9
5	17 269.0	17 270.4	16 474.0	16 475.4	22 639.5	22 640.9	22 014.0	22 015.4
6	17 272.5	17 273.9	16 477.5	16 478.9	22 643.0	22 644.4	22 017.5	22 018.9
7	17 276.0	17 277.4	16 481.0	16 482.4	22 646.5	22 647.9	22 021.0	22 022.4
8	17 279.5	17 280.9	16 484.5	16 485.9	22 650.0	22 651.4	22 024.5	22 025.9
9	17 283.0	17 284.4	16 488.0	16 489.4	22 653.5	22 654.9	22 028.0	22 029.4
10	17 286.5	17 287.9	16 491.5	16 492.9	22 657.0	22 658.4	22 031.5	22 032.9
11	17 290.0	17 291.4	16 495.0	16 496.4	22 660.5	22 661.9	22 035.0	22 036.4
12	17 293.5	17 294.9	16 498.5	16 499.9	22 664.0	22 665.4	22 038.5	22 039.9
13	17 297.0	17 298.4	16 502.0	16 503.4	22 667.5	22 668.9	22 042.0	22 043.4
14	17 300.5	17 301.9	16 505.5	16 506.9	22 671.0	22 672.4	22 045.5	22 046.9
15	17 304.0	17 305.4	16 509.0	16 510.4	22 674.5	22 675.9	22 049.0	22 050.4
16	17 307.5	17 308.9	16 512.5	16 513.9	22 678.0	22 679.4	22 052.5	22 053.9
17	17 311.0	17 312.4	16 516.0	16 517.4	22 681.5	22 682.9	22 056.0	22 057.4
18	17 314.5	17 315.9	16 519.5	16 520.9	22 685.0	22 686.4	22 059.5	22 060.9
19	17 318.0	17 319.4	16 523.0	16 524.4	22 688.5	22 689.9	22 063.0	22 064.4
20	17 321.5	17 322.9	16 526.5	16 527.9	22 692.0	22 693.4	22 066.5	22 067.9
21	17 325.0	17 326.4	16 530.0	16 531.4	22 695.5	22 696.9	22 070.0	22 071.4
22	17 328.5*	17 329.9*	16 533.5*	16 534.9*	22 699.0*	22 700.4*	22 073.5*	22 074.9*
23	17 332.0	17 333.4	16 537.0	16 538.4	22 702.5	22 703.9	22 077.0	22 078.4
24	17 335.5	17 336.9	16 540.5	16 541.9	22 706.0	22 707.4	22 080.5	22 081.9
25	17 339.0	17 340.4	16 544.0	16 545.4	22 709.5	22 710.9	22 084.0	22 085.4
26	17 342.5	17 343.9	16 547.5	16 548.9	22 713.0	22 714.4	22 087.5	22 088.9
27	17 346.0	17 347.4	16 551.0	16 552.4	22 716.5	22 717.9	22 091.0	22 092.4
28	17 349.5	17 350.9	16 554.5	16 555.9				
29	17 353.0	17 354.4	16 558.0	16 559.4				
30	17 356.5	17 357.9	16 561.5	16 562.9				

* The frequencies followed by an asterisk are calling frequencies (see Nos. 1352 and 1352A).

SECTION C

Table of Single Sideband Transmitting Frequencies for Simplex (single-frequency) Operation (in kc/s)

4 Mc/s Band		6 Mc/s Band		8 Mc/s Band		12 Mc/s Band		16 Mc/s Band		22 Mc/s Band	
Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency
4 139·5	4 140·9	6 210·4 6 213·5	6 211·8 6 214·9	8 281·2 8 284·4	8 282·6 8 285·8	12 421·0 12 424·5 12 428·0	12 422·4 12 425·9 12 429·4	16 565·0 16 568·5 16 572·0	16 566·4 16 569·9 16 573·4	22 094·5 22 098·0 22 101·5 22 105·0 22 108·5	22 095·9 22 099·4 22 102·9 22 106·4 22 109·9

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ANNEX 31

Addition of a new Appendix (Appendix 17A) to the Radio Regulations

The following new Appendix shall be added to the Radio Regulations after Appendix 17:

ADD

APPENDIX 17A

**Technical Characteristics of Single Sideband Transmitters Used
in the Maritime Mobile Service for Radiotelephony in
the Bands between 1 605 and 4 000 kc/s and between 4 000 and
23 000 kc/s**

1. Classes of emission:
 - a) for class A3A emissions the power of the carrier shall be 16 ± 2 db below the peak envelope power;
 - b) for class A3J emissions the power of the carrier shall be at least 40 db below the peak envelope power.
2. Coast and ship stations shall use only the upper sideband.
3. The transmitter audio-frequency band shall be 350 to 2 700 c/s, with a permitted amplitude variation of 6 db.
4. The carrier frequencies shall be maintained within the following tolerances:
 - a) coast stations: ± 20 c/s;
 - b) ship stations: ± 100 c/s; the short-term limits (of the order of 15 minutes) shall be ± 40 c/s.

5. The unwanted frequency modulation of the carrier shall be sufficiently low to prevent harmful distortion.

6. When class A3H, A3A or A3J emissions are used, the power of any unwanted emission supplied to the antenna transmission line on any discrete frequency shall, when the transmitter is driven to full peak envelope power, be in accordance with the following table:

Separation Δ in kc/s between the frequency of the unwanted emission and the assigned frequency ¹	Minimum attenuation below peak envelope power
$1.6 < \Delta \leq 4.8$	28 db
$4.8 < \Delta \leq 8.0$	38 db
$8.0 < \Delta$	43 db, without exceeding the power of 50 milliwatts

Transmitters using reduced carrier or suppressed carrier emission may, as far as spurious emissions are concerned, be tested for compliance with this regulation by means of a two-tone audio input signal with a frequency separation between the tones such that all intermodulation products occur at frequencies at least 1.6 kc/s removed from the assigned frequency.

¹ The assigned frequency is 1 400 c/s higher than the carrier frequency (see No. 445A).

ANNEX 32

Revision of Appendix 18 to the Radio Regulations

Appendix 18 to the Radio Regulations shall be amended as follows:

MOD

APPENDIX 18

**Table of Transmitting Frequencies for the Band 156-174 Mc/s
for Radiotelephony in the International Maritime Mobile Service
(See No. 287 and Article 35)**

Note 1: For assistance in understanding the Table, see notes *a)* to *j)* below.

Note 2: Channels 01 to 28, except 15 and 17, correspond to the channels of Appendix 18 to the Radio Regulations, Geneva, 1959, and channels 15, 17 and 60 to 88 represent the additional channels available for assignment by administrations in the future in this frequency band (see Resolution No. MAR 14).

Note 3: Channel designators 60 to 88 were chosen for the additional channels in order to separate them clearly from the original channels.

Channel Designators	Transmitting Frequencies (Mc/s)		Intership	Port Operations		Public Correspondence
	Ship Stations	Coast Stations		Single Frequency	Two Frequency	
60 g)	156-025	160-625			17	25
01	156-050 f)	160-650			10	8
61	156-075	160-675			23	19
02	156-100	160-700			8	10
62	156-125	160-725			20	22
03	156-150 f)	160-750			9	9
63	156-175 f)	160-775			18	24
04	156-200	160-800			11	7
64	156-225	160-825			22	20
05	156-250	160-850			6	12
65	156-275	160-875			21	21
06	156-300 e)		①			
66	156-325	160-925			19	23
07	156-350	160-950			7	11
67	156-375	156-375	10	10		
08	156-400		②			
68	156-425	156-425		6		
09	156-450	156-450	5	5		
69	156-475	156-475	9	11		
10	156-500	156-500	3	9		
70	156-525		6			
11	156-550	156-550		3		
71	156-575	156-575		7		
12	156-600	156-600		①		
72	156-625		7			
13	156-650	156-650	4	4		
73	156-675	156-675	8	12		
14	156-700	156-700		②		
74	156-725	156-725		8		
15 d) i)	156-750	156-750	12	14		
75		Guard-band	156-7625 - 156-7875 Mc/s j)			
16	156-800	156-800	CALLING AND SAFETY			
76		Guard-band	156-8125 - 156-8375 Mc/s j)			
17 d) i)	156-850	156-850	13	13		
77	156-875		11			
18	156-900	161-500			3	

Channel Designators	Transmitting Frequencies Mc/s		Intership	Port Operations		Public Correspondence
	Ship Stations	Coast Stations		Single Frequency	Two Frequency	
78	156-925	161-525			12	
19	156-950	161-550			4	
79	156-975	161-575			14	
20	157-000	161-600			①	
80	157-025	161-625			16	
21	157-050	156-050 <i>f</i>) or 161-650			5	
81	157-075	161-675			15	
22	157-100	161-700			②	
82	157-125	161-725			13	26
23	157-150	156-150 <i>f</i>) or 161-750				5
83	157-175	156-175 <i>f</i>) or 161-775				16
24	157-200	161-800				4
84	157-225	161-825			24	13
25	157-250	161-850				③
85	157-275	161-875				17
26	157-300	161-900				①
86	157-325	161-925				15
27	157-350	161-950				②
87	157-375	161-975				14
28	157-400	162-000				6
88 <i>g</i>)	157-425	162-025				18

NOTES REFERRING TO THE TABLE

- a) The figures in the column headed "Intership" indicate the normal sequence in which channels should be taken into use by mobile stations.
- b) The figures in the columns headed "Port Operations" and "Public Correspondence" indicate the normal sequence in which channels should be taken into use by each coast station. However, in some cases, it may be necessary to omit channels in order to avoid harmful interference between the services of neighbouring coast stations.

- c) Administrations should, as far as possible, arrange that ship stations fitted with the channels corresponding to the figures in a circle can obtain a reasonably adequate use of available services.
 - d) On channels 15 and 17, the maximum frequency deviation shall be limited to ± 5 kc/s. Until 1 January 1983, the effective radiated power of ship stations must not exceed 1 watt.
 - e) During ice seasons, ship stations shall avoid harmful interference to communications on 156-300 Mc/s (Channel 06) between icebreakers and assisted ships.
 - f) In France and in Belgium, the frequencies 156-050, 156-150 and 156-175 Mc/s are used as ship station frequencies in Channels 01, 03 and 63 respectively and as coast station frequencies in Channels 21, 23 and 83 respectively when the latter are used in the special semi-duplex public correspondence systems employed with 1 Mc/s separation between transmit and receive frequencies.
 - g) Channels 60 and 88 can be used subject to special agreements between interested and affected administrations.
 - h) The frequencies in this Table may also be used for radiotelephone communications on inland waterways in accordance with the conditions specified in No. 287.
 - i) Channels 15 and 17 may also be used for internal operational communications on board ships, provided the effective radiated power does not exceed 0.1 W, and subject to the national regulations of the administration concerned when these channels are used in its territorial waters.
 - j) This guard-band will apply after 1 January 1983 (see No. 1363.1).
-

ANNEX 33

Revision of Appendix 19 to the Radio Regulations

Appendix 19 to the Radio Regulations shall be amended as follows:

MOD

APPENDIX 19

Technical Characteristics for Transmitters and Receivers Used in the Maritime Mobile Service in the 156-174 Mc/s Band

(See Articles 28 and 35, Appendix 18 and Resolution No. MAR 14)

Section A. Transmitters and receivers using 50 kc/s-spacing between adjacent channels

1. Only frequency modulation with a pre-emphasis of 6 db/octave (phase modulation) shall be used.
2. The frequency deviation corresponding to 100% modulation shall approach 15 kc/s as nearly as practicable. In no event shall the frequency deviation exceed ± 15 kc/s. However, it is recognized that, under certain conditions, the percentage of modulation may be decreased to avoid adjacent channel interference.
3. When transmitting on any of the frequencies designated in the Table in Appendix 18, the emission of each station shall be vertically polarized at the source.
4. The audio-frequency band shall be limited to 3 000 c/s.

Section B. Transmitters and receivers using 25 kc/s-spacing between adjacent channels

1. Only frequency modulation with a pre-emphasis of 6 db/octave (phase modulation) shall be used.

2. The frequency deviation corresponding to 100% modulation shall approach 5 kc/s as nearly as practicable. In no event shall the frequency deviation exceed ± 5 kc/s.
 3. The frequency tolerance for coast and ship stations shall not exceed 10 parts in 10^6 .
 4. When transmitting on any of the frequencies designated in the Table in Appendix 18, the emission of each station shall be vertically polarized at the source.
 5. The audio-frequency band shall be limited to 3 000 c/s.
 6. It shall be possible to reduce, readily, the effective radiated power of a ship station to 1 watt or less.
-

ANNEX 34

Revision of Appendix 20 to the Radio Regulations

Appendix 20 to the Radio Regulations shall be amended as follows:

APPENDIX 20

Automatic Receiving Equipment for Radiotelegraph and Radiotelephone Alarm Signals

(See Section VIII of Article 36)

1. The automatic devices intended for the reception of the radio-telegraph alarm signal shall fulfil the following conditions:

MOD

a) The equipment shall respond to the alarm signal transmitted by the telegraphic emissions of at least class A2 and A2H (see No. 1094A).

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ANNEX 35

Addition of a new Appendix (Appendix 20A) to the Radio Regulations

The following new Appendix shall be added to the Radio Regulations after Appendix 20:

ADD

APPENDIX 20A

Technical Characteristics of Emergency Position-indicating Radiobeacons Operating on the Carrier Frequency 2 182 kc/s

(See Section VIIIA of Article 36)

Emergency position-indicating radiobeacons shall fulfil the following conditions:

a) The power radiated by low-power radiobeacons (Type L) shall be of a value necessary to produce at a distance of 30 nautical miles at sea level a field strength equal to or less than 10 microvolts per metre, with an initial field strength of at least 2.5 microvolts per metre.

b) The power radiated by high-power radiobeacons (Type H) shall be of a value necessary to produce at a distance of 30 nautical miles at sea level a field strength greater than 10 microvolts per metre.

c) After a period of 48 hours' continuous operation the radiated power shall not be less than 20 per cent of the initial power.

d) The radiobeacons shall be capable of class A2 or A2H emissions, with a depth of modulation between 30 and 90 per cent.



e) The audio-frequency tolerance of emissions used for emergency position-indicating radiobeacons (Nos. **1476B** and **1476C**) are:

± 20 c/s for the frequency of 1 300 c/s

± 35 c/s for the frequency of 2 200 c/s

f) Equipment shall be designed to comply with relevant C.C.I.R. recommendations.

ANNEX 36

Addition of a new Appendix (Appendix 20B) to the Radio Regulations

The following new Appendix shall be added to the Radio Regulations after Appendix 20A:

ADD

APPENDIX 20B

Narrow-band Direct-printing Telegraph Equipment

(See Articles 28 and 29)

The equipment for narrow-band direct-printing telegraph systems in the maritime mobile service shall fulfil the following conditions:

- a) The equipment shall accept signals conforming to International Telegraph Alphabet Code No. 2 at a modulation rate of 50 bauds and shall provide similar signals at its output for extension to the public telegraph network.
- b) The modulation rate over the radio path shall not exceed 100 bauds.
- c) Class F1 emissions shall be used, with a total frequency shift of 170 c/s.

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ANNEX 37

Addition of a new Appendix (Appendix 20C) to the Radio Regulations

The following new Appendix shall be added to the Radio Regulations after Appendix 20B:

ADD

APPENDIX 20C

Selective Calling System for Use in the International Maritime Mobile Service

(See Articles 19, 28A, 29 and 33 and Appendix 9)

1. Where there is a need to fulfil immediate requirements for selective calling, the system to be used shall have the following characteristics:

1.1 the selective call signal shall consist of five figures representing the code number assigned to a ship for selective calling;

1.2 the audio-frequency signal applied to the input of the coast station transmitter shall consist of consecutive audio-frequency pulses conforming to the following:

1.2.1 the audio frequencies used to identify the figures of the code number assigned to a ship shall conform to the following series:

Figure	1	2	3	4	5	6	7	8	9	0	Figure repetition
Audio frequency (c/s)	1124	1197	1275	1358	1446	1540	1640	1747	1860	1981	2110

For example, the series of audio-frequency pulses corresponding to the selective call 12133 would be 1124-1197-1124-1275-2110 c/s, and the series corresponding to the code number 22222 would be 1197-2110-1197-2110-1197 c/s;

- 1.2.2 if the series of numbers represented by the use of only two frequencies, chosen from those in paragraph 1.2.1, are reserved for calling predetermined groups of ships, then 100 different groups of numbers are available for allocation, according to the needs of administrations;
- 1.2.3 the waveforms of the audio-frequency generators shall be substantially sinusoidal, not exceeding 2% total harmonic distortion;
- 1.2.4 the audio-frequency pulses shall be transmitted sequentially;
- 1.2.5 the difference between the maximum amplitude of any audio-frequency pulses shall not exceed 1 db;
- 1.2.6 the duration of each audio-frequency pulse, measured between the half-amplitude points, shall be 100 ms \pm 10 ms;
- 1.2.7 the time interval between consecutive pulses, measured between the half-amplitude points, shall be 3 ms \pm 2 ms;
- 1.2.8 the rise and the decay time of each audio-frequency pulse, measured between the 10% and 90% amplitude points, shall be 1.5 ms \pm 1 ms;
- 1.2.9 the frequency tolerance of the audio frequencies given in paragraph 1.2.1 shall be \pm 4 c/s;
- 1.2.10 the selective call signal (the selective call number assigned to the ship station) shall be transmitted twice with an interval of 900 ms \pm 100 ms between the end of the first signal and the beginning of the second signal (Figure 1);
- 1.2.11 the interval between calls from a coast station to different ships shall be at least 1 second (Figure 1).

2. The additional information following the selective call signal shall be transmitted as follows:

- 2.1 to identify the calling coast station, four figures shall be transmitted;
- 2.2 to identify the VHF channel on which a reply is required, two "zeros" followed by two "figures" should be transmitted (see Appendix 18);
- 2.3 the characteristics of the signals shall conform to paragraphs 1.2.1 and 1.2.3 to 1.2.9 inclusive;
- 2.4 the composition of the signal shall be as shown in the diagram (Figure 2), the tolerance on the 350 ms interval being ± 30 ms.

3. An "all ships call" to actuate the receiving selectors on all ships, regardless of their individual code number, shall consist of a continuous sequential transmission of the eleven audio frequencies given in paragraph 1.2.1. The parameters of the audio-frequency pulses shall be in accordance with paragraphs 1.2.3, 1.2.4, 1.2.5 and 1.2.9. The duration of each audio-frequency pulse, measured between the half-amplitude points, shall be $17 \text{ ms} \pm 1 \text{ ms}$ and the interval between consecutive pulses, measured between half-amplitude points, shall not exceed 1 ms.

4. Receiving selectors on ships should operate reliably in any radio conditions acceptable for satisfactory communication.

5. The receiving selector shall be designed to accept the signals as defined in paragraph 1. However, bearing in mind that coast stations may transmit additional signals (e.g. coast station identification), it is important that the reset time of the decoder should be $250 \text{ ms} \pm 40 \text{ ms}$.

6. The receiving selector should be so designed, constructed and maintained that it is resistant to atmospheric and other unwanted signals including selective calling signals other than that for which the decoder has been set up.

7. The receiving selector shall include an audible or visual means of indicating the receipt of a call and, if required, an additional facility allowing the determination of the identity of the calling station or the VHF channel on which to reply according to the needs of administrations.
8. The indicating means shall be actuated on correct reception of the calling signal, no matter whether the correct registration has occurred on the first, or the second, or both parts of the calling signal transmitted by the coast stations.
9. The indicating means shall remain actuated until reset manually.
10. The receiving selector equipment should be as simple as is practicable, be capable of reliable operation over long periods with a minimum of maintenance, and could, with advantage, include facilities for self-testing.

FIGURE 1

Composition of Selective Call Signals without Additional Information

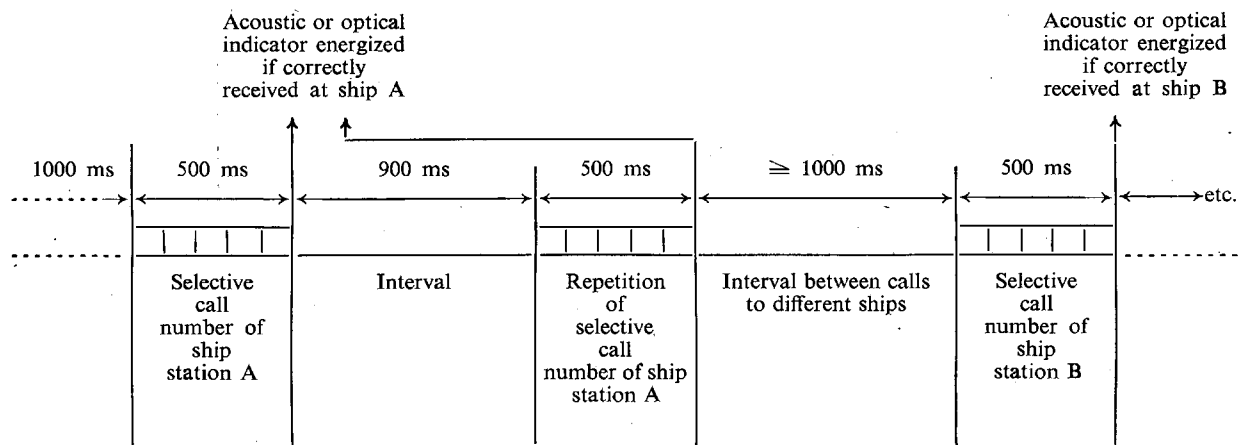
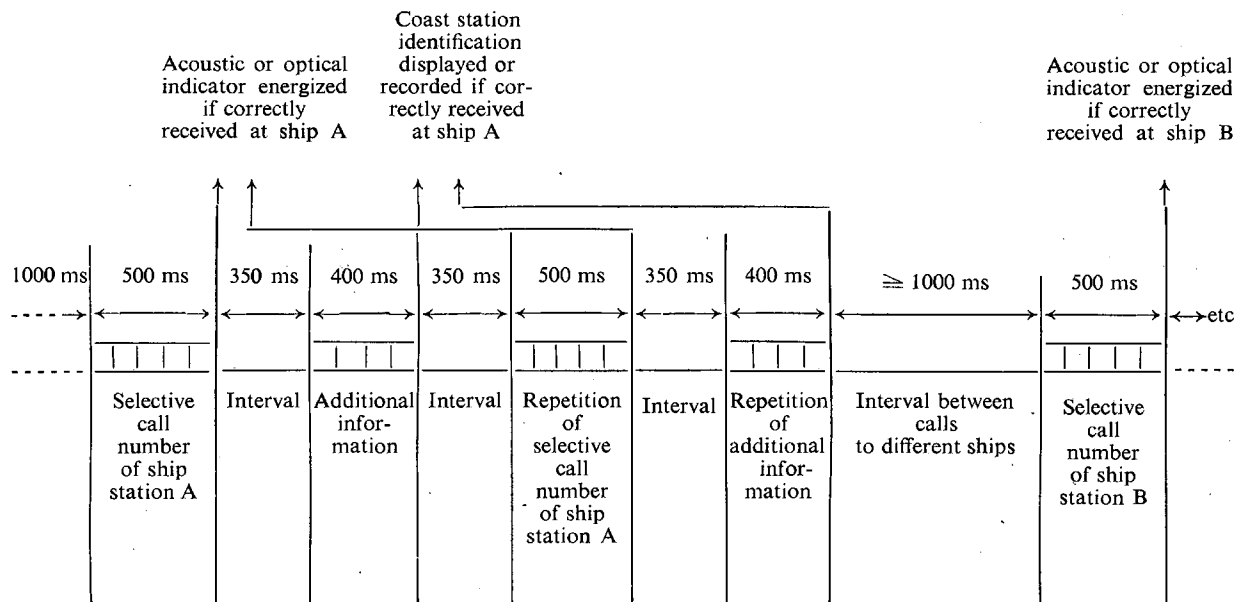


FIGURE 2

Composition of Selective Call Signals with Additional Information



**PARTIAL REVISION
OF THE ADDITIONAL RADIO REGULATIONS
GENEVA, 1959**

In Resolution No. 20 adopted by the Plenipotentiary Conference, Montreux, 1965, it was decided that a World Administrative Radio Conference to deal with matters relating to the maritime mobile service should be held in Geneva in 1967, and the Administrative Council was invited to draw up the detailed agenda for this Conference and to fix the opening date and the duration thereof at its 1966 annual session. During its 21st Session (1966), the Administrative Council, with the concurrence of a majority of the Members of the Union, adopted Resolution No. 590 which determined the Agenda of the Conference and decided that a World Administrative Radio Conference should be convened in Geneva on 18 September 1967.

* * *

The World Administrative Radio Conference to deal with matters relating to the maritime mobile service accordingly convened on the appointed date, and, in accordance with the provisions of Nos. 52 and 54 of the Convention, Montreux, 1965, considered and revised the relevant provisions of the Radio Regulations and of the Additional Radio Regulations, Geneva, 1959. Particulars of the revisions of the Additional Radio Regulations are given in Annexes AR1 to AR6 hereto.

The revised provisions of the Additional Radio Regulations, Geneva, 1959, shall form an integral part of the Additional Radio Regulations which are annexed to the International Telecommunication Convention. They shall come into force on 1 April 1969, upon which date the provisions of the Additional Radio Regulations, Geneva, 1959, which are cancelled or modified by these revisions shall be abrogated.

* * *

The delegates signing this revision of the Additional Radio Regulations, Geneva, 1959, hereby declare that, should an administration make reservations concerning the application of one or more of the revised provisions of the Additional Radio Regulations, Geneva, 1959, no other administration shall be obliged to observe that provision or those provisions in its relations with that particular administration.

* * *

Members and Associate Members of the Union shall inform the Secretary-General of their approval of the revision of the Additional Radio Regulations, Geneva, 1959, by the World Administrative Radio Conference to deal with matters relating to the maritime mobile service, Geneva, 1967. The Secretary-General will inform Members and Associate Members of the Union regarding receipt of such notifications of approval as they are received.

In witness whereof the delegates of the Members of the Union represented at the World Administrative Radio Conference to deal with matters relating to the maritime mobile service, Geneva, 1967, have signed in the names of their respective countries this revision of the Additional Radio Regulations, Geneva, 1959, in a single copy which will remain in the archives of the International Telecommunication Union and of which a certified copy will be delivered to each Member and Associate Member of the Union.

Done at Geneva, 3 November, 1967.

(The signatures follow)

(The signatures following the revision of the Additional Radio Regulations are the same as those which follow the revision of the Radio Regulations (see pages 3 to 28) with the exception of that of Cuba, the United States of America and the Territories of the United States of America who did not sign it.)

ANNEX AR 1

Revision of Article 4 of the Additional Radio Regulations

Article 4 of the Additional Radio Regulations shall be amended as follows:

Section I. General. Full-rate Radiotelegrams

Delete Regulation No. 2031.

Replace Regulation No. 2040 by the following new text:

(MOD) 2040 § 11. The land station or ship or aircraft station charges for radiotelegrams concerning stations not yet included in the appropriate list of stations are fixed, as part of its duties, by the office which collects the charge. The ship or aircraft station charges pertaining to radiotelegrams intended for mobile stations, the names or call signs of which are replaced by the indication of the route followed or by any other equivalent indication (see No. 2011), are also fixed, as part of its duties, by the office which collects the charge. They are the normal rates notified by the administration(s) concerned or, in the absence of such notification, they are the maximum charges prescribed in No. 2025.

Section II. Reduced-rate Radiotelegrams

Replace Regulation No. 2054 by the following new text:

MOD 2054 (2) Meteorological radiotelegrams must bear the service instruction =OBS= at the beginning of the preamble and the paid service indication =OBS= before the address. This paid service indication is the only one admitted.

After the title "D. Press Radiotelegrams" add the following new Regulation:

ADD 2057A § 16A. Press telegrams from a mobile station to a land station shall be admitted as press radiotelegrams.

Replace Regulation No. 2059 by the following new text:

MOD 2059 § 18. (1) The land station and ship or aircraft charges are reduced by 50 per cent. These radiotelegrams are subject to the conditions of acceptance laid down in Articles 65 to 69 of the Telegraph Regulations, Geneva Revision, 1958. For those radiotelegrams which are addressed to a destination in the country of the land station, the telegraph charge to be collected is one-half of the telegraph charge applicable to an ordinary radiotelegram.

ANNEX AR 2

Revision of Article 7 of the Additional Radio Regulations

Article 7 of the Additional Radio Regulations shall be amended as follows:

Replace Regulations Nos. 2108 and 2109 by the following new texts:

MOD 2108 a) Press radiotelegrams in the conditions specified in Nos. 2057A to 2060.

MOD 2109 b) Meteorological radiotelegrams in the conditions specified in Nos. 2053 to 2057.

After Regulation No. 2117, add the following new Regulation:

ADD 2117A k) The supplementary charges levied by the offices of origin or by mobile stations for the special radiotelegrams specified in Nos. 2110 to 2117 inclusive shall be the charges specified in the Telegraph Regulations, Geneva Revision, 1958.

Replace Regulations Nos. 2118 to 2120 by the following new texts:

MOD 2118 l) Radiotelegrams to be retransmitted by one or two mobile stations at the sender's request (=RM=), in the conditions specified in Nos. 2152 to 2154.

- MOD 2119 *m)* Radiomaritime letters and radio air letters in the conditions specified in Article 6 of these Additional Regulations.
- MOD 2120 *n)* Radiotelegrams concerning persons protected in time of war by the Geneva Conventions of 12 August 1949 (=RCT=) in the conditions specified in Nos. 2061 and 2062.

Delete Regulation No. 2121.

Replace Regulation No. 2122 by the following new text:

- MOD 2122 § 2. In addition, the following paid service indications shall be permitted in radiotelegrams: =GP=, =GPR=, =MP=, =TR=, =TFx= (from ship or aircraft to land), =TLXx= (from ship or aircraft to land), =Jx= (from land to ship or aircraft), =Réexpédié de x= (only when the charge for forwarding can be collected), =Jour=, =Nuit=, =Etat Priorité Nations=, =Etat Priorité=, =Etat=, =Remettre x= (from ship or aircraft to land).
-

ANNEX AR 3

Revision of Article 8 of the Additional Radio Regulations

Article 8 of the Additional Radio Regulations shall be amended as follows:

Section I. Radiotelegrams destined for Ships at Sea

Replace Regulations Nos. 2126, 2127, 2130 and 2131 by the following new texts:

MOD 2126 § 2. When it has not been possible for a land station to transmit to a ship station:

- a) a radiotelegram bearing the paid service indication = Jx = within the prescribed period, or
- b) a radiotelegram not bearing this service indication up to the morning of the fourth day following the date of handing-in,

the coast station informs the office of origin, which notifies the sender. The sender of the radiotelegram may then ask, by paid service advice, addressed to the coast station, either that his radiotelegram be cancelled as regards the section between the coast station and the ship station or that further attempts at transmitting it to the ship station be made during a period of another seven days at the most. Failing such a request, the radiotelegram is treated as undelivered by the coast station three days after the dispatch of the advice of non-transmission. The same applies upon the expiry of any period for further attempts which may have been requested by the sender if it has been impossible to reach the ship. The office of origin shall be immediately advised if the coast station transmits the radiotelegram during the last-mentioned period of three days. The same shall apply if the coast station transmits the radiotelegram during the additional period which may have been requested by the sender.

MOD 2127 § 3. On the morning of the day following that day on which a radiotelegram to a ship station is treated as undelivered by the coast station, the latter shall advise the office of origin which notifies the sender. The coast station and ship station charges and the charges for the special services not performed shall be refunded to the sender.

MOD 2130 (2) The coast station which carries out the redirection alters the address of the radiotelegram by placing after the name of the ship station that of the new coast station charged with the transmission and adding at the end of the preamble the service instruction "redirected from x Radio" which must be transmitted throughout the course of the radiotelegram.

(MOD) 2131 *(This modification concerns the French version only)*

ANNEX AR 4

Revision of Article 9 of the Additional Radio Regulations

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

Replace Regulations Nos. 2144 and 2151 by the following new texts:

(MOD) 2144 *(This modificaton concerns the French version only)*

MOD 2151 (4) Each administration designates the land station or stations participating in the long-distance radio service. An indication to this effect shall appear in the List of Coast Stations.

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ANNEX AR 5

Revision of Article 10 of the Additional Radio Regulations

Article 10 of the Additional Radio Regulations shall be amended as follows:

Section I. Retransmission at the Request of the Sender

Replace Regulation No. 2152 by the following new text:

MOD 2152 § 1. Mobile stations shall, if the sender so requests, serve as intermediaries for the routing of radiotelegrams; the number of intermediary mobile stations is, however, limited to two.

Section II. Routine Retransmission

Replace Regulation No. 2157 by the following new text:

MOD 2157 (3) The station assisting in the free retransmission in accordance with the provisions of Nos. **2155** and **2156** must enter the service abbreviation QSP... (name of the mobile station) at the end of the preamble of the radiotelegram.

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ANNEX AR 6

Revision of Article 11 of the Additional Radio Regulations

Article 11 of the Additional Radio Regulations shall be amended as follows:

Replace Regulation No. 2160 by the following new text:

MOD 2160 § 2. When a radiotelegram received at a mobile station cannot be delivered, that station so informs the office or mobile station of origin by a service advice. In the case of a radiotelegram originating on land, this service advice is sent, whenever possible, to the land station through which the radiotelegram passed, or, if necessary, to another land station of the same country or of a neighbouring country, so far as existing conditions or special arrangements permit. In such cases the name or call sign of the station from which the radiotelegram was received is quoted.

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FINAL PROTOCOL

At the time of signing the Final Acts of the World Administrative Radio Conference, Geneva, 1967, the undersigned delegates take note of the following statements made by signatory delegations:

ALGERIA (ALGERIAN DEMOCRATIC AND POPULAR REPUBLIC),
FEDERAL REPUBLIC OF CAMEROON, REPUBLIC OF THE IVORY COAST,
ETHIOPIA, GHANA, REPUBLIC OF LIBERIA,
REPUBLIC OF THE SENEGAL, TUNISIA

The delegations of the above-mentioned countries declare that neither their signature of the Final Acts of the Radio Administrative Conference on matters relating to the maritime mobile service, Geneva, 1967, nor the subsequent approval of these Acts by their Governments in any way imply recognition of the present Government of the Republic of South Africa or any obligation towards that Government.

ALGERIA (ALGERIAN DEMOCRATIC AND POPULAR REPUBLIC),
HASHEMITE KINGDOM OF JORDAN, STATE OF KUWAIT AND TUNISIA

The above-mentioned delegations declare that the signature, and possible subsequent approval by their respective Governments of the Final Acts of the World Administrative Radio Conference to deal with matters relating to the maritime mobile service, are not valid with respect to the Member appearing under the name of Israel, and in no way imply its recognition.

PEOPLE'S REPUBLIC OF BULGARIA, HUNGARIAN PEOPLE'S REPUBLIC,
PEOPLE'S REPUBLIC OF POLAND AND CZECHOSLOVAK SOCIALIST REPUBLIC

In signing the Final Acts of the present Conference, the delegations of the above-mentioned countries wish to make the following declaration:

The present Conference has designated frequency bands for the transmission of oceanographic data in the decametric wave bands allocated exclusively to the maritime mobile service.

The delegations of the above-mentioned countries fully recognize the importance of establishing a world-wide system for the collection and transmission of oceanographic data. Nevertheless, they consider it would be more logical and consonant with the interests of such a system if its international legal status were defined beforehand and solutions devised for all the technical problems arising in connection with the establishment and operation of the system. In the absence of technical criteria worked out by the competent international bodies, including the C.C.I.R., any decisions on this matter are bound to be incomplete and even erroneous.

For these reasons the delegations of the above-mentioned countries maintain their point of view that a solution to the problems of oceanography including the allocation of frequency bands and the assignment of frequencies for the transmission of oceanographic data, can only be worked out following a thorough study of the problem by the Intergovernmental Oceanographic Commission and the World Meteorological Organization, acting in consultation with the International Telecommunication Union—the technical and legal conditions referred to above having been fulfilled—and on the basis of a world-wide, coordinated plan for the geographical distribution of oceanographical stations and their systems of operation.

In view of the foregoing, the delegations of the abovementioned countries consider the question of the allocation and use of frequency bands for the transmission of oceanographic data as not yet settled.

CHILE

The delegation of Chile makes the following reservations for inclusion in the Final Protocol:

a) Introduction of single sideband technique

considering

1. that the present Conference has laid down dates for the replacement of the double sideband system by the single sideband system in the bands allocated to the maritime mobile service between 1 605 and 4 000 kc/s and the HF bands;

2. that the observance of these dates will make considerable financial demands that will not be easy to meet;

the delegation of Chile makes a formal reservation with regard to the dates adopted at the present Conference for the introduction of the single sideband technique into the maritime mobile service. Nevertheless, every effort will be made to observe the dates laid down.

b) General reservation

The delegation of Chile signs the Final Acts, the agreements, resolutions and recommendations of this Conference subject to their later ratification by the competent Chilean authorities.

REPUBLIC OF CHINA

In signing the Final Acts of the World Administrative Radio Conference, Geneva, 1967, the delegation of the Republic of China declares, with reference to the statement made by the representative of the reactionary Castro régime, that the Government of the Republic of China rejects and considers as null and void such a statement which is incompatible with and derogatory to its legitimate position as the Government of China.

REPUBLIC OF KOREA

The delegation of the Republic of Korea to the World Administrative Radio Conference, Geneva, 1967, declares that it is, as at the previous conferences since the accession of Korea to the Union, the only legitimate representation throughout Korea and recognized as such by the Conference.

Any declaration or reservation made in connection with or attached to the Radio Regulations by any Member of the Union, incompatible with the position of the Republic of Korea as set forth above, is illegal and therefore null and void.

REPUBLIC OF THE IVORY COAST AND REPUBLIC OF THE SENEGAL

The delegation of the Ivory Coast hereby declares that it reserves for its Government and for that of the Republic of the Senegal, by virtue of the powers conferred on it, the right to take any steps—in cooperation with the I.T.U.—they might deem necessary to safeguard their interests, should any Member or Associate Member fail to observe in any way the provisions of the revised version of the Radio Regulations, Geneva, 1959, established by the World Administrative Radio Conference to deal with matters relating to the maritime mobile service, Geneva, 1967, or if reservations made by other countries should jeopardize the proper working of their telecommunication services.

CUBA

On signing the Final Acts of the Maritime Mobile Radio Conference, Geneva, 1967, the delegation of Cuba, on behalf of the Government of the Republic of Cuba, makes the following declarations:

I

Considering

a) that there is no agreement on legislation regulating all matters concerned with oceanographic data transmission under world-wide juridical standards;

b) that technical data and an organized world-wide system for establishing a plan for collecting and supplying oceanographic information to all countries do not exist;

c) that this Conference approved without unanimity the setting aside of a frequency band for the transmission of oceanographic data without prior establishment of the technical, organizational and juridical bases for the carrying out of such a plan;

Cuba accordingly makes a formal reservation

as regards everything approved in this Conference in connection with the establishment of specific bands in the radio spectrum allocated to the maritime mobile service for the exclusive use of oceanographic data transmission, so long as the bases of a world-wide system, coordinated for the collection of such data, do not exist and there is no plan which would allow all countries to participate under equal conditions.

II

Considering

a) that several countries have expressed themselves in favour of later dates than that agreed by the present Conference for the introduction of single sideband technique in the maritime mobile bands;

b) that no single criterion has been found on the dates of implementation, which shows that various countries are not in sufficiently developed economic, technical and operational conditions to introduce this system by the agreed date;

c) that the Conference has not taken into account the unequal development of the various countries represented;

we therefore make a formal reservation as regards the dates approved by the present Conference for the introduction of single sideband technique in the maritime mobile service.

III

1. The delegation of the traitor régime of Saigon cannot, in this Conference, nor in any other, represent the heroic people of South Vietnam. The sole legitimate representative of the people of South Vietnam is the National Liberation Front of South Vietnam.
2. It is ridiculous and without any legal value that the delegates of the puppet régime of South Korea should presume to represent all Korea at this Conference. The Government of South Korea is at no time representative of the Korean people.
3. The presence and the signature of the Final Acts of this Conference by the delegates of the puppet régime of Taiwan are illegal and illogical. The legitimate representatives of China can be appointed only by the Government of the Chinese People's Republic.

GHANA

The delegation of the Republic of Ghana reserves the right of its Government to take any action it deems necessary to safeguard its interests should Members or Associate Members in any way fail to comply with the requirements of the Radio Regulations of the World Administrative Radio Conference, Geneva, 1967, or should reservations by other countries jeopardize its telecommunication services.

REPUBLIC OF INDONESIA

Bearing in mind that the new five-year development plan, scheduled to start in 1969, is still being formulated, the Indonesian delegation, on behalf of its Administration, reserves its position, with regard to the target dates (1.1.1972) mentioned (No. 1351A of the Revised Radio Regulations, Geneva, 1967) in paragraphs 2 and 3 of Resolution No. MAR 6.

STATE OF ISRAEL

The declarations made by the Governments of Algeria, Jordan, Kuwait and Tunisia being in flagrant contradiction to the principles and purposes of the International Telecommunication Union and therefore void of any legal validity, the Government of Israel wishes to put on record that it rejects these declarations outright and will proceed on the assumption that they can have no validity as to the rights and duties of any Member State of the International Telecommunication Union.

In any case, the Government of Israel will avail itself of its rights to safeguard its interests should the Governments of Algeria, Jordan, Kuwait and Tunisia in any way violate any of the articles of the International Telecommunication Convention, including any of the Regulations annexed thereto.

REPUBLIC OF LIBERIA

The delegation of the Republic of Liberia hereby reserves the right of its Government to take any action it deems necessary to safeguard its interests should Members or Associate Members in any way fail to comply with the requirements of the World Administrative Radio Conference, Geneva, 1967, or should reservations by other countries jeopardize its telecommunication services.

MALAYSIA

Upon signing the Final Acts of the World Administrative Radio Conference, Geneva, 1967, the delegation of Malaysia declares that it reserves the right of the Government of Malaysia to take any action it deems necessary to safeguard its interests should Members or Associate Members in any way fail to comply with the requirements of the Final Acts of the World Administrative Radio Conference, Geneva, 1967, or should any reservation made by Members or Associate Members jeopardize its telecommunication services.

PAKISTAN

The delegation of Pakistan declares that its Government would do its utmost to abide by the various decisions of the World Administrative Radio Conference, Geneva, 1967. However, Pakistan reserves the right to take all necessary action to safeguard its interests should a Member or Associate Member fail to abide by the decisions of the same Conference or should reservations made by other administrations jeopardize the telecommunication services of Pakistan.

REPUBLIC OF SINGAPORE

In signing the Final Acts of the World Administrative Radio Conference, Geneva, 1967, the delegation of the Republic of Singapore reserves for its Government the right to take such action as it may consider necessary to safeguard its interests should any country fail in any way to comply with the requirements of the Final Acts of this Conference or should reservations by any country jeopardize the telecommunication services of the Republic of Singapore.

REPUBLIC OF SOUTH AFRICA

In signing the Final Acts of the World Administrative Radio Conference, Geneva, 1967, the delegation of the Republic of South Africa declares that it represents the legal Government of the Republic of South Africa and does not accept any reservations made by other delegations impinging upon the status of the Government of the Republic of South Africa. Furthermore, the delegation declares that its country reserves the right to take all necessary steps to protect its radio services in cases where any Member or Associate Member of the Union fails to comply with the provisions of the Radio Regulations and Additional Radio Regulations as revised by the present Conference or where the reservations made by Members have a harmful effect on the telecommunication services of the Republic of South Africa.

UNION OF SOVIET SOCIALIST REPUBLICS

In view of the importance of establishing a world-wide system for the transmission of oceanographic data and the fact that the actual allocation of frequencies for oceanography should only be made with reference to such a world-wide system, the delegation of the Union of Soviet Socialist Republics has submitted proposals to the World Administrative Radio Conference, Geneva, 1967, recommending that the Intergovernmental Oceanographic Commission (I.O.C.) and the World Meteorological Organization (W.M.O.) work out an international system of this sort and determine the frequency requirements of oceanography with the help of telecommunication experts.

Taking into consideration that specified frequency bands have been allocated for the transmission of oceanographic data before a plan for the establishment of a world-wide system for the collection of oceanographic data has been worked out and agreed upon by the countries concerned, the Telecommunication Administration of the U.S.S.R. considers that the question of allocating frequencies for the transmission of oceanographic data has been left open.

REPUBLIC OF VIET-NAM

In signing the Final Acts of the World Administrative Radio Conference, Geneva, 1967, the Viet-Nam delegation makes the following reservations on behalf of the Republic of Viet-Nam:

I

The delegation of the Republic of Viet-Nam reserves for its Government the right to take such action as it may consider necessary to safeguard its interests should reservations by any country jeopardize the telecommunication services of the Republic of Viet-Nam.

II

The statements made by certain delegates during the present Conference about the delegation of Viet-Nam are without any legal basis and are considered invalid.

(The signatures follow)

(The signatures following the Final Protocol are the same as those which follow the revision of the Radio Regulations on pages 3 to 28.)

RESOLUTION No. MAR 1

**Relating to the Abrogation of Obsolete Recommendations
of the Administrative Radio Conference, Geneva, 1959**

The World Administrative Radio Conference, Geneva, 1967,

considering

a) that all necessary action has been taken on the following Recommendations of the Administrative Radio Conference, Geneva, 1959:

Recommendation No. 22 to the Intergovernmental Maritime Consultative Organization, the International Civil Aviation Organization and to Administrations relating to an International Radiotelephone Code for the Maritime Mobile Service;

Recommendation No. 23 to the Safety of Life at Sea Conference relating to the Use of the Term "Emergency (Reserve)";

Recommendation No. 24 to the Governments Signatory to the International Convention for the Safety of Life at Sea relating to the Adoption of a Radiotelephone Alarm Signal;

Recommendation No. 25 to the International Conference on Safety of Life at Sea relating to Distress, Urgency and Safety Communications;

b) that the undermentioned Recommendations of the Administrative Radio Conference, Geneva, 1959, are obsolete:

Recommendation No. 26 relating to a Reclassification of International Public Correspondence Categories of Ship Stations;

Recommendation No. 27 relating to Hours of Service for Ship Stations;

Recommendation No. 28 relating to the Use of Single Sideband Systems by the Maritime Mobile Service;

Recommendation No. 30 relating to the Phonetic Figure Table;

resolves

that the said Recommendations are abrogated.

RESOLUTION No. MAR 2

**Relating to the Establishment of a Manual
for Use by the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1967,

considering

that provision has been made in Appendix 11 to the Radio Regulations for the carriage by ship stations of a manual for use by the maritime mobile service ;

resolves

1. that those provisions of
 - a) the Radio Regulations (including Appendices thereto) and the Additional Radio Regulations, as revised by the World Administrative Radio Conference, Geneva, 1967,
 - b) the Telegraph Regulations and the Telephone Regulations, and
 - c) the International Telecommunication Convention,

which are applicable or useful to stations in the maritime mobile service shall be assembled by the Secretary-General in a manual entitled "Manual for Use by the Maritime Mobile Service";

2. that the Secretary-General shall publish such a manual, using as a basis the "Manual for Use by the Mobile Services" published in 1961 with the exception of such provisions as do not relate to the maritime mobile service, and shall make it available by 1 October 1968 at the latest;
3. that the Secretary-General may consult the following Administrations on questions relating to the tasks entrusted to him in accordance with paragraphs 1 and 2 above:

United States of America
France
Italy
Kingdom of the Netherlands
United Kingdom of Great Britain and Northern Ireland
Sweden;

4. that the Secretary-General shall examine the possibility of issuing this manual in loose-leaf form to facilitate its being brought up to date following any revision by future conferences of the provisions referred to in 1. *a)*, *b)* and *c)* above;

5. that, as from 1 April 1969, the "Manual for Use by the Maritime Mobile Service" shall replace, so far as the maritime mobile service is concerned, the "Manual for Use by the Mobile Services" published in accordance with the provisions of Resolution No. 12 of the Administrative Radio Conference, Geneva, 1959.

RESOLUTION No. MAR 3

Relating to the Classes of Emissions to be used for Remote-Controlled Coast Stations in the Maritime Mobile Radiotelephone Service

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that, in Recommendation 258-1, the C.C.I.R. (Oslo, 1966) advocated the use of both class A3A and class A3J emissions;
- b) that, under Nos. 1336A and 1351A of the Radio Regulations, coast stations will be required to use class A3H emissions during the period of transition to single sideband operation;
- c) that some administrations have already converted their services to single sideband operation in accordance with C.C.I.R. Recommendation 258 (Los Angeles, 1959);
- d) that during this period the interim provision of three classes of emission may, in the case of remote-controlled coast stations, cause considerable hardship to the above-mentioned administrations;

resolves

1. that, during the transitional period¹ of conversion from double sideband to single sideband operation, coast stations equipped for at least class A3H and class A3A emissions will satisfy the requirements of ship stations fitted for reception of class A3, class A3A or class A3J emissions; and
2. that after the end of the transitional period¹ such coast stations shall be capable of using class A3A and A3J emissions, except that the use of class A3H emissions shall be required on the frequency 2 182 kc/s in accordance with the provisions of No. 1337 of the Radio Regulations.

¹ See Resolutions Nos. MAR 5 and MAR 6.

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RESOLUTION No. MAR 4

Relating to the Conversion to Single Sideband Technique of Stations of the Radiotelephone Maritime Mobile Service Operating in the Bands between 1 605 and 4 000 kc/s

The World Administrative Radio Conference, Geneva, 1967,

considering

- a)* that radiotelephone stations in the maritime mobile service operating with double sideband emissions in the bands between 1 605 and 4 000 kc/s use a bandwidth of the order of 6 kc/s;
- b)* that these stations will have to use single sideband operation in future;
- c)* that, during the period of conversion to single sideband operation, every precaution must be taken to avoid harmful interference between stations operating with double sideband emissions and those operating with single sideband emissions;

resolves

- 1. that the transition to single sideband operation in the stations referred to in considerandum *a)* above shall be made in accordance with the following provisions:
 - 1.1 the carrier frequency of the single sideband channel in the upper part of the previous double sideband channel shall be the same as the carrier frequency of that channel;
 - 1.2 the carrier frequency of the single sideband channel in the lower part of the previous double sideband channel shall be 3 kc/s lower than the carrier frequency of the previous double sideband channel when the latter has a carrier frequency at least 6 kc/s

above that of the lower adjacent double sideband radiotelephone channel;

- 1.3 in Region 1, the carrier frequency of the single sideband channel in the lower part of the previous double sideband channel for intership communication shall be 2.5 kc/s below the carrier frequency of the previous double sideband channel when the latter has a carrier frequency 5 kc/s above that of the lower adjacent double sideband radiotelephone channel;
 2. that class A3H emissions shall not be used on single sideband channels in the lower part of previous double sideband channels.
-

RESOLUTION No. MAR 5

**Relating to the Use of Single Sideband Technique in the Radiotelephone
Maritime Mobile Service Bands between 1 605 and 4 000 kc/s**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) Recommendation No. 28 of the Administrative Radio Conference, Geneva, 1959;
- b) that the present Conference has decided to require the use of single sideband techniques, except in certain circumstances;
- c) the desirability of replacing double sideband emissions by single sideband emissions as early as possible in the maritime mobile service bands between 1 605 and 4 000 kc/s;

resolves

that, unless otherwise specified in the Final Acts of this Conference, radiotelephone stations in the maritime mobile service operating in the bands between 1 605 and 4 000 kc/s shall comply with the following conditions:

1. as from 1 January 1973, any new installations of double sideband equipment in ship stations shall not be permitted, except in the cases covered by Nos. 984, 987 and 1323 of the Radio Regulations; however, administrations shall endeavour to discontinue the installation of double sideband equipment at the earliest possible date after 1 April 1969;
2. coast stations shall be capable of single sideband operation at the earliest possible date; furthermore, they shall discontinue double sideband emissions as early as possible, and, in any case, not later than 1 January 1975;

3. until 1 January 1982, coast and ship stations equipped for single sideband operation shall also be equipped to transmit class A3H emissions compatible with reception by double sideband equipment. On the carrier frequency 2 182 kc/s this requirement with respect to class A3H emissions will continue beyond 1 January 1982;

4. with the following exceptions, as from 1 January 1982, the use of class A3A and A3J emissions only shall be authorized:

- class A3 and A3H emissions for ship, survival craft and aircraft stations transmitting with a carrier frequency of 2 182 kc/s;
- class A3H emissions for coast stations transmitting with a carrier frequency of 2 182 kc/s;
- in Regions 1, 3 and in Greenland, in exceptional circumstances, class A3H emissions for coast stations sending safety messages on the carrier frequency 2 170·5 kc/s;
- classes of emission A2H, A2A and A2J for coast stations for selective calling on the carrier frequency 2 170·5 kc/s;
- the class of emission specified in Appendix 20A to the Radio Regulations for emergency position-indicating radiobeacons (see also No. **1476G** of the Radio Regulations);

5. as from 1 January 1982, ship and aircraft stations required to employ single sideband operation on the working frequencies of the maritime mobile service shall use only class A3H emissions on the carrier frequency 2 182 kc/s.

RESOLUTION No. MAR 6

**Relating to the Use of Single Sideband Technique in the
Radiotelephone Maritime Mobile Service Bands between
4 000 and 23 000 kc/s**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) Recommendation No. 28 and Resolution No. 3 of the Administrative Radio Conference, Geneva, 1959;
- b) Recommendation No. 3 contained in the Final Report of the Panel of Experts convened for the purpose of devising ways and means of reducing the congestion in the bands between 4 and 27.5 Mc/s, Geneva, 1963;
- c) the desirability of replacing double sideband emissions by single sideband emissions as early as possible in the maritime mobile service bands between 4 000 and 23 000 kc/s;

resolves

that, unless otherwise specified in the Final Acts of this Conference or in any decision concerning the use of class of emission A3B which may be taken pursuant to Resolution No. MAR 13, radiotelephone stations in the maritime mobile service operating in the bands between 4 000 and 23 000 kc/s shall comply with the conditions set out in the following provisions:

1. as from 1 January 1972, any new installation of double sideband equipment in ship stations shall not be permitted. However, administrations shall endeavour to discontinue the installation of double sideband equipment at the earliest possible date after 1 April 1969;

2. as from 1 January 1972, coast stations shall cease all¹ double sideband emissions;

3. a) until 1 January 1978, coast stations equipped for single sideband operation shall be able to use class A3H emissions in addition to class A3A and A3J emissions¹;

b) this provision should, until 1 January 1978, also apply to ship stations equipped for single sideband operation;

c) in any event, ship stations equipped for single sideband operation prior to 1 January 1972 shall be able to transmit class A3H emission in order to ensure compatibility with coast stations not yet equipped with single sideband receivers;

4. as from 1 January 1978, class A3A and A3J emissions only shall be authorized.

¹ See also Resolution No. MAR 3.

RESOLUTION No. MAR 7

**Relating to the Recommendations and Standards for Emergency Position-
Indicating Radiobeacons Operating
on the Frequencies 121.5 Mc/s and 243 Mc/s**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a)* that emergency position-indicating radiobeacons operating on the frequencies 121.5 Mc/s and 243 Mc/s are intended to facilitate search and rescue operations;
- b)* that the frequencies 121.5 Mc/s and 243 Mc/s are in common use by aircraft engaged in search and rescue operations;
- c)* that the International Civil Aviation Organization has established recommended signal characteristics and technical specifications for aircraft equipment operating on 121.5 Mc/s and/or 243 Mc/s; .

resolves

that administrations authorizing the use of emergency position-indicating radiobeacons on 121.5 Mc/s and/or 243 Mc/s should ensure that such radiobeacons comply with the relevant recommendations and standards of the International Civil Aviation Organization and the International Radio Consultative Committee.

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RESOLUTION No. MAR 8

Relating to the Notification of Ship Station Frequencies used for Narrow-Band Direct-Printing Telegraph and Data Transmission Systems

The World Administrative Radio Conference, Geneva, 1967,

considering

- a)* that in Appendix 15 to the Radio Regulations certain sections of the HF bands allocated to the maritime mobile service are reserved for narrow-band direct-printing telegraph and data transmission systems;
- b)* that the development by administrations of radiotelegraph services between ship and shore using the above-mentioned systems is at an early stage;
- c)* that in consequence the present Conference is not in a position to decide whether it is necessary to regulate the orderly use of frequencies for the transmission by ship stations of direct-printing telegraph signals or on what basis this might be done;
- d)* that these questions should be considered by the World Administrative Radio Conference referred to in Recommendation No. MAR 6;
- e)* that the existing provisions of the Radio Regulations do not provide administrations with appropriate guidance for the period between the coming into force of the Final Acts of the present Conference and the coming into force of the Final Acts of the Conference mentioned in *d)* above;

resolves

1. that, during the period referred to in *e)* above, any administration operating or bringing into operation narrow-band direct-printing telegraph or data transmission systems for ships, shall notify to the International Frequency Registration Board, for recording in the Master International

Frequency Register, and to the Secretary-General for inclusion in the List of Coast Stations, the frequencies on which ship stations participating in the service will be required to transmit;

2. that these notices concerning frequencies used for reception by coast stations shall not be subject to technical examination by the Board, and that the assignments notified shall be recorded in the Master Register for information only, bearing no date in Column 2, but with a suitable remark in the Remarks Column merely referring to this Resolution;

3. that these entries in the Master Register shall not prejudice any decisions which may be taken by the World Administrative Radio Conference referred to in Recommendation No. MAR 6.

RESOLUTION No. MAR 9

**Relating to the Unauthorized Use of Frequencies in the Bands
Allocated to the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that monitoring observations of the use of frequencies in the band 2 170-2 194 kc/s and the bands allocated exclusively to the maritime mobile service between 4 063 and 25 110 kc/s show that a number of frequencies in these bands are being used by stations of services other than the maritime mobile service;
- b) that these stations are causing harmful interference to the maritime mobile service and that a considerable number of emissions, the sources of which could not be positively identified, were observed in these bands;
- c) that radio is the sole means of communication of the maritime mobile service;
- d) that it is of paramount importance that the international distress frequencies and the frequencies for international calls and public correspondence should be kept free from harmful interference, since the former are essential for the protection of the safety of life and property and the latter are essential to ensure the orderly and efficient operation of communications in the maritime mobile service;

resolves to urge

administrations to ensure that stations of services other than the maritime mobile service abstain from using frequencies in the guard-bands of calling and distress frequencies and in the bands allocated exclu-



sively to that service, except under the conditions expressly specified in Nos. **115**, **208**, **209**, **211**, **213** or **415** of the Radio Regulations, Geneva, 1959;

invites

the International Frequency Registration Board to continue to organize monitoring observations in the guard-bands of calling and distress frequencies and in the bands allocated exclusively to the maritime mobile service between 4063 kc/s and 25 110 kc/s with a view to eliminating the emissions of out-of-band stations which cause, or are likely to cause, harmful interference to the maritime mobile service; and to seek the co-operation of administrations in identifying the sources of such emissions by all available means, including the use of automatic recording equipment, direction-finding and field strength measurements, and in securing the cessation of these emissions.

RESOLUTION No. MAR 10

Relating to the Transfer of certain Frequency Assignments for Coast Radiotelegraph Stations in the Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kc/s

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that the frequency band limits for coast radiotelegraph stations have been modified as a result of the revision of Appendices 15 and 17 to the Radio Regulations;
- b) that the new limits of the frequency bands for coast radiotelegraph stations are:

4 231	-	4 361	kc/s
6 345.5	-	6 514	kc/s
8 459.5	-	8 728.5	kc/s
12 689	-	13 107.5	kc/s
16 917.5	-	17 255	kc/s
22 374	-	22 624.5	kc/s

recognizing

that the rearrangement of the frequency usage within the frequency bands allocated to the maritime mobile service should be carried out in several stages and that the transfer of certain coast radiotelegraph station frequency assignments governs any subsequent arrangements and should therefore be one of the phases of the rearrangement;

resolves

1. that the frequency assignments to coast radiotelegraph stations which, on 1 April 1969, are recorded in the Master International Frequency Register, shall be transferred as follows:

— any frequency assignment f in the 4 361 - 4 368 kc/s band shall be transferred to the frequency $f-129$ kc/s;

- any frequency assignment f in the 6 514 - 6 525 kc/s band shall be transferred to the frequency $f-168$ kc/s;
 - any frequency assignment f in the 8 728.5 - 8 745 kc/s band shall be transferred to the frequency $f-269$ kc/s;
 - any frequency assignment f in the 13 107.5 - 13 130 kc/s band shall be transferred to the frequency $f-419$ kc/s;
 - any frequency assignment f in the 17 255 - 17 290 kc/s band shall be transferred to the frequency $f-338$ kc/s;
 - any frequency assignment f in the 22 624.5 - 22,650 kc/s band shall be transferred to the frequency $f-251$ kc/s;
2. that low traffic ships will discontinue the use of frequencies above 4 229 kc/s, 6 343.5 kc/s, 8 458 kc/s, 12 687 kc/s, 16 916 kc/s and 22 370 kc/s as soon as practicable, and in any event not later than 1 February 1970;
3. that between 2 February 1970 and 28 February 1970, administrations shall transfer the transmitting frequencies of their coast radio-telegraph stations as indicated in paragraph 1 above. Administrations shall notify the I.F.R.B. of these transfers, in accordance with the provisions of Section I of Article 9 of the Radio Regulations;
4. provided that the notices received by the I.F.R.B. in accordance with paragraph 3 above do not contain any change in the basic characteristics of the originally recorded assignment, other than the assigned frequency, the I.F.R.B. shall record the change in the Master Register. The dates to be entered in the appropriate parts of Column 2 shall be those of the original assignment. Should any other change in the basic characteristics of the original assignment be notified, this change shall be dealt with in accordance with the provisions of Article 9 of the Radio Regulations;
5. that on 1 March 1970, the I.F.R.B. shall also include in the Master Register, in respect of each original assignment the transfer of which has not at that time been notified to the Board, a provisional entry determined in accordance with paragraph 1 above. For such provisional entries, the dates in Column 2 recorded for the original assignment shall be retained. The original entries shall be retained in the Master Register

but with a special remark in the Remarks Column and any dates in Column 2a shall be transferred to Column 2b;

6. that thirty days after 1 March 1970, the I.F.R.B. shall send to those administrations which have not yet notified the transfer of frequency assignments to their coast radiotelegraph stations in accordance with paragraphs 1 and 3 above, an extract from the Master Register showing the relevant entries contained therein on their behalf, and shall remind them of the provisions of this Resolution;

7. that if, sixty days after the despatch of these extracts, an administration has still not notified to the I.F.R.B. the transfer of an existing assignment in accordance with paragraphs 1 and 3 above, the corresponding provisional new entry shall be deleted from the Master Register and the original entry shall be retained with its date in Column 2b and a special remark in the Remarks Column; if, however, the administration concerned notifies the transfer during the sixty days period, the provisions of paragraph 4 above shall apply;

8. that in those cases where the foregoing transfer procedure will result in an increase in the probability of a specific frequency assignment causing or experiencing harmful interference, the I.F.R.B. shall render such assistance as will be necessary to the administrations concerned in order to solve the problem. In doing so, the I.F.R.B. shall apply the provisions of No. 534 or Nos. 629 to 633 of the Radio Regulations, as the case may be.

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RESOLUTION No. MAR. 11

Relating to the Transfer of Frequency Assignments to Coast Radiotelephone Stations in the Frequency Bands allocated exclusively to the Maritime Mobile Service between 4 000 and 23 000 kc/s

The World Administrative Radio Conference, Geneva, 1967,

considering

a) that the frequency allotment plan appearing in Appendix 25 to the Radio Regulations, Geneva, 1959, is to be retained until a new plan is established by the Conference mentioned in Recommendation No. MAR 6;

b) that, as a result of the extension of the bands allocated exclusively to the maritime mobile service for radiotelephony, new duplex radiotelephone channels will be available to the maritime mobile service and will be contained in Section III of Appendix 25 MOD (see Resolution No. MAR 15);

c) that the separation between the transmitting frequencies of coast and ship stations should remain constant within each band;

d) that on the whole it is easier and cheaper to change transmitting frequencies for coast stations than for ship stations, taking into account the large number of ship stations;

e) that the additions to the bands allocated exclusively to the maritime mobile service for radiotelephony will become available on 1 March 1970 (see Resolution No. MAR 12);

f) that the new channels should be brought into use as soon as possible;

resolves

1. that, on 1 March 1970, the frequencies appearing in Appendix 25 to the Radio Regulations, Geneva, 1959, shall be replaced by the frequencies appearing in Annex 1 to this Resolution. This Appendix, as modified, shall also contain the new Section III (see Annex 3) referred to in Resolution No. MAR 15 and shall then be known as Appendix 25 MOD;
2. that, on 1 March 1970, the I.F.R.B. shall bring the appropriate initial entries, listed in the Master International Frequency Register in accordance with the provisions of paragraph 2.1 c) of Resolution No. 1 of the Administrative Radio Conference, Geneva, 1959, into conformity with the allotments included in Appendix 25 MOD referred to above;
3. that the frequency assignments to high frequency coast radiotelephone stations recorded in the Master Register on 1 March 1970 on the channels defined in Appendix 17 to the Radio Regulations, Geneva, 1959, shall be transferred in accordance with the Tables appearing in Annex 1 (double sideband or independent sideband emissions) or Annex 2 (single sideband emissions), as the case may be;
4. that the frequency assignments to coast radiotelephone stations in the high frequency bands allocated exclusively for that purpose, recorded in the Master Register on 1 March 1970, but not in accordance with Appendix 17 to the Radio Regulations, Geneva, 1959, shall be transferred in such a way as to retain, with respect to the frequencies specified in Section A of Appendix 17, the same relative positions they occupied in relation to the frequencies listed in Appendix 17 to the Radio Regulations, Geneva, 1959;
5. that, on 1 March 1970 at 0001 G.M.T., administrations shall modify, as indicated in paragraphs 3 and 4 above, the transmitting frequencies of their coast radiotelephone stations. They shall notify these modifications to the I.F.R.B. in accordance with the provisions of Section I of Article 9 of the Radio Regulations;

6. that, provided the notice received by the I.F.R.B. in accordance with paragraph 5 above does not contain any change in the basic characteristics of the originally recorded assignment, other than the assigned frequency, the I.F.R.B. shall record the change in the Master Register; the dates to be entered in the appropriate parts of Column 2 shall be those of the original assignment. Should any other change be notified in the basic characteristics of the original assignment, it shall be dealt with in accordance with the provisions of Article 9 of the Radio Regulations;

7. that, on 1 March 1970, the I.F.R.B. shall also include in the Master Register, in respect of each original assignment the transfer of which has not at that time been notified to the I.F.R.B., a provisional entry determined in accordance with the provisions of paragraphs 3 or 4 above. For such provisional entries, the dates in Column 2 recorded for the original assignment shall be retained. The original entries shall be retained in the Master Register, but with a special remark in the Remarks Column, and any dates in Column 2a shall be transferred to Column 2b;

8. that, thirty days after that date, the I.F.R.B. shall send to those administrations which have not yet notified the transfer of frequency assignment to their coast radiotelephone stations in accordance with paragraphs 3 or 4 and 5 above, an extract from the Master Register showing the relevant entries contained therein on their behalf, and shall remind them of the provisions of this Resolution;

9. that if, sixty days after the despatch of these extracts, an administration has still not notified to the I.F.R.B. the transfer of an existing assignment in accordance with paragraphs 3 or 4 and 5 above, the corresponding provisional new entry shall be deleted from the Master Register and the original entry shall be retained with its date in Column 2b and a special remark in the Remarks Column. If, however, the administration concerned notifies the transfer during the sixty days period, the provisions of paragraph 6 above shall apply.

ANNEX 1

Table of Transmitting Frequencies of Coast Radiotelephone Stations (in kc/s)
(Double sideband or independent sideband ¹ emissions)

4 Mc/s band		8 Mc/s band		12 Mc/s band		16 Mc/s band		22 Mc/s band	
Old frequencies	New frequencies	Old frequencies	New frequencies	Old frequencies	New frequencies	Old frequencies	New frequencies	Old frequencies	New frequencies
4 371.1	4 364.7	8 748.1	8 732.1	13 133.5	13 112.5	17 293.5	17 258.5	22 653.5	22 629.0
4 377.4	4 371.0	8 754.4	8 738.4	13 140.5	13 119.5	17 300.5	17 265.5	22 660.5	22 636.0
4 383.8	4 377.4	8 760.8	8 744.8	13 147.5	13 126.5	17 307.5	17 272.5	22 667.5	22 643.0
4 390.2	4 383.8	8 767.2	8 751.2	13 154.5	13 133.5	17 314.5	17 279.5	22 674.5	22 650.0
4 396.6	4 390.2	8 773.6	8 757.6	13 161.5	13 140.5	17 321.5	17 286.5	22 681.5	22 657.0
4 403.0	4 396.6	8 780.0	8 764.0	13 168.5	13 147.5	17 328.5	17 293.5	22 688.5	22 664.0
4 409.4	4 403.0	8 786.4	8 770.4	13 175.5	13 154.5	17 335.5	17 300.5	22 695.5	22 671.0
4 415.8	4 409.4	8 792.8	8 776.8	13 182.5	13 161.5	17 342.5	17 307.5	22 702.5	22 678.0
4 422.2	4 415.8	8 799.2	8 783.2	13 189.5	13 168.5	17 349.5	17 314.5	22 709.5	22 685.0
4 428.6	4 422.2	8 805.6	8 789.6	13 196.5	13 175.5	17 356.5	17 321.5	22 716.5	22 692.0
4 434.9	4 428.6	8 811.9	8 796.0						

¹ See Resolution No. MAR 13

ANNEX 2

Table of Single Sideband Transmitting Frequencies of Coast Radiotelephone Stations (in kc/s)

4 Mc/s band				8 Mc/s band			
Old frequencies		New frequencies		Old frequencies		New frequencies	
Carrier frequencies	Assigned frequencies	Carrier frequencies	Assigned frequencies	Carrier frequencies	Assigned frequencies	Carrier frequencies	Assigned frequencies
4 368.0	4 369.4	4 361.6	4 363.0	8 745.0	8 746.4	8 729.0	8 730.4
4 371.1	4 372.5	4 364.7	4 366.1	8 748.1	8 749.5	8 732.1	8 733.5
4 374.3	4 375.7	4 367.8	4 369.2	8 751.3	8 752.7	8 735.2	8 736.6
4 377.4	4 378.8	4 371.0	4 372.4	8 754.4	8 755.8	8 738.4	8 739.8
4 380.7	4 382.1	4 374.2	4 375.6	8 757.7	8 759.1	8 741.6	8 743.0
4 383.8	4 385.2	4 377.4	4 378.8	8 760.8	8 762.2	8 744.8	8 746.2
4 387.1	4 388.5	4 380.6	4 382.0	8 764.1	8 765.5	8 748.0	8 749.4
4 390.2	4 391.6	4 383.8	4 385.2	8 767.2	8 768.6	8 751.2	8 752.6
4 393.5	4 394.9	4 387.0	4 388.4	8 770.5	8 771.9	8 754.4	8 755.8
4 396.6	4 398.0	4 390.2	4 391.6	8 773.6	8 775.0	8 757.6	8 759.0
4 399.9	4 401.3	4 393.4	4 394.8	8 776.9	8 778.3	8 760.8	8 762.2
4 403.0	4 404.4	4 396.6	4 398.0	8 780.0	8 781.4	8 764.0	8 765.4
4 406.3	4 407.7	4 399.8	4 401.2	8 783.3	8 784.7	8 767.2	8 768.6
4 409.4	4 410.8	4 403.0	4 404.4	8 786.4	8 787.8	8 770.4	8 771.8
4 412.7	4 414.1	4 406.2	4 407.6	8 789.7	8 791.1	8 773.6	8 775.0
4 415.8	4 417.2	4 409.4	4 410.8	8 792.8	8 794.2	8 776.8	8 778.2
4 419.1	4 420.5	4 412.6	4 414.0	8 796.1	8 797.5	8 780.0	8 781.4
4 422.2	4 423.6	4 415.8	4 417.2	8 799.2	8 800.6	8 783.2	8 784.6
4 425.5	4 426.9	4 419.0	4 420.4	8 802.5	8 803.9	8 786.4	8 787.8
4 428.6	4 430.0	4 422.2	4 423.6	8 805.6	8 807.0	8 789.6	8 791.0
4 431.8	4 433.2	4 425.4	4 426.8	8 808.8	8 810.2	8 792.8	8 794.2
4 434.9	4 436.3	4 428.6	4 430.0	8 811.9	8 813.3	8 796.0	8 797.4

ANNEX 2 (continued)

Table of Single Sideband Transmitting Frequencies of Coast Radiotelephone Stations (in kc/s)

12 Mc/s band				16 Mc/s band			
Old frequencies		New frequencies		Old frequencies		New frequencies	
Carrier frequencies	Assigned frequencies	Carrier frequencies	Assigned frequencies	Carrier frequencies	Assigned frequencies	Carrier frequencies	Assigned frequencies
13 130-2	13 131-6	13 109-0	13 110-4	17 290-2	17 291-6	17 255-0	17 256-4
13 133-5	13 134-9	13 112-5	13 113-9	17 293-5	17 294-9	17 258-5	17 259-9
13 137-2	13 138-6	13 116-0	13 117-4	17 297-2	17 298-6	17 262-0	17 263-4
13 140-5	13 141-9	13 119-5	13 120-9	17 300-5	17 301-9	17 265-5	17 266-9
13 144-2	13 145-6	13 123-0	13 124-4	17 304-2	17 305-6	17 269-0	17 270-4
13 147-5	13 148-9	13 126-5	13 127-9	17 307-5	17 308-9	17 272-5	17 273-9
13 151-2	13 152-6	13 130-0	13 131-4	17 311-2	17 312-6	17 276-0	17 277-4
13 154-5	13 155-9	13 133-5	13 134-9	17 314-5	17 315-9	17 279-5	17 280-9
13 158-2	13 159-6	13 137-0	13 138-4	17 318-2	17 319-6	17 283-0	17 284-4
13 161-5	13 162-9	13 140-5	13 141-9	17 321-5	17 322-9	17 286-5	17 287-9
13 165-2	13 166-6	13 144-0	13 145-4	17 325-2	17 326-6	17 290-0	17 291-4
13 168-5	13 169-9	13 147-5	13 148-9	17 328-5	17 329-9	17 293-5	17 294-9
13 172-2	13 173-6	13 151-0	13 152-4	17 332-2	17 333-6	17 297-0	17 298-4
13 175-5	13 176-9	13 154-5	13 155-9	17 335-5	17 336-9	17 300-5	17 301-9
13 179-2	13 180-6	13 158-0	13 159-4	17 339-2	17 340-6	17 304-0	17 305-4
13 182-5	13 183-9	13 161-5	13 162-9	17 342-5	17 343-9	17 307-5	17 308-9
13 186-2	13 187-6	13 165-0	13 166-4	17 346-2	17 347-6	17 311-0	17 312-4
13 189-5	13 190-9	13 168-5	13 169-9	17 349-5	17 350-9	17 314-5	17 315-9
13 193-2	13 194-6	13 172-0	13 173-4	17 353-2	17 354-6	17 318-0	17 319-4
13 196-5	13 197-9	13 175-5	13 176-9	17 356-5	17 357-9	17 321-5	17 322-9

Table of Single Sideband Transmitting Frequencies of Coast Radiotelephone Stations (in kc/s)

22 Mc/s band			
Old frequencies		New frequencies	
Carrier frequencies	Assigned frequencies	Carrier frequencies	Assigned frequencies
22 650.2	22 651.6	22 625.5	22 626.9
22 653.5	22 654.9	22 629.0	22 630.4
22 657.2	22 658.6	22 632.5	22 633.9
22 660.5	22 661.9	22 636.0	22 637.4
22 664.2	22 665.6	22 639.5	22 640.9
22 667.5	22 668.9	22 643.0	22 644.4
22 671.2	22 672.6	22 646.5	22 647.9
22 674.5	22 675.9	22 650.0	22 651.4
22 678.2	22 679.6	22 653.5	22 654.9
22 681.5	22 682.9	22 657.0	22 658.4
22 685.2	22 686.6	22 660.5	22 661.9
22 688.5	22 689.9	22 664.0	22 665.4
22 692.2	22 693.6	22 667.5	22 668.9
22 695.5	22 696.9	22 671.0	22 672.4
22 699.2	22 700.6	22 674.5	22 675.9
22 702.5	22 703.9	22 678.0	22 679.4
22 706.2	22 707.6	22 681.5	22 682.9
22 709.5	22 710.9	22 685.0	22 686.4
22 713.2	22 714.6	22 688.5	22 689.9
22 716.5	22 717.9	22 692.0	22 693.4

ANNEX 3

Channels in Section III of Appendix 25 MOD (in kc/s)

The frequencies printed in italics are calling frequencies (see No. 1352A)

4 Mc/s Band		6 Mc/s Band		8 Mc/s Band		12 Mc/s Band		16 Mc/s Band		22 Mc/s Band	
Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency	Carrier frequency	Assigned frequency
4 431.8	4 433.2	6 515.4	6 516.8	8 799.2	8 800.6	13 179.0	13 180.4	17 325.0	17 326.4	22 695.5	22 696.9
<i>4 434.9</i>	<i>4 436.3</i>	<i>6 518.6</i>	<i>6 520.0</i>	<i>8 802.4</i>	<i>8 803.8</i>	<i>13 182.5</i>	<i>13 183.9</i>	<i>17 328.5</i>	<i>17 329.9</i>	<i>22 699.0</i>	<i>22 700.4</i>
		6 521.8	6 523.2	8 805.6	8 807.0	13 186.0	13 187.4	17 332.0	17 333.4	22 702.5	22 703.9
				8 808.8*	8 810.2	13 189.5*	13 190.9	17 335.5*	17 336.9	22 706.0*	22 707.4
				8 812.0	8 813.4	13 193.0	13 194.4	17 339.0	17 340.4	22 709.5	22 710.9
						13 196.5*	13 197.9	17 342.5*	17 343.9	22 713.0*	22 714.4
								17 346.0	17 347.4	22 716.5	22 717.9
								17 349.5*	17 350.9		
								17 353.0	17 354.4		
								17 356.5*	17 357.9		

* This carrier frequency may also be used for double sideband transmissions in accordance with Resolution No. MAR 15

RESOLUTION No. MAR 12

Relating to the Implementation of the New Arrangement of Radiotelegraphy and Radiotelephony Bands Allocated to the Maritime Mobile Service between 4 000 and 27 500 kc/s

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that each of the high-frequency radiotelegraphy and radiotelephony bands allocated to the maritime mobile service by the Administrative Radio Conference, Geneva, 1959, has been modified to make additional channels available for radiotelephony;
- b) that a considerable number of both ship and coast stations will be transferred from existing frequencies to the new frequencies and channels designated by this Conference;
- c) that changes in frequency assignments should be made as soon as possible so that the advantages of the rearrangement of bands may be realized at the earliest opportunity;
- d) that the transfer of assignments should be made with the least possible disruption of the service rendered by each station;
- e) that the transfer of assignments should be made in such a manner that harmful interference between stations involved is avoided during the implementation period;

resolves

1. that the implementation of the decisions made by this Conference relating to the rearrangement of the high-frequency bands allocated to the maritime mobile service should follow an orderly procedure for the transfer of the existing services from the old to the new assignments;
2. that administrations shall make every effort to implement the rearrangement in accordance with the time schedule in Annexes 1, 2 and 3.

ANNEX 1

Step of implementation (4 000 to 23 000 kc/s bands)	Starting date	Completion date
<i>Step 1</i> Vacate low traffic ship working channels 85 to 98	As soon as possible	1 February 1970
<i>Step 2</i> Transfer coast radiotelegraph stations to frequencies made available by Step 1	2 February 1970 (In accordance with Resolution No. MAR 10)	28 February 1970
<i>Step 3</i> Transfer coast radiotelephone stations to new channels as shown in Appendix 25 MOD, Sections I and II	0001 G.M.T. ¹ 1 March 1970	—
<i>Step 4</i> Authorize coast radiotelephone stations to use the channels vacated by coast radiotelegraph stations in Step 2	1 March 1970	—

¹ Time of change-over.

ANNEX 2

Step of implementation (4 000 to 23 000 kc/s bands)	Starting date	Completion date
<i>Step 1 a)</i> Transfer high traffic ship radiotelegraphy (A1) stations to their new frequencies	1 January 1969	30 June 1969
<i>b)</i> Vacate the first calling channel (the lowest assignable calling frequency in each band) of Section A, Appendix 15 (Geneva, 1959)	1 January 1969	30 June 1969
<i>Step 2</i> Transfer direct-printing radiotelegraph systems to their new bands	1 July 1969	31 October 1969
<i>Step 3</i> Transfer wide-band radiotelegraph systems upward in frequency, as needed	1 November 1969	31 December 1969
<i>Step 4</i> Change frequency usage specified in Section B, Appendix 15 (Geneva, 1959) to that specified in Appendix 17	1 January 1970	28 February 1970
<i>Step 5</i> Ship radiotelephone stations may commence use of the new duplex ship channels. Ship and coast radiotelephone stations may commence use of the new simplex channels	1 March 1970	—

ANNEX 3

Step of implementation (25 Mc/s band)	Starting date	Completion date
<i>Step 1</i> Transfer ship radiotelegraphy stations from the first three working channels of Section A, Appendix 15 (Geneva, 1959) to their new higher frequencies	1 January 1969	30 June 1969
<i>Step 2</i> Ship radiotelegraphy stations may commence use of the new calling channels	1 July 1969	—

RESOLUTION No. MAR 13

**Relating to the Use of Class of Emission A3B by Radiotelephone
Stations in the Maritime Mobile Service in the Bands between
4 000 and 23 000 kc/s**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that certain administrations are at present using class A3B emissions, in accordance with the provisions of Appendix 17 to the Radio Regulations, Geneva, 1959, for radiotelephone communications with ships;
- b) that difficulties may arise from the use of this class of emission when the new allotment plan is prepared by the Conference which is the subject of Recommendation No. MAR 6;

resolves

1. that, as an exception, the use of class A3B emissions, in addition to normal single sideband emissions, may continue to be authorized up to the date when the new allotment plan enters into force, subject to agreements between administrations concerned and those whose services may be affected;
 2. that the Conference envisaged in Recommendation No. MAR 6 shall consider whether class A3B emissions should be maintained after that date.
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RESOLUTION No. MAR 14

Relating to the Channel Spacing of Transmitting Frequencies Allotted to the International Maritime Mobile Service for Radiotelephony in the Band 156-174 Mc/s

(See Appendix 18 and Article 35)

The World Administrative Radio Conference, Geneva, 1967,

considering

- a)* the expanding use of the maritime mobile radiotelephone frequencies in the VHF bands between 156 Mc/s and 174 Mc/s;
- b)* the increasing demand for additional channels for port operations (including pilotage, tug and other services);
- c)* the need for additional VHF channels for short-distance communications in the maritime mobile service to relieve the congestion and saturation on the maritime mobile frequencies in the band 1 605 kc/s to 3 800 kc/s;
- d)* that this expanding use of VHF cannot be fully met by the existing available channels given in the Table of Transmitting Frequencies in Appendix 18 to the Radio Regulations, Geneva, 1959;
- e)* that additional channels could be made available by reducing the present channel spacing of 50 kc/s to 25 kc/s;

resolves

1. that the channel spacing for international maritime mobile VHF radiotelephone services shall be reduced from 50 kc/s to 25 kc/s;

2. that the additional channels shall be obtained by interleaving the 25 kc/s channels midway between the existing 50 kc/s channels given in Appendix 18 to the Radio Regulations, Geneva, 1959, and that they shall be numbered from 60 to 88;
3. that the 25 kc/s channels should be allocated on an international basis;
4. that, until 1 January 1983, administrations shall arrange that ship stations fitted with any of the channels from 01 to 28 of Appendix 18 to the Radio Regulations, Geneva, 1959, can obtain an adequate use of available services;
5. that, in bringing into use channels 15, 17 and 60 to 88 (see Appendix 18) before 1 January 1983, no harmful interference shall be caused to those services on channels 01 to 28 referred to in paragraph 4 above, especially with respect to ships equipped with receivers built for 50 kc/s spacing between channels;
6. that the technical characteristics of equipment for 25 kc/s channel spacing in the international maritime mobile VHF radiotelephone service shall be in accordance with Appendix 19, Section B;
7. that, after 1 January 1983, guard-bands on either side of 156.80 Mc/s shall be 156.7625 to 156.7875 Mc/s and 156.8125 to 156.8375 Mc/s;
8. that the transition from a channel spacing of 50 kc/s to that of 25 kc/s shall be in accordance with the following:
 - 8.1 date by which modification of transmitters to a maximum deviation of ± 5 kc/s and of receivers to increase the audio gain, where necessary, may commence 1 January 1972
 - 8.2 date by which the modifications specified in paragraph 8.1 shall be completed for all existing equipments 1 January 1973
 - 8.3 date up to which coast stations should maintain capability to receive transmissions with a maximum deviation of

- ± 15 kc/s and after which the modification of coast station receivers should take place as early as practicable to meet the selectivity requirements for a channel spacing of 25 kc/s 1 January 1973
- 8.4 date by which all new equipments shall conform to 25 kc/s standards 1 January 1973
- 8.5 date by which all equipments shall conform to 25 kc/s standards and all interleaved channels may be generally introduced 1 January 1983
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RESOLUTION No. MAR 15

Relating to the Use of the New High Frequency Channels made available for Maritime Radiotelephony by the Present Conference

The World Administrative Radio Conference, Geneva, 1967,

considering

a) that the Conference has decided to create as from 1 March 1970 new high frequency duplex radiotelephone channels to be included in Appendix 17 to the Radio Regulations and, without allotting them to countries, in Section III of Appendix 25 MOD;

b) that the Conference has also decided to recommend that a World Administrative Radio Conference be convened in 1973 to prepare a new frequency allotment plan for high frequency coast radiotelephone stations, covering the channels in the present Appendix 25 as well as the new channels referred to in a) above;

c) that, however, interim measures have to be taken by administrations and by the I.F.R.B. to provide for an orderly use of the new channels between the date when they become available for maritime radiotelephony and the date of entry into force of the new frequency allotment plan;

resolves

1. that during the interim period referred to in c) above, the new channels should be used for single sideband operation, and also for double sideband operation where technically feasible, in accordance with the time-table for conversion to single sideband operation determined by the present Conference; the peak envelope power of the transmitters shall be limited to 5 kW per speech channel for coast stations¹ and to 1.5 kW for ship stations;

¹ For class A3H emissions a peak envelope power of 7 kW may be used. For class A3 emissions a mean power of 10 kW may be used.

2. that the I.F.R.B. shall collect from administrations their requirements for use of these new channels;

urges administrations

3. in view of the limited number of new channels available for maritime radiotelephony, to submit only those requirements considered essential for use during the interim period referred to in c) above;

further resolves

4. that, after compilation of the requirements collected from administrations, the I.F.R.B., in consultation, where appropriate, with the administrations concerned, shall endeavour to distribute such requirements amongst the new channels, dealing with them in the following order, in the frequency bands covered by Appendix 25 MOD, band by band:

- 4.1 requirements from those countries which, in a particular frequency band, have no allotments in the present Appendix 25, have no assignments to high frequency coast radiotelephone stations recorded in the Master International Frequency Register in that band and are in urgent need of frequencies for maritime radiotelephony in that band;

- 4.2 requirements from those countries which have assignments to high frequency coast radiotelephone stations recorded in the Master Register, but which have a large volume of traffic to handle and whose assignments are causing or experiencing harmful interference;

5. that the distribution of requirements amongst the new channels in accordance with paragraph 4 above shall be circulated to all administrations at least six months before the new channels become available for maritime radiotelephony;

6. that the channels distributed in accordance with paragraph 4 above shall be regarded as allotments to the countries concerned from the point of view of the frequency notification and registration procedure to be applied as from the date the channels become available;

7. that, as from that date, the relevant provisions of Nos. 541 to 551 of the Radio Regulations, in so far as they refer to Section I of Appendix 25, shall apply also to the frequency bands covered by the new channels (Section III of Appendix 25 MOD), for the examination by the I.F.R.B. of frequency assignment notices for transmission or reception by coast stations;
8. that the dates to be entered in Column 2a or Column 2b of the Master Register depending upon the findings reached by the I.F.R.B., after the examination referred to in paragraph 7 above, shall be in accordance with the relevant provisions of Nos. 577 to 586 of the Radio Regulations;
9. that the above procedure, which should be discontinued on the date of entry into force of the new frequency allotment plan to be prepared by the Radio Conference referred to in Recommendation No. MAR 6, is of an interim nature and shall not prejudice the decisions to be taken by the above-mentioned Conference; a suitable remark to this effect shall be entered in the Master Register for the frequency assignments in the bands concerned.

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RESOLUTION No. MAR 16

**Relating to the Introduction of a
Radiocommunication Operator's General Certificate
for the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that Article 23 of the Radio Regulations, Geneva, 1959, provides for two classes of certificate as well as a special certificate for radiotelegraph operators;
- b) that many radiotelegraph operators are the holders of the second class certificate;
- c) that the higher Morse code speed qualification of the first class certificate may not be necessary in the future;
- d) that there is a future need for greater emphasis on the practical maintenance of radiocommunication equipment in service;

is of the opinion

- a) that administrations should consider the desirability of replacing the present two classes of radiotelegraph operator's certificate with a general class of certificate for radiocommunication operators, which is more closely related to future needs;
- b) that in considering the introduction of such a certificate, administrations should take into account the certificate qualification as appended hereto in Annexes 1, 2 and 3;

resolves

1. that administrations wishing to issue a radiocommunication operator's general certificate for the maritime mobile service are authorized to do so;

2. that the radiocommunication operator's general certificate shall maintain at least the practical technical standards of the present first class radiotelegraph operator's certificate;
3. that the Morse code speed shall not be less than specified in No. 884 of the Radio Regulations;
4. that, for the purposes of the Radio Regulations, such a general certificate shall be recognized as an alternative to the present first and second class certificates;
5. that a country which does not issue the general certificate and which employs an operator of a foreign nationality who holds this certificate may decide upon the status of the radiocommunication operator in so far as employment in its own ships is concerned.

ANNEX 1

**Conditions for the Issue of the Radiocommunication Operator's
General Certificate—Maritime**

The radiocommunication operator's general certificate is issued to candidates who have given proof of the technical and professional knowledge and qualifications enumerated below:

- a)* Knowledge of the principles of electricity and the theory of radio sufficient to meet the requirements of paragraphs *b)*, *c)* and *d)* below.
- b)* Theoretical knowledge of marine radiotelegraph and radiotelephone transmitters and receivers, marine aerial systems, automatic alarm devices, radio equipment for lifeboats and other survival craft, direction-finding equipment, together with all auxiliary items including power supply (such as motors, alternators, generators, inverters, rectifiers and accumulators), with particular reference to maintaining the equipment in service.
- c)* Practical knowledge of the operation, adjustment and maintenance of the apparatus mentioned in paragraph *b)* above, including the taking of direction-finding bearings and knowledge of the principles of the calibration of radio direction-finding apparatus.
- d)* Practical knowledge necessary for the location and remedying (with the means available on board) of faults which may occur during a voyage in the apparatus mentioned in paragraph *b)* above.
- e)* Ability to send correctly by hand and to receive correctly by ear, in the Morse code, code groups (mixed letters, figures and punctuation marks), at a speed of sixteen groups a minute, and a plain language text at the speed of twenty words a minute. Each code group shall comprise five characters, each figure or punctuation mark counting as two characters.

The average word of the text in plain language shall contain five characters. The duration of each test of sending and receiving shall be, as a rule, five minutes.

f) Ability to send correctly and to receive correctly by radio-telephone.

g) Knowledge of the Regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of the provisions of the Convention for the Safety of Life at Sea which relate to radio.

h) A sufficient knowledge of world geography, especially the principal shipping and the most important telecommunication routes.

i) Knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required.

ANNEX 2

Qualifying Service

1. An operator holding a radiocommunication operator's general certificate may be authorized to embark as chief operator of a ship station of the fourth category (see No. 932 of the Radio Regulations).

2. Before becoming chief operator of a ship station of the second or third category (see Nos. 931 and 931A of the Radio Regulations) an operator holding a radiocommunication operator's general certificate shall have had, as operator on board ship or in a coast station, at least six months' experience, of which at least three shall have been on board ship.

3. Before becoming chief operator of a ship station of the first category (see No. 930 of the Radio Regulations) an operator holding a radiocommunication operator's general certificate shall have had, as operator on board ship or in a coast station, at least two years' experience of which at least one shall have been on board ship.

ANNEX 3

**Conditions of Employment of Holders of Radiocommunication Operator's
General Certificates on Ship Stations**

The holder of a radiocommunication operator's general certificate may carry out the radiotelegraph or radiotelephone service of any ship station and, having regard to the requirements of paragraphs 1, 2 and 3 of Annex 2, may act as chief or sole operator on any ship station in the circumstances detailed in Nos. 914 to 918 of the Radio Regulations.

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RESOLUTION No. MAR 17

Relating to the Need for keeping adequate Watch by Ship Stations on the International Distress Frequency for Radiotelephony

The World Administrative Radio Conference, Geneva, 1967,

considering

- a)* that this Conference has adopted the necessary amendments to the Radio Regulations, Geneva, 1959, concerning the operation of emergency position-indicating radiobeacons on the international distress frequency for radiotelephony;
- b)* that ship stations which are equipped for radiotelegraphy but are also equipped for radiotelephony are required to keep watch only on the international distress frequency for radiotelephony;
- c)* that ship stations keeping watch only on the international distress frequency for radiotelegraphy will not hear distress calls from small craft calling on the distress frequency for radiotelephony;
- d)* that if radiotelegraph ship stations in a position to do so would keep watch on both the radiotelephony and radiotelegraphy international distress frequencies, it would increase the safety of ships and especially of those fitted for radiotelephony only;
- e)* that a watch on both the radiotelephony and radiotelegraphy international distress frequencies would improve the efficacy of assistance to the survivors from any maritime distress incident;

is of the opinion

that an increased watch is necessary by ship stations on the radiotelephony distress frequency;

resolves

that the Inter-Governmental Maritime Consultative Organization be invited to consider this matter, as part of the study currently being undertaken on the maritime safety system, taking into account the possibility of eventual amendment to the pertinent provisions of the International Convention for the Safety of Life at Sea (London, 1960);

requests the Secretary-General

to communicate this Resolution to the Inter-Governmental Maritime Consultative Organization.

RESOLUTION No. MAR 18

Relating to the Examination of Pertinent Portions of the Revised International Code of Signals

The World Administrative Radio Conference, Geneva, 1967,

considering

a) that the Inter-Governmental Maritime Consultative Organization (I.M.C.O.) has prepared a revised International Code of Signals which is designed to be used in all methods of signalling, including radio;

b) that the revised International Code of Signals was adopted by the I.M.C.O. Assembly at its 4th Session in 1965, to come into effect on first of January 1968 (later amended to be first of January 1969);

c) that the I.M.C.O. Assembly at its 4th Session invited the International Telecommunication Union (I.T.U.) to comment on the pertinent portions of the revised International Code of Signals at an Administrative Radio Conference for the maritime mobile service;

d) that the present Conference has amended certain portions of the Radio Regulations by adopting Appendices 13A and 16, and in so doing has attempted to reduce to a minimum the differences between the Radio Regulations and the International Code of Signals;

e) that it is necessary to determine the responsibility of the I.M.C.O. and the I.T.U. regarding the choice and conditions of use of international signals related to radiocommunication;

f) that it is advisable to bring the revised International Code of Signals and the Appendices 13A and 16 to the Radio Regulations into force on the same date;

recognizing

- a) that the I.T.U. is responsible for determining the choice and conditions of use of international signals relating to radiocommunication procedures;
- b) that the I.M.C.O. is responsible for determining the choice and conditions of use of international signals relating to other matters, such as navigation, and search and rescue operations;

resolves

1. that, where considered desirable, signals within the responsibility of the International Telecommunication Union may be reproduced in the publications of the Inter-Governmental Maritime Consultative Organization suitably annotated to indicate their source;
2. that the attention of the Inter-Governmental Maritime Consultative Organization should be invited to differences existing between the Radio Regulations and the revised International Code of Signals (see Annex to this Resolution);

requests the Secretary-General

to communicate the present Resolution, together with the Annex, to the Inter-Governmental Maritime Consultative Organization.

ANNEX

**Differences between the Provisions of Appendices 13A and 16
to the Radio Regulations and those of the International Code of Signals**

1. Phonetic Alphabet and Figure Code

The figure spelling table in Appendix 16 contains, in addition to the figures 0 to 9 and the mark "Decimal Point", the mark "Full Stop" * as follows:

Figure or mark to be transmitted	Code word to be used	Spoken as
Full Stop	STOP	STOP

2. Abbreviations in Appendix 13A pertaining to use of emergency position-indicating radiobeacons not appearing in the International Code of Signals

QOJ	Will you listen on...kc/s (or Mc/s) for signals of emergency position-indicating radiobeacons?	I am listening on...kc/s (or Mc/s) for signals of emergency position-indicating radiobeacons.
QOK	Have you received the signal of an emergency position-indicating radiobeacon on ...kc/s (or Mc/s)?	I have received the signal of an emergency position-indicating radiobeacon on ...kc/s (or Mc/s).

* The mark "Full Stop" appears in the International Code of Signals but not in the figure spelling table of that Code.

3. *Signals with identical or almost identical meaning but with different abbreviations or signals*

App. 13A	International Code of Signals	Meaning **
QOE	YI	I have received the safety signal sent by... (<i>name and/or call sign</i>).
QOE?	YJ	Have you received the safety signal sent by... (<i>name and/or call sign</i>)?
QRX	YL	I will call you again at... hours (on...kc/s (or Mc/s)).
QRZ?	YM	Who is calling me?
QTA	YN	Cancel telegram (or message) No....
QOA?	YR 7	Can you communicate by radiotelegraphy (500 kc/s)?
QOB?	YR 8	Can you communicate by radiotelephony (2 182 kc/s)?
QOC?	YR 9	Can you communicate by radiotelephony (channel 16 - frequency 156.80 Mc/s)?
QTQ	YU	I am going to communicate with your station by means of the International Code of Signals (INTER-CO).
QSW	YW	I am going to send on this frequency (or on...kc/s (or Mc/s)) (with emissions of class...).
QSW	YX	I am going to send on this frequency (or on...kc/s (or Mc/s)) (with emissions of class...).
QSW	YY	I am going to send on this frequency (or on...kc/s (or Mc/s)) (with emissions of class...).

** In cases of slight differences of meaning, the wording in Appendix 13A is given.

App. 13A	International Code of Signals	Meaning **
QOD	ZB	I can communicate with you in... 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish
QOD?	ZC	Can you communicate with me in... 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish ?
QRS	ZM	Send more slowly (... words per minute).
QRS?	ZM 1	Shall I send more slowly?
QSZ	ZN	Send each word or group twice (or... times).
QRT	ZO	Stop sending.
QRT?	ZO 1	Shall I stop sending?
4.	<i>Identical abbreviations or signals having quite different meanings</i> BK, BQ, BT, CL, CP, DF, DO, KA, NW, NX, OL, TU, WD, WX, XQ, MIN, MSG.	
5.	<i>Identical abbreviations or signals having only a slight difference of meaning</i> CQ K (no confusion possible, if signal K is given with numerals)	

* * *

** In cases of slight differences of meaning, the wording in Appendix 13A is given.

Note: The following provisions of the Radio Regulations refer to the International Code of Signals:

- No. **1386A**,
 - Appendix 13A, Section I, abbreviation QTQ,
 - Appendix 13A, Section II, abbreviation INTERCO.
-

RESOLUTION No. MAR 19

Relating to the Manner in which the I.F.R.B. shall treat Notifications dealing with Frequency Assignments to Oceanographic Stations

The World Administrative Radio Conference, Geneva, 1967,

considering

a) that the Conference has adopted Resolution No. MAR 20, concerning the establishment of a co-ordinated world-wide system for the collection of data relating to oceanography; and

b) that the I.F.R.B. requires instructions regarding the notification and registration in the Master International Frequency Register of assignments to oceanographic stations;

resolves

that the I.F.R.B. be instructed to accept for registration in the Master International Frequency Register only such notifications, submitted by administrations in accordance with Nos. 486 and 487, as pertain to transmitting and receiving oceanographic stations which are land based and which are in conformity with Resolution No. MAR 20. Such notifications shall be treated by the Board in accordance with No. 505 of the Regulations. These entries in the Master Register shall not prejudice any decisions to be taken by the next Administrative Radio Conference competent to deal with the maritime mobile service.

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RESOLUTION No. MAR 20

Concerning the Establishment of a Co-ordinated World-wide System for the Collection of Data relating to Oceanography

The World Administrative Radio Conference, Geneva, 1967,

considering

- a)* the expressed desire for the establishment of a co-ordinated world-wide system for the collection of data relating to oceanography;
- b)* that in each of the six high frequency bands allocated exclusively to the maritime mobile service a frequency band has been designated for use in the collection of data relating to oceanography in accordance with Appendix 15 to the Radio Regulations;
- c)* that use of these frequencies with maximum effectiveness is dependent upon co-operation and co-ordination among administrations;
- d)* that certain administrations expressed the desire that a co-ordinated world-wide system for the transmission of data relating to oceanography be established on the basis of a co-ordinated plan in the bands allocated by the present Conference;
- e)* that, however, certain other administrations wish to use in the near future stations for the collection of data relating to oceanography within the framework of decisions taken on this matter by the present Conference;
- f)* that, consequently, a co-ordinated programme for the collection of data relating to oceanography should be established using the frequency bands referred to in *b)* above;
- g)* that the Intergovernmental Oceanographic Commission (I.O.C.) and the World Meteorological Organization (W.M.O.) have been in

consultation since 1962 with respect to co-operative efforts in the collection of data relating to oceanography (e.g. the W.M.O./I.O.C. Panel of Experts on Co-ordination of Requirements, Geneva, 19-21 July, 1967);

resolves

1. that the I.O.C. and W.M.O. be invited to develop jointly, in consultation with the I.F.R.B., and in consultation with administrations of the Members and Associate Members of the Union, as appropriate, a co-ordinated plan designed to meet existing and future requirements of all interested Members and Associate Members, for use by stations in the collection of data relating to oceanography in a world-wide system, within the framework of provisions made by the present Conference for such a system; this plan to include the geographical distribution of oceanographic stations, their system of operation, the deployment of frequencies in the system and the manner in which oceanographic information is to be transmitted;
 2. that administrations be encouraged to assign frequencies in conformity with the plan and the recommendations of I.O.C. and W.M.O. for the portion of the world-wide system over which they have jurisdiction;
 3. that the I.O.C. and W.M.O. be invited further to assume jointly the responsibility, in consultation with the I.F.R.B., for keeping such a plan current, in the light of changing requirements for data relating to oceanography;
 4. that the plan developed under points 1 and 3 above shall be considered at the next Administrative Radio Conference competent to deal with matters relating to the maritime mobile service, to determine what changes, if any, appear necessary to improve its effectiveness.
-

RECOMMENDATION No. MAR 1

Relating to a Reprint of the Radio Regulations and of the Additional Radio Regulations

The World Administrative Radio Conference, Geneva, 1967,

considering

that the Radio Regulations, Geneva, 1959, have undergone partial revision by the Extraordinary Administrative Radio Conference to Allocate Frequency Bands for Space Radiocommunication Purposes, Geneva, 1963, and by the Extraordinary Administrative Radio Conference for the Preparation of a Revised Allotment Plan for the Aeronautical Mobile (R) Service, Geneva, 1966, and that the Radio Regulations, Geneva, 1959, and the Additional Radio Regulations, Geneva, 1959, have undergone partial revision by the present Conference;

is of the opinion

that the task of administrations would be facilitated if these Regulations were reprinted to include the partial revisions carried out by the above-mentioned conferences;

recommends

1. that the Secretary-General should consult all administrations as to:
 - a) the desirability of carrying out such a reprint;
 - b) the desirability of issuing the new publication in loose-leaf form, with the pages of each article numbered separately, so as to facilitate its being kept up-to-date to reflect any partial revisions of the Radio Regulations or the Additional Radio Regulations which may be carried out by future conferences;
2. that if the response as regards 1.a) is favourable, the Secretary-General should proceed with the reprint, with a view to the new publication being available by 1 April 1969.

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RECOMMENDATION No. MAR 2

**Relating to a Regrouping of the Radio Regulations and
the Additional Radio Regulations appertaining to
the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1967,

in view of

the terms of Administrative Council Resolutions Nos. 522, 549 and Decision No. 346 relating to a possible revision of the structure of the Radio Regulations and the Additional Radio Regulations;

considering

a) that it is desirable that those provisions of the Radio Regulations and of the Additional Radio Regulations which relate to the maritime mobile service be segregated from those relating to other services and regrouped in logical sequence;

b) that the Administration of the United Kingdom of Great Britain and Northern Ireland submitted to the present Conference in Document No. 117 a proposal for regrouping the provisions of the Radio Regulations and of the Additional Radio Regulations relating to the maritime mobile service, but that time did not permit its detailed examination;

c) that it is in general very difficult for a conference of limited duration, charged with the revision of the substance of only part of the Regulations, to undertake at a sufficiently early stage in its work a revision of the order in which they are arranged;

recommends

1. that the Administrative Council should bear in mind:

a) the desirability of including a regrouping of the Radio Regulations and of the Additional Radio Regulations relating to the maritime

mobile service in the agenda of the first World Administrative Radio Conference at which, in the Council's opinion, it would be practicable to undertake this task; and

- b) in particular, the possibility that it might be included in the agenda of the Conference referred to in Recommendation No. MAR 6 of the present Conference;

2. that the Secretary-General should ask all administrations to take the present Recommendation into account in connection with any studies they may be making in accordance with Administrative Council Decision No. 346;

requests

the Secretary-General and the I.F.R.B. also to study this question and to submit their suggestions to administrations in due time.

RECOMMENDATION No. MAR 3

**Relating to the Utilization of Space Communication
Techniques in the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) the efforts of the International Telecommunication Union to reduce congestion in the frequency bands available to the maritime mobile service;
- b) the fact that ships at sea are completely dependent upon the use of radio for communication; and
- c) the potential value of adapting satellite relay techniques to the communication requirements of the maritime mobile service;

noting

- a) that limited tests have demonstrated the feasibility of effecting communications between ships and coast stations by means of relaying through a stationary satellite;
- b) that no provision is made for the use of space communication techniques in any of the frequency bands at present allocated to the maritime mobile service;
- c) that the frequencies available to the maritime mobile service by virtue of Appendix 18 to the Radio Regulations are technically suitable for the use of space communication techniques, but that the congestion foreseen from terrestrial maritime mobile usage, even after implementation of reduced channel spacing, is expected to preclude the accommodation of an operational system employing space communication techniques;
- d) that the Inter-Governmental Maritime Consultative Organization (I.M.C.O.) has undertaken a study of the requirements for maritime safety



and navigation that may be satisfied by utilization of space communication techniques;

e) that the C.C.I.R. has a study group on space systems and radio-astronomy as well as a study group on mobile services and that close co-ordination of the work of the C.C.I.R. and I.M.C.O. in these fields is desirable; and

f) that the Scientific and Technical Sub-Committee of the United Nations Committee on the Peaceful Use of Outer Space has also established a working group which is studying the need for, the feasibility and ways and means of establishing a navigation satellite system;

invites administrations

to determine the foreseeable operational requirements of the maritime mobile service that can be accommodated by means of space communication techniques;

invites the Inter-Governmental Maritime Consultative Organization

to continue to study the requirements and other considerations where benefit may accrue to the safety and navigation of ships at sea through application of space communication techniques;

invites the C.C.I.R.

to study the technical aspects of systems which offer the potential of fulfilling these maritime requirements and to recommend a practical system with particular attention to the environment in which ships operate;

and invites both administrations and the C.C.I.R.

to consider in these studies a technically suitable frequency band higher in the spectrum than band 8 and of sufficient bandwidth to accommodate the overall needs of the maritime mobile service. In this connection, particular attention may be given to bands 9 and 10 for the link between the mobile station and the relaying satellite.

RECOMMENDATION No. MAR 4

Relating to Transmission by Television of Port Radar Images to Ships

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that there may be a future requirement for the transmission by television of port radar images from shore to ships, in congested waters;
- b) that the Table of Frequency Allocations does not provide spectrum space for this purpose;

recommends

1. that administrations and the Inter-Governmental Maritime Consultative Organization study the operational need and the characteristics for such systems and inform the Secretary-General of the I. T. U. of the results of these studies;
2. that if such an operational need does exist, the C.C.I.R. be invited to determine the most suitable order of frequencies required for this purpose, and the technical parameters to be met by such systems;
3. that administrations be prepared to take a decision in this matter at the next World Administrative Radio Conference competent to deal with the matter.

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RECOMMENDATION No. MAR 5

**Relating to the Designation of Common Frequencies in the
Medium Frequency Bands for Use by Coast Radiotelephone Stations
for Communicating with Ships of other Nationalities**

The World Administrative Radio Conference, Geneva, 1967,

noting

- a) that, on small ships fitted with single sideband equipment, a crystal-controlled fixed frequency receiver is essential to facilitate correct tuning;
- b) that, if such ships make international voyages and communicate with coast stations of other nationalities, they need to be provided with a considerable number of additional crystals;
- c) that, by reducing the number of receiver crystals required, the cost of single sideband receivers can be kept to a satisfactory level;

considering

- a) that international working frequencies should be assigned to all coast stations for working with ships of other nationalities, without precluding their use for national purposes;
- b) that, according to the Master International Frequency Register, no frequencies appear to be available for common use by all coast stations for working with ships of other nationalities, either on a world-wide or on a regional basis;

recommends

1. that administrations study this question at the earliest opportunity with a view to formulating proposals for consideration by the next Administrative Radio Conference competent to deal with the matter;
 2. that, in the meantime, countries should explore the possibility of concluding regional, bilateral or multilateral arrangements to provide common frequencies for coast stations working with ship stations of other nationalities.
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RECOMMENDATION No. MAR 6

**Relating to the Preparation of a new Frequency Allotment Plan
for High Frequency Coast Radiotelephone Stations**

The World Administrative Radio Conference, Geneva, 1967,

considering

- a)* that the present Frequency Allotment Plan for coast radiotelephone stations contained in Appendix 25 to the Radio Regulations, Geneva, 1959, was initially prepared by the Provisional Frequency Board in the years from 1948 to 1950 and was subject to amendments by the Extraordinary Administrative Radio Conference, Geneva, 1951, and by the Administrative Radio Conference, Geneva, 1959;
- b)* that the Plan has already been implemented to a great extent, this being illustrated by the assignments, corresponding to allotments, recorded in the Master International Frequency Register;
- c)* that a number of additional assignments has also been recorded in the Master Register;
- d)* that the introduction of single sideband technique in the maritime high frequency radiotelephone bands has already started on the basis of the provisions of Appendix 17 to the Radio Regulations, Geneva, 1959, and that the conversion from double sideband to single sideband will continue, guided by the time-table and the supplementary technical specifications adopted by the present Conference;
- e)* that double sideband operation in the frequency bands concerned will continue until 1 January 1972 for coast stations and 1 January 1978 for ship stations;
- f)* that the Conference has decided to create as from 1 March 1970, new high frequency duplex radiotelephone channels to be used in accor-

dance with the provisions of Resolution No. MAR 15, to include such new channels in Appendix 17 to the Radio Regulations and, without allotting them to countries, in Section III of Appendix 25 MOD;

g) that it was found impracticable for the present Conference to prepare a new Frequency Allotment Plan, but it was found necessary that such a Plan be prepared by a subsequent conference;

h) that it is desirable to have in advance of that conference proposals for the technical bases for the establishment of a frequency allotment plan;

in view of

the provisions of Nos. 60 and 61 of the International Telecommunication Convention, Montreux, 1965;

recommends

1. that a World Administrative Radio Conference be convened:
 - 1.1 to establish on the basis of single sideband operation a new Frequency Allotment Plan for high-frequency radiotelephone coast stations, covering the channels in the present Appendix 25 as well as the new channels referred to in f) above;
 - 1.2 to amend the associated provisions of the Radio Regulations;
2. that such a conference be convened in 1973;
3. that the Administrative Council determine the exact date and place of such a conference, in accordance with No. 64 of the International Telecommunication Convention, Montreux, 1965;
4. that this conference be preceded by a preparatory meeting, in accordance with No. 73 of that Convention.

RECOMMENDATION No. MAR 7

Relating to Harmonic Relationship and Channel Spacing in the High Frequency Bands used by Ship Stations for Radiotelegraphy

The World Administrative Radio Conference, Geneva, 1967,

considering

- a) that there is an urgent need for all services to utilize the high frequency spectrum with maximum efficiency;
- b) that new developments and advances in technique, and in frequency synthesizers in particular, are leading to more stable and reliable radiocommunication equipment;
- c) that the continued use of harmonically related frequencies and of the existing channel spacings may hinder the fullest use in the future of the bands allocated exclusively to the maritime mobile service for ships' radiotelegraph stations, especially the upper bands;
- d) that, in view of the time required for full utilization and amortization of equipment, any organized change of equipment for ships may require a period of some 20 years;

recommends

1. that administrations should study, in the light of advancing techniques, the problems relating to the future use of harmonic relationship in ships' radio equipment and to the determination of the optimum channel spacing and the number of channels in the bands allocated for calling and for high and low traffic ships, as indicated in Appendix 15 to

the Radio Regulations, and should submit their proposals for consideration by the next World Administrative Radio Conference competent to deal with the matter;

2. that administrations should consider whether the use of synthesized transmitters by ship stations will make it desirable to modify the provisions for low traffic ships of Nos. **1196** to **1201** of the Radio Regulations, in order to allow more flexibility in the choice of actual working frequencies.

RECOMMENDATION No. MAR 8**Relating to the Study of a Selective Calling System for future operational Requirements of the Maritime Mobile Service**

The World Administrative Radio Conference, Geneva, 1967,

noting

a) that the C.C.I.R. has prepared a draft Recommendation D.a (257-1) giving the characteristics of a selective calling system for the maritime mobile service to fulfil immediate requirements;

b) that the present Conference has adopted and included in Articles 19 and 28A of the Radio Regulations and in Appendix 20C thereto provisions for utilization of this system;

c) that the C.C.I.R. has adopted Question 9/XIII on the subject of a selective calling system for future operational requirements of the maritime mobile service;

urges the C.C.I.R.

to complete the studies in response to Question 9/XIII as soon as possible;

and invites administrations

in their participation in the work of the C.C.I.R. to give priority to these studies.

