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| **41 MEETING OF PERMANENT**  **CONSULTATIVE COMMITTEE II:**  **RADIOCOMMUNICATIONS**  **May 22 to 26, 2023**  **Mexico City, Mexico** | | **OEA/Ser.L/XVII.4.2.41**  **CCP.II-RADIO /doc. /23**  **01 May 2023**  **Original: English** | |
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|  | **Wrc-23 agenda item 1.11**  **(issues a and b)** | |  |
|  | **(Item on the Agenda: 3.1/SGT 2)** | |  |
|  | **(Document submitted by United States of America)** | |  |

**Impact on the sector:**

This document provides a proposal on WRC-23 agenda item 1.11 (GMDSS Modernization), issues A and B to be considered by CITEL administrations to become an IAP for WRC-23

**Executive Summary:**

This document proposes methods to solve issue A (GMDSS Modernization) and issue B (E-Navigation) for WRC-23 agenda item 1.11. For issue A, the United States proposes Method A with the future use of 1645.5-1646.5 MHz restricted solely for use by GMDSS. For issue B, the United States proposes method B, No Change (NOC) which is the only method proposed in the CPM text. Method C has been addressed by the United States in a previous input document which is now included in [GT-CMR23-2022-40-056\_i.docx](https://www.oas.org/citelevents/en/Events/EToolDocDownloadFile/32421?eId=636).

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| United States of America |
| PROPOSALS FOR THE WORK OF THE CONFERENCEAGENDA ITEM 1.11Issues A and B |

1.11to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of e‑navigation, in accordance with Resolution **361 (Rev.WRC‑19)**;

**BACKGROUND INFORMATION**:

The Global Maritime Distress and Safety System (GMDSS) modernization regarding NAVDAT in the MF and HF bands was studied under agenda item 1.11, Issue A. In 2022, IMO has adopted amendments to the 1974 Safety of Life at Sea (SOLAS) Convention Chapters III and IV, together with related and consequential amendments to existing instruments other than SOLAS. These amendments will enter into force in 2024 and concluded the International Maritime Organization (IMO) work on modernization of the GMDSS.

This proposal addresses Issue A and Issue B pertaining to WRC-23 AI 1.11 (GMDSS modernization), Issue A addresses four issues pertaining to GMDSS modernization and issue B addresses E-navigation.

**GMDSS Modernization**

GMDSS modernization address the following four topics under issue A:

1. **Current regulatory status of narrow band direct printing (NBDP) for the global maritime distress and safety system**

The deletion of NBDP is proposed for distress and safety communications from GMDSS in RR Appendices **15** and **17** for MF and HF in all bands. This is due to the fact that NBDP for such purpose has been deleted by the IMO from SOLAS Chapter IV. As NBDP is not in practical use on ships for distress alerting the deletion simplifies the operational use and reduces the burden on the administrations to maintain a system which is no longer in use.

Technical characteristics of NBDP in the maritime mobile service (MMS) are provided by Recommendations ITU-R M.476-5 and ITU-R M.625-4, which are incorporated by reference in the RR. In Recommendation ITU-R M.625-4 direct printing telegraphy is explicitly considered as part of the GMDSS. Further characteristics are given in Recommendation ITU-R M.627 (referenced by RR No. **51.41**).

1. **An automatic connection system (ACS) for MF and HF**

The implementation of an ACS is proposed for MF and HF in selected bands using DSC technology as indicated by IMO in the related performance standards, taking into account studies performed within ITU-R, especially in Recommendation ITU-R M.493 and Recommendation ITU-R M.541 and working document towards a preliminary draft new Report ITU-R M.[ACS]. It is proposed to implement ACS on the frequencies which had previously been used by NBDP for GMDSS in MF and all HF bands in RR Article **5** and Appendix **17** by a footnote.

Recommendations ITU-R M.493 and ITU-R M.541 have been revised in order to allow the introduction of an ACS based on DSC for communication in the MF and HF bands. Communication by MF/HF frequency bands remains an integral part of the GMDSS. The implementation of ACS will ensure simple and reliable access to the required radio links for the mariner.

1. **NAVDAT**

The introduction of the NAVDAT frequencies is proposed in MF and HF bands in RR Appendix **15** and modification of the relevant provisions in RR Articles **5**, **32**, **33** and **52**.

The amendments to the 1974 SOLAS Convention chapters III and IV made it possible for NAVDAT to become an element of the modernized GMDSS. The frequencies for NAVDAT in MF and HF have been identified in RR Article **5** and Appendix **17** by the WRC-19. These frequencies need now to be inserted in RR Appendix **15.**

1. **1.6 GHz satellite emergency position indicating radio beacons**

The frequency band 1 645.5-1 646.5 MHz is allocated to the MSS (Earth-to-space) and was previously intended to be used by satellite EPIRBs (“1.6 GHz EPIRBs”) operating with MSS networks. Recommendation ITU-R M.632-3, last revised in 1997, provides technical characteristics. The 1.6 GHz EPIRB service has been withdrawn from GMDSS by the IMO, and this band has remained unused for many years. The adjacent frequency band, 1 626.5-1 645.5 MHz is allocated to the MSS and is used to provide MSS service (Earth-to-space) for ships, including GMDSS SAT‑COM communications (see RR No. **5.353A**).

## E-navigation

E-navigation is a concept under study at IMO since the MSC 81 in 2005. The definition of e‑navigation is given by IMO:

“E-navigation is the harmonized collection, integration, exchange, presentation and analysis of marine information on board and ashore by electronic means to enhance berth to berth navigation and related services for safety and security at sea and protection of the marine environment.”

As shipping moves into the digital world, e-navigation is expected to provide digital communications and digital information for the benefit of maritime safety, security and protection of the marine environment, reducing the administrative burden and increasing the efficiency of maritime trade and transport.

Among the objectives of e-navigation, quoting the strategy implementation plan of the IMO, there are the improvements of communications in general, the standardization and automation of ship’s reporting and the integration and presentation of available information in graphical displays received via communication equipment.

Communication is a key element for e-navigation. Future communication systems should be digital and could include VDES and in the future NAVDAT and be developed to facilitate wide information management solutions.

This proposal address’ methods to satisfy *resolves*1 and *resolves* 2 of WRC-23 agenda item 1.11 (Resolution **361 (Rev.WRC‑19)).** The United States proposes to support Method A for issue A (global maritime distress and safety system modernization):

## Method B for Issue B: E-Navigation

– Previous WRCs have identified the frequency bands to be utilized for VDES and NAVDAT. These two systems can both support e-navigation.

– Satellite networks which would support e-navigation already have their allocation identified in the Radio Regulations.

– E-navigation is not part of the GMDSS.

Therefore*,* it is proposed a no change (**NOC**) to RR Article**5** for issue B.

**PROPOSAL**

MOD USA/4534A11/1

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

MOD USA/4534A11/2

495-1 800 kHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 495-505 MARITIME MOBILE 5.82C ADD 5.A111 | | |

**Reasons:** Coordination of the NAVDAT system should be done through the procedures establish by IMO, in the same way as it is done for the NAVTEX services, see Resolution **339 (Rev.WRC‑07)**.

ADD USA/4534A11/3

**5.A111** When establishing coast stations in the NAVDAT system on the frequencies 500 kHz and 4 226 kHz, the conditions for the use of the frequencies 500 kHz and 4 226 kHz are prescribed in Articles **31** and **52**. Administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution **[A111] (WRC‑23)**).     (WRC‑23)

MOD USA/4534A11/4

3 230-5 003 kHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 4 063-4 438 MARITIME MOBILE 5.79A ADD 5.A111 5.109 MOD 5.110 5.130 5.131 MOD 5.132  5.128 | | |

ADD USA/4534A11/5

3 230-5 003 kHz ADD 5.A11

MOD USA/4534A11/6

5.110 The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are used by digital selective calling equipment as described in the most recent version of Recommendation ITU-R M.541.     (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. The distress frequencies for NBDP are reused for the ACS described in Recommendation ITU-R M.541 (under revision) and the new Report ITU‑R M.[ACS]

MOD USA/4534A11/7

5.132 The frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the international frequencies for the transmission of maritime safety information (MSI) (see Appendices 15 and **17**). (WRC-23)

**Reasons:** First to correct the omission of RR Appendix **15** and second to be align with RR No. **5.B111**.

5 003-7 000 kHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 6 200-6 525 MARITIME MOBILE 5.109 5.110 5.130 MOD 5.132 ADD 5.B111  5.137 | | |

ADD USA/4534A11/8

ADD 5B111 The frequencies 6 337.5 kHz, 8 443 kHz, 12 663.5 kHz, 16 909.5 kHz and 22 450.5 kHz are the regional frequencies for the transmission of maritime safety information (MSI) by means of NAVDAT system (see Appendices **15** and **17**).     (WRC‑23)

**Reasons:** Introduction of the regional NAVDAT frequencies.

MOD USA/4534A11/9

7 450-13 360 kHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 8 195-8 815 MARITIME MOBILE 5.109 5.110 MOD 5.132 5.145 ADD 5.B111  5.111 | | |
| **…/…** | | |
| 12 230-13 200 MARITIME MOBILE 5.109 5.110 MOD 5.132 5.145 ADD 5.B111 | | |

**Reasons:** Introduction of the regional NAVDAT frequencies.

MOD USA/4534A11/10

13 360-18 030 kHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 16 360-17 410 MARITIME MOBILE 5.109 5.110 MOD 5.132 5.145 ADD 5.B111 | | |

**Reasons:** Introduction of the regional NAVDAT frequencies.

MOD USA/4534A11/11

18 030-23 350 kHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 22 000-22 855 MARITIME MOBILE MOD 5.132 ADD 5.B111  5.156 | | |

**Reasons:** Introduction of the regional NAVDAT frequencies.

MOD USA/4534A11/12

5.228C The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the maritime mobile service and the mobile-satellite (Earth-to-space) service is limited to the automatic identification system (AIS), including the AIS search and rescue transmitter (AIS-SART). The use of these frequency bands by the aeronautical mobile (OR) service is limited to AIS emissions from search and rescue aircraft operations. The AIS operations in these frequency bands shall not constrain the development and use of the fixed and mobile services operating in the adjacent frequency bands.    (WRC‑23)

**Reasons:** Recognize the use AIS frequencies for SARTs

MOD USA/4534A11/13

5.375 The use of the band 1 645.5-1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress, urgency and safety communications (see Article **31**). (WRC‑23)

**Reasons:** Introduction of the word urgency in order to reflect the last modification of SOLAS Chapter IV.

ARTICLE 19

Identification of stations

Section I − General provisions

MOD USA/4534A11/14

19.11 5) All transmissions by satellite emergency position‑indicating radiobeacons (EPIRBs) operating in the band 406‑406.1 MHz shall carry identification signals.      (WRC‑23)

**Reasons:** No EPIRB operation in L band and VHF DSC.

ARTICLE 31

Frequencies for the global maritime distress and safety system (GMDSS)

Section II − Survival craft stations

MOD USA/4534A11/15

31.7 2) Equipment for transmitting locating signals from survival craft stations shall be capable of operating in the frequency band 9 200-9 500 MHz or on 161.975 MHz (AIS 1 of Appendix **18**) and 162.025 MHz (AIS 2 of Appendix **18**).     (WRC‑23)

**Reasons:** The frequencies for AIS-SART homing signal need to be included.

ARTICLE 32

Operational procedures for distress communications in the  
global maritime distress and safety system (GMDSS)     (WRC‑07)

Section I − General

MOD USA/4534A11/16

32.7 § 6 The phonetic alphabet and figure code in Appendix 14 and the abbreviations and signals in accordance with the most recent version of Recommendation ITU‑R M.1172 should be used where applicableMOD1.     (WRC‑03)

**Reasons:**

MOD USA/4534A11/17

32.7.1The use of the Standard Marine Communication Phrases and, where language difficulties exist, the International Code of Signals, both published by the International Maritime Organization (IMO), is also recommended. It should be noted that the pronunciations for figures in Appendix **14** and IMO SMCP are different.     (WRC‑23)

**Reasons:** In order to avoid potential confusion, it is necessary to remind the mariners and administrations of the difference in pronunciations of figures between RR Appendix **14** and IMO SMCP.

Section II − Distress alerting and distress calling     (WRC‑07)

MOD USA/4534A11/18

32.11 B − Transmission of a distress alert or a distress call     (WRC‑07)

**Reasons:**

B1 − Transmission of a distress alert or a distress call by a ship station  
or a ship earth station     (WRC‑07)

MOD USA/4534A11/19

32.12 § 8 Ship-to-shore distress alerts or calls are used to alert rescue coordination centres via coast stations or coast earth stations that a ship is in distress. These alerts are based on the use of transmissions via satellites (from a ship earth station or a satellite EPIRB) and terrestrial services (from ship stations).     (WRC‑23)

**Reasons:** Terrestrial VHF EPRIRB is no longer in operation.

32.20 C − Receipt and acknowledgement of distress alerts and distress calls     (WRC‑07)

C1 − Procedure for acknowledgement of receipt of distress alerts or a distress call     (WRC‑07)

MOD USA/4534A11/20

32.21A 2) When acknowledging receipt of a distress alert sent by DSC8, the acknowledgement in the terrestrial services shall be made by DSC or radiotelephony on the associated distress and safety frequency in the same band in which the distress alert was received, taking due account of the directions given in the most recent versions of Recommendations ITU‑R M.493 and ITU‑R M.541.     (WRC‑23)

**Reasons:** NBDP has been deleted by the IMO from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, acknowledging receipt of a distress alert by NBDP should be excluded. However, acknowledge receipt by DSC or radiotelephony should be retained.

MOD USA/4534A11/21

32.23 § 15 When acknowledging by radiotelephony the receipt of a distress alert or a distress call from a ship station or a ship earth station, the acknowledgement should be given in the following form, taking into account Nos. **32.6** and **32.7**:

– the distress signal “MAYDAY”;

– the name followed by the call sign, or the MMSI or other identification of the station sending the distress message;

– the words “THIS IS”;

– the name and call sign or other identification of the station acknowledging receipt;

– the word “RECEIVED”;

– the distress signal “MAYDAY”.     (WRC‑12)

**Reasons:** Editorial changes of numbering due to the suppression of RR No. **32.24**.

SUP USA/4534A11/22

32.24

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, the acknowledging receipt of a distress alert by NBDP is not effective.

C3 − Receipt and acknowledgement by a ship station or   
ship earth station    (WRC‑07)

MOD USA/4534A11/23

32.31 2) However, in order to avoid making unnecessary or confusing transmissions in response, a ship station, which may be at a considerable distance from the incident, receiving an HF distress alert, shall not acknowledge it but shall observe the provisions of Nos. 32.36 to 32.37, and shall, if the distress alert is not acknowledged by a coast station within five minutes, relay the distress alert, but only to an appropriate coast station or coast earth station (see also Nos. 32.16 to **32.**19H).     (WRC23)

**Reasons:** NBDP has been deleted from the GMDSS with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. If the provision of RR No. **32.38** is deleted, this provision number should be amended.

MOD USA/4534A11/24

32.34A § 21A However, unless instructed to do so by a coast station or a rescue coordination centre, a ship station may only send an acknowledgement by DSC in the event that:

*a)* no acknowledgement by DSC from a coast station has been observed; and

*b)* no other communication by radiotelephony to or from the vessel in distress has been observed; and

*c)* at least five minutes have elapsed and the distress alert by DSC has been repeated (see No. 32.21A.1).     (WRC‑07)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, distress communication by NBDP is not effective.

32.36 D − Preparations for handling of distress traffic

32.38

SUP USA/4534A11/25

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, coast stations and ship stations need not set watch on the NBDP frequencies for GMDSS. Radio watch on the associated frequency by radiotelephony is regulated by RR No. **32.37**.

Section III − Distress traffic

32.39 A − General and search and rescue coordinating communications

SUP USA/4534A11/26

32.43

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, distress traffic by NBDP is not appropriate.

SUP USA/4534A11/27

32.44

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, distress traffic by NBDP is not effective.

MOD USA/4534A11/28

32.47 in radiotelephony, the signal SEELONCE MAYDAY, pronounced as the French expression “silence, m’aider”; (WRC‑23)

**Reasons:** Editorial changes of numbering due to the suppression of RR No. **32.48**.

SUP USA/4534A11/29

32.48

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, distress related traffic by NBDP is not effective.

MOD USA/4534A11/30

32.52 § 32 In radiotelephony, the message referred to in No. 32.51 should consist of the following taking into account Nos. **32.6** and **32.7**:

– the distress signal “MAYDAY”;

– the words “ALL STATIONS”, spoken three times;

– the words “THIS IS”;

– the name of the station sending that message, spoken three times;

– the call sign or other identification of the station sending the message;

– the time of handing in of the message;

– the MMSI (if the initial alert has been sent by DSC), the name and the call sign of the mobile station which was in distress;

– the words “SEELONCE FEENEE” pronounced as the French words “silence fini”.     (WRC‑12)

**Reasons:** Editorial changes of numbering due to the suppression of RR No. **32.53**.

SUP USA/4534A11/31

32.53

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, there is no need to announce by NBDP that the distress traffic has been finished.

MOD USA/4534A11/32

32.54 B − On-scene communications

**Reasons:**

MOD USA/4534A11/33

32.56 2) Control of on-scene communications is the responsibility of the unit coordinating search and rescue operations10. Simplex communications shall be used so that all on-scene mobile stations may share relevant information concerning the distress incident. (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. On-scene communications are distress traffic between the mobile unit in distress and assisting mobile units. Therefore, on-scene communications using NBDP is not appropriate.

MOD USA/4534A11/34

32.57 § 34 1) The preferred frequencies in radiotelephony for on-scene communications are 156.8 MHz and 2 182 kHz. (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, ship-to-ship on-scene communications using NBDP is not appropriate.

MOD USA/4534A11/35

32.59 § 35 The selection or designation of on-scene frequencies is the responsibility of the unit coordinating search and rescue operations10. Normally, once an on-scene frequency is established, a continuous aural watch is maintained by all participating on-scene mobile units on the selected frequency.  (WRC-23)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, ship-to-ship on-scene communications using NBDP is not appropriate.

32.60 C − Locating and homing signals

MOD USA/4534A11/36

32.61 § 36 1) Locating signals are radio transmissions intended to facilitate the finding of a mobile unit in distress or the location of survivors. These signals include those transmitted by searching units, and those transmitted by the mobile unit in distress, by survival craft, by satellite EPIRBs, radar SARTs and by AIS SARTs to assist the searching units. (WRC-23)

**Reasons:** Editorial changes to the name of EPIRB and SART. AIS-SART is also GMDSS equipment and transmit locating signal.

ARTICLE 33

Operational procedures for urgency and safety communications in  
the global maritime distress and safety system (GMDSS)

Section II − Urgency communications

MOD USA/4534A11/37

33.8 § 2 1) In a terrestrial system, urgency communications consist of an announcement, transmitted using digital selective calling, followed by the urgency call and message transmitted using radiotelephony, or data. The announcement of the urgency message shall be made on one or more of the distress and safety calling frequencies specified in Section I of Article 31 using either digital selective calling and the urgency call format, or if not available, radio telephony procedures and the urgency signal. Announcements using digital selective calling should use the technical structure and content set forth in the most recent version of Recommendations ITU‑R M.493 and ITU‑R M.541. A separate announcement need not be made if the urgency message is to be transmitted through the maritime mobile-satellite service.     (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, urgency communications by NBDP are not appropriate.

MOD USA/4534A11/38

33.12 § 6 The urgency call should consist of the following, taking into account Nos. **32.6** and **32.7**:

– the urgency signal “PAN PAN”, spoken three times;

– the name of the called station or “ALL STATIONS”, spoken three times;

– the words “THIS IS”;

– the name of the station transmitting the urgency message, spoken three times;

– the call sign or any other identification;

– the MMSI (if the initial announcement has been sent by DSC),

followed by the urgency message or followed by the details of the channel to be used for the message in the case where a working channel is to be used.

In radiotelephony, on the selected working frequency, the urgency call and message consist of the following, taking into account Nos. **32.6** and **32.7**:

– the urgency signal “PAN PAN”, spoken three times;

– the name of the called station or “ALL STATIONS”, spoken three times;

– the words “THIS IS”;

– the name of the station transmitting the urgency message, spoken three times;

– the call sign or any other identification;

– the MMSI (if the initial announcement has been sent by DSC);

– the text of the urgency message.     (WRC‑23)

**Reasons:** Editorial change to the number of provision.

SUP USA/4534A11/39

33.13

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, urgency communications by NBDP are not appropriate.

SUP USA/4534A11/40

33.17 § 9

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, urgency communications by NBDP are not appropriate.

SUP USA/4534A11/41

33.18

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, urgency communications by NBDP are not appropriate.

Section III − Medical transports

MOD USA/4534A11/42

33.20 § 11 1) For the purpose of announcing and identifying medical transports which are protected under the above-mentioned Conventions, the procedure of Section II of this Article is used. The urgency call shall be followed by the addition of the single word MAY-DEE-CAL pronounced as in French “médical”, in radiotelephony.     (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Medical advice communication belongs to GMDSS in RR Article **33**. Therefore, urgency communications for medical advice by NBDP are not appropriate.

Section IV − Safety communications

MOD USA/4534A11/43

33.31 § 15 1) In a terrestrial system, safety communications consist of a safety announcement, transmitted using digital selective calling, followed by the safety call and message transmitted using radiotelephony or data. The announcement of the safety message shall be made on one or more of the distress and safety calling frequencies specified in Section I of Article 31 using either digital selective calling techniques and the safety call format, or radiotelephony procedures and the safety signal.     (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS., with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, safety communications by NBDP are not appropriate.

MOD USA/4534A11/44

33.35 § 19 The complete safety call should consist of the following, taking into account Nos. **32.6** and **32.7**:

– the safety signal “SECURITE”, spoken three times;

– the name of the called station or “ALL STATIONS”, spoken three times;

– the words “THIS IS”;

– the name of the station transmitting the safety message, spoken three times;

– the call sign or any other identification;

– the MMSI (if the initial announcement has been sent by DSC),

followed by the safety message or followed by the details of the channel to be used for the message in the case where a working channel is to be used.

In radiotelephony, on the selected working frequency, the safety call and message should consist of the following, taking into account Nos. **32.6** and **32.7**:

– the safety signal “SECURITE”, spoken three times;

– the name of the called station or “ALL STATIONS”, spoken three times;

– the words “THIS IS”;

– the name of the station transmitting the safety message, spoken three times;

– the call sign or any other identification;

– the MMSI (if the initial alert has been sent by DSC);

– the text of the safety message.     (WRC‑23)

**Reasons:** Editorial changes of numbering due to the suppression of RR No. **33.36**.

SUP USA/4534A11/45

33.36

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, safety communications by NBDP are not appropriate.

SUP USA/4534A11/46

33.37

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, safety communications by NBDP are not appropriate.

SUP USA/4534A11/47

33.38

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, safety communications by NBDP are not appropriate.

Section V − Transmission of maritime safety information2

33.39 A − General

33.40 (SUP - WRC‑07)

ADD USA/4534A11/48

3340*bis* The transmission of maritime safety information using either the NAVTEX system and/or the NAVDAT system is the responsibility of the administration which shall inform the IMO in order to update the IMO Master Plan of shore-based facilities for the GMDSS (GMDSS Master Plan). (WRC‑23)

**Reasons:** The administrations could broadcast MSI using either the NAVTEX or NAVDAT system but shall inform the IMO in order to update the GMDSS Master Plan, this can be made by updating the GMDSS Master Plan module for the IMO GISIS (Global Integrated Ship Information System) an online system accessed via the IMO website, this is a means for mariners to know how MSI is broadcast.

33.41 § 22 The mode and format of the transmissions mentioned in Nos. 33.43, 33.45, 33.46, 33.46A2 and 33.48 shall be in accordance with the relevant ITU‑R Recommendations. (WRC‑23)

**Reasons:** Reference to the new NAVDAT section in RR No. **33.46A2.**

33.42 B − International NAVTEX system

MOD USA/4534A11/49

33.43 § 23 Where maritime safety information is transmitted using the international NAVEX system, taking into account No. 33.40 *bis*, by means of narrow‑band direct-printing telegraphy with forward error correction the frequency 518 kHz shall be used (see Appendix 15). (WRC‑23)

**Reasons:** Rewording of this provision taking into account RR No. **33.40*bis***.

ADD USA/4534A11/50

33.46A1 *D − International NAVDAT system* [TEXT MISSING]

ADD

33.46A2 § 25 Where maritime safety information is transmitted using the international NAVDAT system, taking into account No. 33.40*bis*, the frequency 500 kHz and/or 4 226 kHz shall be used (see Appendix 15).     (WRC‑23)

**Reasons:** Introduction of a new section for the NAVDAT.

MOD USA/4534A11/51

33.47 E − High seas maritime safety information

**Reasons:** Editorial renumbering due to the introduction of the new NAVDAT section.

MOD USA/4534A11/52

33.48 § 26 Maritime safety information which is transmitted by means of narrow-band direct-printing telegraphy with forward error correction uses the frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz. Maritime safety information which is transmitted by means of the NAVDAT system uses the frequencies 6 337.5 kHz, 8 443 kHz, 12 663.5 kHz, 16 909.5 kHz and 22 450.5 kHz.     (WRC‑23)

**Reasons:** Introduction of the HF frequencies used for the NAVDAT, see RR Appendix **17** and Recommendation ITU-R M.2058.

MOD USA/4534A11/53

33.49 F − Maritime safety information via satellite

**Reasons:** Editorial renumbering due to the introduction of the new NAVDAT section.

MOD USA/4534A11/54

33.49 E − Maritime safety information via satellite

**Reasons:**

MOD USA/4534A11/55

33.50 § 27 Maritime safety information may be transmitted via satellite in the maritime mobile-satellite service using the frequency bands 1 530-1 545 MHz and 1 621.35-1 626.5 MHz (see Appendix 15).     (WRC‑23)

**Reasons:** Editorial renumbering due to the introduction of the new NAVDAT section. Paragraphs Nos. **33.51** to **33.53** to be renumbered.

ARTICLE 34

Alerting signals in the global maritime distress and safety system (GMDSS)

MOD USA/4534A11/56

Section I − Satellite emergency position-indicating radiobeacon (EPIRB)

**Reasons:** Editorial changes to the name of EPIRB.

ARTICLE 47

Operator’s certificates

Section III − Conditions for the issuing of certificates

MOD USA/4534A11/57

TABLE 47-1 (WRC-23)

Requirements for radio electronic and operator’s certificates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| The relevant certificate is issued to a candidate who has given proof of the technical and professional knowledge and qualifications enumerated below, as indicated by an asterisk in the appropriate box | 1st-class radio electronic certificate | 2nd-class radio electronic certificate | General operator’s certificate | Restricted operator’s certificate |
| Knowledge of the principles of electricity and the theory of radio and of electronics sufficient to meet the requirements specified below: | \* | \* |  |  |
| Theoretical knowledge of GMDSS radiocommuni-cation equipment, including narrow-band direct-printing telegraph and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, satellite emergency position-indicating radiobeacons, marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of the principles of other equipment generally used for radionavigation, with particular reference to maintaining equipment in service. | \* |  |  |  |
| General theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraph and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, (including telegrapgy), satellite emergency position-indicating radiobeacons, marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of the principles of other equipment generally used for radionavigation, with particular reference to maintaining equipment in service. |  | \* |  |  |
| Practical knowledge of the operation and knowledge of the preventive maintenance of the equipment indicated above. | \* | \* |  |  |
| Practical knowledge necessary for the location and repair (using appropriate testing equipment and tools) of faults in the equipment mentioned above which may occur during a voyage. | \* |  |  |  |
| Practical knowledge necessary for effecting repairs in the case of faults in the equipment indicated above, using the means available on board and, if necessary, replacing modular units. |  | \* |  |  |

TABLE 47-1 (*end*)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| The relevant certificate is issued to a candidate who has given proof of the technical and professional knowledge and qualifications enumerated below, as indicated by an asterisk in the appropriate box | 1st-class radio electronic certificate | 2nd-class radio electronic certificate | General operator’s certificate | Restricted operator’s certificate |
| Detailed practical knowledge of the operation of all the GMDSS sub-systems and equipment. | \* | \* | \* |  |
| Practical knowledge of the operation of all the GMDSS sub-systems and equipment which is required while the ship is within the range of VHF coast stations (see NOTE 1). |  |  |  | \* |
| Ability to send and to receive correctly by radiotelephony and telegraphy. | \* | \* | \* |  |
| Ability to send and to receive correctly by radiotelephone. | \* | \* | \* | \* |
| Detailed knowledge of the regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommuni-cations and knowledge of those provisions of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended which relate to radio. | \* | \* | \* |  |
| Knowledge of the regulations applying to radiotelephone communications and specifically of that part of those regulations relating to the safety of life. |  |  |  | \* |
| Sufficient 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. | \* | \* | \* |  |
| An elementary 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. Administrations may waive the above language requirements for holders of a restricted operator’s certificate when the ship station is confined to a limited area specified by the administration concerned. In such cases the certificate shall be suitably endorsed. |  |  |  | \* |
| NOTE 1 − A restricted operator’s certificate covers only the operation of GMDSS equipment required for GMDSS sea areas A1, and does not cover the operation of GMDSS A2/A3/A4 equipment fitted on a ship over and above the basic A1 requirements, even if the ship is in a sea area A1. GMDSS sea areas A1, A2, A3 and A4 are identified in the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended.  NOTE 2 − (SUP - WRC-12) | | | | |

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Therefore, knowledge on NBDP operation is not required by GMDSS operators. Ability to send and receive correctly by radiotelephone is essential for all GMDSS operators.

ARTICLE 51

Conditions to be observed in the maritime services

Section I − Maritime mobile service

51.39 CA − Ship stations using narrow-band direct-printing telegraphy

MOD USA/4534A11/58

51.40 § 17 1) All ship stations using narrow-band direct-printing telegraphy equipment for general traffic should be able to send and receive on the frequency designated for narrow-band direct-printing telegraphy in the frequency bands in which they are operating. (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. Voluntary carriage of sending and receiving equipment for general traffic is still possible.

MOD USA/4534A11/59

51.41 2) The characteristics of the narrow-band direct-printing equipment should be in accordance with the most recent version of Recommendations ITU‑R M.476, ITU‑R M.625 and Recommendation ITU‑R M.627.    (WRC‑23)

**Reasons:** NBDP has been deleted from the GMDSS. with the exception of MSI on certain frequencies which are contained in RR Appendix **15**.

51.42 CA1 − Bands between 415 kHz and 535 kHz

MOD USA/4534A11/60

51.44 *a)* send and receive class F1B or J2B emissions for general traffic on the working frequencies necessary to carry out their service;     (WRC‑23)

**Reasons:** Since NBDP is not use anymore for distress, for MSI solely the reception is needed.

51.48 CA3 − Bands between 4 000 kHz and 27 500 kHz

MOD USA/4534A11/61

51.49 § 20 All ship stations equipped with narrow-band direct-printing telegraphy apparatus for general traffic to work in the authorized bands between 4 000 kHz and 27 500 kHz should be able to send and receive class F1B or J2B emissions on working frequencies in each of the HF maritime mobile bands necessary to carry out their service.

All ship stations equipped with narrow-band direct-printing telegraphy apparatus for MSI reception to work in the authorized bands between 4 000 kHz and 27 500 kHz shall be able to receive class F1B or J2B emissions on working frequencies in each of the HF maritime mobile bands necessary to carry out their service.     (WRC‑23)

**Reasons:** NBDP receiving only is still required for MSI reception.

51.50 D − Ship stations using radiotelephony

ADD USA/4534A11/62

51.64A1 E − Ship stations receiving data transmissions     (WRC‑23)

ADD USA/4534A11/63

51.64A1 E − Ship stations receiving data transmissions     (WRC‑23)

ADD USA/4534A11/64

51.64A2 *E1 − Bands between 415 kHz and 526.5 kHz*

ADD USA/4534A11/65

51.64A3 § 24*bis* All ship stations equipped with NAVDAT apparatus for receiving digital data transmissions in the authorized bands between 415 kHz and 535 kHz shall be capable of receiving class W7D emission on 500 kHz, if complying with the provisions of Chapter VII.     (WRC‑23)

ADD USA/4534A11/66

51.64A4 *E2 − Bands between 4 000 kHz and 27 500 kHz*

51.64A5 § 24ter All ship stations equipped with NAVDAT apparatus for receiving digital data transmissions in the authorized bands between 4 000 kHz and 27 500 kHz shall be capable of receiving class W7D emission, if complying with the provisions of Chapter VII. (WRC‑23)

**Reasons:** These provisions are added in order to stipulate the required class of emissions for NAVDAT in accordance with Recommendations ITU-R M.2010 and ITU-R M.2058.

ARTICLE 52

Special rules relating to the use of frequencies

Section I − General provisions

52.4 B − Bands between 415 kHz and 535 kHz

MOD USA/4534A11/67

52.6 § 3 1) In the maritime mobile service, no assignments shall be made on the frequency 518 kHz other than for transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of automatic narrow-band direct-printing telegraphy (International NAVTEX System). In the maritime mobile service, no assignments shall be made on the frequency 500 kHz other than for transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of the International NAVDAT System.     (WRC‑23)

**Reasons:** Protection of the frequency for the international NAVDAT system.

52.12 D − Bands between 4 000 kHz and 27 500 kHz

ADD USA/4534A11/68

52.13A § 6bis In the maritime mobile service, no assignments shall be made on the frequency 4 226 kHz other than for transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of International NAVDAT System. (WRC‑23)

**Reasons:** Protection of the frequency for the international NAVDAT system.

Section III − Use of frequencies for narrow-band direct-printing telegraphy

52.96 B − Bands between 415 kHz and 535 kHz

MOD USA/4534A11/69

52.97 § 45 All ship stations equipped with narrow-band direct-printing apparatus for general traffic to work in the authorized bands between 415 kHz and 535 kHz should be able to send and receive class F1B emissions as specified in No. 51.44. Additionally, ship stations complying with the provisions of Chapter **VII** shall be able to receive class F1B emissions on 518 kHz (see No. 51.45). (WRC-23)

**Reasons:** NBDP receiving only is still required for NAVTEX reception.

52.102 D − Bands between 4 000 kHz and 27 500 kHz

MOD USA/4534A11/70

52.103 § 47 All ship stations equipped with narrow-band direct-printing telegraph apparatus for general traffic to work in the authorized bands between 4 000 kHz and 27 500 kHz should be able to send and receive class F1B emissions as specified in No. **51.49**. The assignable frequencies are indicated in Appendices 15 and 17. (WRC‑23)

**Reasons:** NBDP receiving only is still required for NAVTEX reception.

Section VII – Use of frequencies for data transmissions    (WRC‑12)

52.261 A – General    (WRC‑12)

ADD USA/4534A11/71

52.262A1 *B − Bands between 415 kHz and 526.5 kHz*     (WRC‑23)

ADD

*B1 − Mode of operation of stations*     (WRC‑23)

ADD USA/4534A11/72

52.262A2 The class of emissions to be used for data transmissions in the bands between 415 kHz and 526.5 kHz should be in accordance with the most recent version of Recommendation ITU‑R M.2010. Coast stations as well as ship stations should use radio systems specified in the most recent version of Recommendation ITU‑R M.2010.     (WRC‑23)

**Reasons:** The frequency usages for MF NAVDAT system need to be included.

ADD USA/4534A11/73

52.263 C – Bands between 4 000 kHz and 27 500 kHz    (WRC‑23)

**Reasons:**

MOD USA/4534A11/74

C1 – Mode of operation of stations    (WRC‑23)

**Reasons:**

MOD USA/4534A11/75

52.264 The class of emissions to be used for data transmissions in the bands between 4 000 kHz and 27 500 kHz should be in accordance with the most recent version of Recommendation ITU‑R M.1798 or the most recent version of Recommendation ITU‑R M.2058. Coast stations as well as ship stations should use radio systems specified in the most recent version of Recommendation ITU‑R M.1798 or the most recent version of Recommendation ITU‑R M.2058.    (WRC‑23)

**Reasons:** The frequency usages for HF NAVDAT system need to be included.

ADD USA/4534A11/76

52.265A1 Coast stations employing the class of emissions in accordance with the most recent version of Recommendation ITU R M.2058 in the frequency bands between 4 000 kHz and 27 500 kHz shall not exceed a mean power in the following values.

|  |  |
| --- | --- |
| *Band* | *Maximum mean power* |
| 4 MHz | 5 kW |
| 6 MHz | 5 kW |
| 8 MHz | 10 kW |
| 12 MHz | 10 kW |
| 16 MHz | 10 kW |
| 18/19 MHz | 10 kW |
| 22 MHz | 10 kW | (WRC‑23) |

**Reasons:** Introduction of the maximum mean power for the NAVDAT system by the coast station in the HF bands.

MOD USA/4534A11/77

APPENDIX 14 (REV.WRC‑23)

Phonetic alphabet and figure code

(See Articles 32 and 57)     (WRC‑23)

**Reasons:** This is an editorial mistake. Articles referring to RR Appendix **14** are RR Articles **32** (**32.7**) and **57** (**57.7**) instead of RR Articles **30** and **57**.

APPENDIX 15 (REV.WRC‑19)

Frequencies for distress and safety communications for the Global  
Maritime Distress and Safety System

MOD USA/4534A11/78

TABLE 15-1     (WRC‑23)

Frequencies below 30 MHz

|  |  |  |
| --- | --- | --- |
| Frequency (kHz) | Description of usage | Notes |
| 490 | MSI | The frequency 490 kHz is used exclusively for maritime safety information (MSI).     (WRC‑03) |
| 500 | MSI | The frequency 500 kHz is used exclusively by the international NAVDAT system (see Resolution [**A111] (WRC‑23)**). |
| 518 | MSI | The frequency 518 kHz is used exclusively by the international NAVTEX system. |
|  |  |  |
| \*2 182 | RTP-COM | The frequency 2 182 kHz uses class of emission J3E. See also No. **52.190**. |
| \*2 187.5 | DSC |  |
| 3 023 | AERO-SAR | The aeronautical carrier (reference) frequencies 3 023 kHz and 5 680 kHz may be used for intercommunication between mobile stations engaged in coordinated search and rescue operations, and for communication between these stations and participating land stations, in accordance with the provisions of Appendix **27** (see Nos. **5.111** and **5.115**). |
| \*4 125 | RTP-COM | See also No. **52.221**. The carrier frequency 4 125 kHz may be used by aircraft stations to communicate with stations of the maritime mobile service for distress and safety purposes, including search and rescue (see No. **30.11**). |
|  |  |  |
| \*4 207.5 | DSC |  |
| 4 209.5 | MSI | The frequency 4 209.5 kHz is exclusively used for NAVTEX-type transmissions (see Resolution **339 (Rev.WRC‑07)**). |
| 4 210 | MSI-HF |  |
| 4 226 | MSI | The frequency 4 226 kHz is exclusively used for the international NAVDAT system (see Resolution [**A111] (WRC‑23)**). |
| 5 680 | AERO-SAR | See note under 3 023 kHz above. |
| \*6 215 | RTP-COM | See also No. **52.221**. |
|  |  |  |
| \*6 312 | DSC |  |

TABLE 15-1 (*end*)     (WRC‑07)

|  |  |  |
| --- | --- | --- |
| Frequency (kHz) | Description of usage | Notes |
| 6 314 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| 6 337.5 | MSI-HF | By means of the NAVDAT system. |
| \*8 291 | RTP-COM |  |
|  |  |  |
| \*8 414.5 | DSC |  |
| 8 416.5 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| 8 443 | MSI-HF | By means of the NAVDAT system. |
| \*12 290 | RTP-COM |  |
|  |  |  |
| \*12 577 | DSC |  |
| 12 579 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| \*16 420 | RTP-COM |  |
|  |  |  |
| \*16 804.5 | DSC |  |
| 16 806.5 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| 16 909.5 | MSI-HF | By means of the NAVDAT system. |
| 19 680.5 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| 22 376 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| 22 450.5 | MSI-HF | By means of the NAVDAT system. |
| 26 100.5 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| **Legend**:  **AERO-SAR**     These aeronautical carrier (reference) frequencies may be used for distress and safety purposes by mobile stations engaged in coordinated search and rescue operations.  **DSC**    These frequencies are used exclusively for distress and safety calls using digital selective calling in accordance with No. **32.5** (see Nos. **33.8** and **33.32**).     (WRC‑07)  **MSI**   In the maritime mobile service, these frequencies are used exclusively for the transmission of maritime safety information (MSI) (including meteorological and navigational warnings and urgent information) by coast stations to ships, by means of narrow-band direct-printing telegraphy.  **MSI-HF**     In the maritime mobile service, these frequencies are used exclusively for the transmission of high seas MSI by coast stations to ships, by means of narrow-band direct-printing telegraphy or the NAVDAT system. (WRC‑23)  **RTP-COM**     These carrier frequencies are used for distress and safety communications (traffic) by radiotelephony.  \* Except as provided in these Regulations, any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on the frequencies denoted by an asterisk (\*) is prohibited. Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in this Appendix is prohibited.    (WRC‑07) | | |

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15** and NAVDAT has been introduced in the GMDSS.

MOD USA/4534A11/79

TABLE 15-2     (WRC‑23)

Frequencies above 30 MHz (VHF/UHF)

|  |  |  |
| --- | --- | --- |
| Frequency (MHz) | Description of usage | Notes |
| … |  |  |

|  |  |  |
| --- | --- | --- |
| \*1 645.5-1 646.5 | SAT-COM | Use of the band 1 645.5-1 646.5 MHz (Earth-to-space) is limited to distress, urgency and safety operations (see No. **5.375**). (WRC‑23) |
| … |  |  |
|  | | |

**Reasons:** The frequency band had been assigned limited to the distress alerting by EPIRB (Inmarsat E). As this service has been ceased, this frequency band should be used limited to distress, urgency and safety communication.

APPENDIX 17 (REV.WRC‑19)

Frequencies and channelling arrangements in the  
high-frequency bands for the maritime mobile service

MOD USA/4534A11/80

PART A  –  Table of subdivided bands     (WRC‑23)

*In the Table,* where appropriate[[1]](#footnote-2)1, 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 (*f.*) and the spacing in kHz being indicated in italics.

Table of frequencies (kHz) to be used in the band between 4 000 kHz and 27 500 kHz  
allocated exclusively to the maritime mobile service

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band (MHz) | 4 | 6 | 8 | 12 | 16 | 18/19 | 22 | 25/26 |
| Limits (kHz) | 4 063 | 6 200 | 8 195 | 12 230 | 16 360 | 18 780 | 22 000 | 25 070 |
| Frequencies assignable to ship stations for oceanographic data transmission  *c)* | **4 063.3** to **4 064.8**  *6 f. 0.3 kHz* |  |  |  |  |  |  |  |
| Limits (kHz) | 4 065 | 6 200 | 8 195 | 12 230 | 16 360 | 18 780 | 22 000 | 25 070 |
| Frequencies assignable to ship stations for telephony, duplex operation  *a) i) t)* | **4 066.4** to **4 144.4**  *27 f. 3 kHz* | **6 201.4** to **6 222.4**  *8 f. 3 kHz* | **8 196.4** to **8 292.4**  *33 f. 3 kHz* | **12 231.4** to **12 351.4**  *41 f. 3 kHz* | **16 361.4** to **16 526.4**  *56 f. 3 kHz* | **18 781.4** to **18 823.4**  *15 f. 3 kHz* | **22 001.4** to **22 157.4**  *53 f. 3 kHz* | **25 071.4** to **25 098.4**  *10 f. 3 kHz* |
| Limits (kHz) | 4 146 | 6 224 | 8 294 | 12 353 | 16 528 | 18 825 | 22 159 | 25 100 |

Table of frequencies (kHz) to be used in the band between 4 000 kHz and 27 500 kHz  
allocated exclusively to the maritime mobile service (*continued*)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band (MHz) | 4 | 6 | 8 | 12 | 16 | 18/19 | 22 | 25/26 | |
| Limits (kHz) | 4 146 | 6 224 | 8 294 | 12 353 | 16 528 | 18 825 | 22 159 | 25 100 |
| Frequencies assignable to ship stations as well as coast stations for telephony, simplex operation  *a) u) v)* | **4 147.4** to **4 150.4**  *2 f. 3 kHz* | **6 225.4** to **6 231.4**  *3 f. 3 kHz* | **8 295.4** to **8 298.4**  *2 f. 3 kHz* | **12 354.4** to **12 366.4**  *5 f. 3 kHz* | **16 529.4** to **16 547.4**  *7 f. 3 kHz* | **18 826.4** to **18 844.4**  *7 f. 3 kHz* | **22 160.4** to **22 178.4**  *7 f. 3 kHz* | **25 101.4** to **25 119.4**  *7 f. 3 kHz* |
| Limits (kHz) | 4 152 | 6 233 | 8 300 | 12 368 | 16 549 | 18 846 | 22 180 | 25 121 |
| Frequencies assignable to ship stations for data transmission  *e) m) p) q) r) u)* | **4 153.5** to **4 168.5**  *6 f. 3 kHz* | **6 234.5** to **6 258.5**  *9 f. 3 kHz* | **8 301.5** to **8 337.5**  *13 f. 3 kHz* | **12 369.5** to **12 417.5**  *17 f. 3 kHz* | **16 550.5** to **16 613.5**  *22 f. 3 kHz* | **18 847.5** to **18 871.5**  *9 f. 3 kHz* | **22 181.5** to **22 238.5**  *20 f. 3 kHz* | **25 122.5** to **25 176.5**  *19 f. 3 kHz* |
| Limits (kHz) | 4 170 | 6 260 | 8 339 | 12 419 | 16 615 | 18 873 | 22 240 | 25 178 |
| Frequencies assignable to ship as well as coast stations for data transmission  *e) m) p) q) u)* |  |  |  |  |  |  |  | **25 179.5** to **25 206.5**  *10 f. 3 kHz* |
| Limits (kHz) | 4 170 | 6 260 | 8 339 | 12 419 | 16 615 | 18 873 | 22 240 | 25 208.25 |
| Frequencies (paired and non-paired) assignable to ship stations for narrow-band direct-printing (NBDP) telegraphy and data transmission systems at speeds not exceeding 100 Bd for FSK and 200 Bd for PSK  *b) d)* |  | **6 260.25** to **6 260.75**  *2 f. 0.5 kHz* | **8 339.25** to **8 339.75**  *2 f. 0.5 kHz* | **12 419.25** to **12 419.75**  *2 f. 0.5 kHz* | **16 615.25** to **16 616.75**  *4 f. 0.5 kHz* | **18 873.5** to **18 880**  *14 f. 0.5 kHz* |  |  |
| Limits (kHz) | 4 170 | 6 261 | 8 340 | 12 420 | 16 617 | 18 880.25 | 22 240 | 25 208.25 |
| Frequencies assignable to ship stations for oceanographic data transmission  *c)* |  | **6 261.3** to **6 262.5**  *5 f. 0.3 kHz* | **8 340.3** to **8 341.5**  *5 f. 0.3 kHz* | **12 420.3** to **12 421.5**  *5 f. 0.3 kHz* | **16 617.3** to **16 618.5**  *5 f. 0.3 kHz* |  | **22 240.3** to **22 241.5**  *5 f. 0.3 kHz* |  |
| Limits (kHz) | 4 170 | 6 262.75 | 8 341.75 | 12 421.75 | 16 618.75 | 18 880.25 | 22 241.75 | 25 208.25 |

Table of frequencies (kHz) to be used in the band between 4 000 kHz and 27 500 kHz  
allocated exclusively to the maritime mobile service (*continued*)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band (MHz) | 4 | 6 | 8 | 12 | 16 | 18/19 | 22 | 25/26 |
| Limits (kHz) | 4 170 | 6 262.75 | 8 341.75 | 12 421.75 | 16 618.75 | 18 880.25 | 22 241.75 | 25 208.25 |
| Frequencies (paired and non-paired) assignable to ship stations for narrow-band direct-printing (NBDP) telegraphy and data transmission systems at speeds not exceeding 100 Bd for FSK and 200 Bd for PSK  *b) d) j)* | **4 170.5** to **4 180**  *20 f. 0.5 kHz* | **6 263** to **6 269.5**  *14 f. 0.5 kHz* |  | **12 422**    *1 f. 0.5 kHz* |  |  |  |  |
| Limits (kHz) | 4 180.25 | 6 269.75 | 8 341.75 | 12 422.25 | 16 618.75 | 18 880.25 | 22 241.75 | 25 208.25 |
| Frequencies assignable to ship stations for data transmission  *e) m) p) q) u)* | **4 181.75** to **4 187.75**  *3f. 3 kHz* | **6 271.25** to **6 277.25**  *3 f. 3 kHz* | **8 343.25** to **8 358.25**  *6 f. 3 kHz* | **12 423.75** to **12 450.75**  *10 f. 3 kHz* | **16 620.25** to **16 680.25**  *21 f. 3 kHz* | **18 881.75** to **18 893.75**  *5 f. 3 kHz* | **22 243.25** to **22 288.25**  *16 f. 3 kHz* |  |
| Limits (kHz) | 4 189.25 | 6 278.75 | 8 359.75 | 12 452.25 | 16 681.75 | 18 895.25 | 22 289.75 | 25 208.25 |
| Frequencies assignable to ship as well as coast stations for data transmission  *e) m) p) q) u)* | **4 190.75** to **4 196.75**  *3f. 3 kHz* | **6 280.25** to **6 310.25**  *11 f. 3 kHz* | **8 361.25** to **8 373.25**  *5 f. 3 kHz* | **12 453.75** to **12 474.75**  *8 f. 3 kHz* |  | **18 896.75** *1 f. 3 kHz* |  |  |
| Limits (kHz) | 4 198.25 | 6 311.75 | 8 374.75 | 12 476.25 | 16 681.75 | 18 898.25 | 22 289.75 | 25 208.25 |
| Frequencies assignable to coast stations for data transmission  *e) m) p) q) u)* | **4 199.75** to **4 205.75** *3f. 3 kHz* |  |  |  |  |  |  |  |
| Limits (kHz) | 4 207.25 | 6 311.75 | 8 374.75 | 12 476.25 | 16 681.75 | 18 898.25 | 22 289.75 | 25 208.25 |
| Frequencies (paired and non-paired) assignable to ship stations for NBDP telegraphy and data transmission systems at speeds not exceeding 100 bauds for FSK and 200 bauds for PSK  *b) d) j)* |  |  | **8 375** to **8 383.5**  *18 f. 0.5 kHz* | **12 476.5** to **12 522.5** *93 f. 0.5 kHz* | **16 682** to **16 698.5** *34 f. 0.5 kHz* |  | **22 290** to **22 299** *19 f 0.5 kHz* |  |
| Limits (kHz) | 4 207.25 | 6 311.75 | 8 383.75 | 12 522.75 | 16 698.75 | 18 898.25 | 22 299.25 | 25 208.25 |

Table of frequencies (kHz) to be used in the band between 4 000 kHz and 27 500 kHz  
allocated exclusively to the maritime mobile service (*continued*)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band (MHz) | 4 | 6 | 8 | 12 | 16 | 18/19 | 22 | 25/26 | |
| Limits (kHz) | 4 207.25 | 6 311.75 | 8 383.75 | 12 522.75 | 16 698.75 | 18 898.25 | 22 299.25 | 25 208.25 |
| Frequencies assignable to ship as well as coast stations for data transmission  *e) p) q) u)* |  |  | **8 385.5** to **8 406.5**  *8 f. 3 kHz* | **12 524.25** to **12 575.25**  *18 f. 3 kHz* | **16 700.5** to **16 802.5** *35 f. 3 kHz* |  | **22 300.75** to **22 372.75** *25 f. 3 kHz* |  |
| Limits (kHz) | 4 207.25 | 6 311.75 | 8 408 | 12 576.75 | 16 804 | 18 898.25 | 22 374.25 | 25 208.25 |
| Frequencies assignable to coast stations for data transmission  *e ) m) p) q) u)* |  |  | **8 409.5** to **8 412.5**  *2 f. 3 kHz* |  |  |  |  |  |
| Limits (kHz) | 4 207.25 | 6 311.75 | 8 414 | 12 576.75 | 16 804 | 18 898.25 | 22 374.25 | 25 208.25 |
| Frequencies assignable to ship stations for digital selective calling  *k) l)* | **4 207.5** to **4 209**  4 f. 0.5 kHz | **6 312** to **6 313.5**  4 f. 0.5 kHz | **8 414.5** to **8 416**  4 f. 0.5 kHz | **12 577** to **12 578.5**  4 f. 0.5 kHz | **16 804.5** to **16 806**  4 f. 0.5 kHz | **18 898.5** to **18 899.5**  3 f. 0.5 kHz | **22 374.5** to **22 375.5**  3 f. 0.5 kHz | **25 208.5** to **25 209.5**  3 f. 0.5 kHz |
| Limits (kHz) | 4 209.25 | 6 313.75 | 8 416.25 | 12 578.75 | 16 806.25 | 18 899.75 | 22 375.75 | 25 210 |
| Limits (kHz) | 4 209.25 | 6 313.75 | 8 416.25 | 12 578.75 | 16 806.25 | 19 680.25 | 22 375.75 | 26 100.25 |
| Frequencies (paired and non-paired) assignable to coast stations for NBDP and data transmission systems, at speeds not exceeding 100 Bd for FSK and 200 Bd for PSK  *b) d) n) o)* | **4 209.5** to **4 216**  14 f. 0.5 kHz | **6 314** to **6 321.5**  16 f. 0.5 kHz | **8 416.5** to **8 423.5**  15 f. 0.5 kHz | **12 579** to **12 624.5**  92 f. 0.5 kHz | **16 806.5** to **16 821.5**  31 f. 0.5 kHz | **19 680.5**    1 f. 0.5 kHz | **22 376**    1 f. 0.5 kHz | **26 100.5** to **26 102.5**  5 f. 0.5 kHz |
| Limits (kHz) | 4 216.25 | 6 321.75 | 8 423.75 | 12 624.75 | 16 821.75 | 19 680.75 | 22 376.25 | 26 102.75 |
| Frequencies assignable to ship stations for data transmission  *e) m) p) q) u)* |  |  |  |  |  |  | **22 377.75** to **22 380.75**  2 f. 3 kHz |  |
| Limits (kHz) | 4 216.25 | 6 321.75 | 8 423.75 | 12 624.75 | 16 821.75 | 19 680.75 | 22 382.25 | 26 102.75 |
| Frequencies assignable to ship as well as coast stations for data transmission  *e) m) p) q) u)* | **4 217.75**    1 f. 3 kHz |  |  |  | **16 823.25** to **16 838.25**  6 f. 3 kHz |  |  |  |
| Limits (kHz) | 4 219.25 | 6 321.75 | 8 423.75 | 12 624.75 | 16 839.75 | 19 680.75 | 22 382.25 | 26 102.75 |

Table of frequencies (kHz) to be used in the band between 4 000 kHz and 27 500 kHz  
allocated exclusively to the maritime mobile service (*continued*)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band (MHz) | 4 | 6 | 8 | 12 | 16 | 18/19 | 22 | 25/26 |
| Limits (kHz) | 4 219.25 | 6 321.75 | 8 423.75 | 12 624.75 | 16 839.75 | 19 680.75 | 22 382.25 | 26 102.75 |
| Frequencies assignable to coast stations for data transmission  *e) m) q) u)* |  | **6 323.25** to **6329.25**  *3 f. 3 kHz* | **8 425.5** to **8 434.5**  *4 f. 3 kHz* | **12 626.25** to **12 653.25**  *10 f. 3 kHz* | **16 841.25** to **16 901.25**  *21 f. 3 kHz* | **19 682.25**    *1 f. 3 kHz* |  | **26 104.25** to **26 119.25**  *6 f. 3 kHz* |
| Limits (kHz) | 4 219.25 | 6 330.75 | 8 436.25 | 12 654.75 | 16 902.75 | 19 683.75 | 22 382.25 | 26 120.75 |
| Frequencies (paired and non-paired) assignable to coast stations for NBDP and data transmission systems, at speeds not exceeding 100 Bd for FSK and 200 Bd for PSK  *b) d)* |  |  |  | **12 655** to **12 656.5**  *4 f. 0.5 kHz* |  | **19 684** to **19 691**  *15 f. 0.5 kHz* | **22 382.5** to **22 389**  *14 f. 0.5 kHz* |  |
| Limits (kHz) | 4 219.25 | 6 330.75 | 8 436.25 | 12 656.75 | 16 902.75 | 19 691.25 | 22 389.25 | 26 120.75 |
| Frequencies assignable to coast stations for data transmission  *e) m) p) q) u)* |  |  |  |  |  | **19 692.75** to **19 701.75**  *4 f. 3 kHz* | **22 390.75** to **22 441.75**  *18 f. 3 kHz* |  |
| Limits (kHz) | 4 219.25 | 6 330.75 | 8 436.25 | 12 656.75 | 16 902.75 | 19 703.25 | 22 443.25 | 26 120.75 |
| Frequencies (non-paired) assignable to coast stations for NBDP and data transmission systems, at speeds not exceeding 100 Bd for FSK and 200 Bd for PSK  *b)* |  |  |  |  |  |  | **22 443.5** *1 f. 0.5 kHz* |  |
| Limits (kHz) | 4 219.25 | 6 330.75 | 8 436.25 | 12 656.75 | 16 902.75 | 19 703.25 | 22 443.75 | 26 120.75 |
| Frequencies assignable to coast stations for digital selective calling  *l)* | **4 219.5** to **4 220.5**  *3 f. 0.5 kHz* | **6 331** to **6 332**  *3 f. 0.5 kHz* | **8 436.5** to **8 437.5**  *3 f. 0.5 kHz* | **12 657** to **12 658**  *3 f. 0.5 kHz* | **16 903** to **16 904**  *3 f. 0.5 kHz* | **19 703.5** to **19 704.5**  *3 f. 0.5 kHz* | **22 444** to **22 445**  *3 f. 0.5 kHz* | **26 121** to **26 122**  *3 f. 0.5 kHz* |
| Limits (kHz) | 4 221 | 6 332.5 | 8 438 | 12 658.5 | 16 904.5 | 19 705 | 22 445.5 | 26 122.5 |

Table of frequencies (kHz) to be used in the band between 4 000 kHz and 27 500 kHz  
allocated exclusively to the maritime mobile service (*end*)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band (MHz) | 4 | 6 | 8 | 12 | 16 | 18/19 | 22 | 25/26 |
| Limits (kHz) | 4 221 | 6 332.5 | 8 438 | 12 658.5 | 16 904.5 | 19 705 | 22 445.5 | 26 122.5 |
| Frequencies assignable for wide‑band systems, facsimile, special and data transmission systems and direct-printing telegraphy systems  *m) p) s) pp) ppp)* |  |  |  |  |  |  |  |  |
| Limits (kHz) | 4 351 | 6 501 | 8 707 | 13 077 | 17 242 | 19 755 | 22 696 | 26 145 |
| Frequencies assignable to coast stations for telephony, duplex operation  *a) t)* | **4 352.4** to **4 436.4**  *29 f. 3 kHz* | **6 502.4** to **6 523.4**  *8 f. 3 kHz* | **8 708.4** to **8 813.4**  *36 f. 3 kHz* | **13 078.4** to **13 198.4**  *41 f. 3 kHz* | **17 243.4** to **17 408.4**  *56 f. 3 kHz* | **19 756.4** to **19 798.4**  *15 f. 3 kHz* | **22 697.4** to **22 853.4**  *53 f. 3 kHz* | **26 146.4** to **26 173.4**  *10 f. 3 kHz* |
| Limits (kHz) | 4 438 | 6 525 | 8 815 | 13 200 | 17 410 | 19 800 | 22 855 | 26 175 |

*a)* See Part B, Section I.

*b)* See Part B, Section III.

*c)* The frequency bands may also be used by buoy stations for oceanographic data transmission and by stations interrogating these buoys.

*d)* See Part B, Section II.

*e)* See Part B, Section IV.

*i)* For the use of the carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz and 16 420 kHz in these sub‑bands by ship and coast stations for distress and safety purposes, by single-sideband radiotelephony, see Article **31**.

*j)* For the use of the assigned frequencies 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz in these sub-bands by ship and coast stations for the automatic connection system (ACS). (WRC‑23)

*k)* For the use of the assigned frequencies 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12 577 kHz and 16 804.5 kHz in these sub-bands by ship and coast stations for distress and safety purposes, by digital selective calling, see Article **31**.

*l)* The following paired assigned frequencies (for ship/coast stations) 4 208/4 219.5 kHz, 6 312.5/6 331 kHz, 8 415/8 436.5 kHz, 12 577.5/12 657 kHz, 16 805/16 903 kHz, 18 898.5/19 703.5 kHz, 22 374.5/22 444 kHz and 25 208.5/26 121 kHz are the first choice international frequencies for digital selective calling (see Article **54**).

*m)* Frequencies from these frequency bands may also be used for A1A or A1B Morse telegraphy subject to not claiming protection from other stations in the maritime mobile service using digitally modulated emissions. Any frequencies so assigned shall be multiples of 100 Hz. Administrations shall ensure a uniform distribution of such assignments within the bands.

*n)* The assigned frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the exclusive international frequencies for the transmission of maritime safety information (MSI) (see Articles **31** and **33**).

*o)* The frequency 4 209.5 kHz is an exclusive international frequency for the transmission of NAVTEX type information (see Articles **31** and **33**).

*p)* These sub-bands, except the frequencies referred to in Notes *i), j)*, *n)* and *o)*, are designated for digitally modulated emissions in the maritime mobile service (e.g. as described in the most recent version of Recommendation ITU‑R M.1798). The provisions of No. **15.8** apply.     (WRC-15)

*pp)* The frequency bands 4 221-4 231 kHz, 6 332.5-6 342.5 kHz, 8 438-8 448 kHz, 12 658.5-12 668.5 kHz, 16 904.5-16 914.5 kHz and 22 445.5-22 455.5 kHz may also be used by the NAVDAT system, on condition that the use of NAVDAT system transmitting stations is limited to coast stations operating in accordance with the most recent version of Recommendation ITU‑R M.2058.     (WRC‑19)

*ppp)* The frequency 4 226 kHz is an exclusive frequency for the International NAVDAT system (see Articles **33** and **52**).     (WRC‑23)

*q)* These frequency bands may be used by narrow-band direct-printing applications by administrations, subject to not claiming protection from other stations in the maritime mobile service using digitally modulated emissions.

*r)* Frequencies in these bands may be used for wide-band telegraphy, facsimile and special data transmission on the condition that interference is not caused to and protection is not claimed from stations in the maritime mobile service using digitally modulated emissions.

*s)* The frequency bands 4 345-4 351 kHz, 6 495-6 501 kHz, 8 701-8 707 kHz may be used for simplex (single-sideband) telephone operation (regularly spaced by 3 kHz), in accordance with provision No. **52.177**, subject to not claiming protection from other stations in the maritime mobile service using digitally modulated emissions.

*t)* The frequency bands 4 065-4 146 kHz, 4 351-4 438 kHz, 6 200-6 224 kHz, 6 501-6 525 kHz, 8 195-8 294 kHz, 8 707‑8 815 kHz, 12 230-12 353 kHz, 13 077-13 200 kHz, 16 360-16 528 kHz, 17 242-17 410 kHz, 18 780‑18 825 kHz, 19 755-19 800 kHz, 22 000-22 159 kHz, 22 696-22 855 kHz, 25 070-25 100 kHz and 26 145‑26 175 kHz may be used, in accordance with the Appendix **25** allotment Plan, for digitally modulated emissions as described in the most recent version of Recommendation ITU‑R M.1798 on the condition that it shall not cause harmful interference to, or claim protection from other stations in the maritime mobile service using radiotelephony operations. The digitally modulated emissions may be used provided that their occupied bandwidth does not exceed 2 800 Hz, it is situated wholly within one frequency channel and the peak envelope power of coast stations does not exceed 10 kW and the peak envelope power of ship stations does not exceed 1.5 kW per channel.      (WRC-15)

*u)* These frequency bands may be used for wide-band digitally modulated emissions by combining multiple 3 kHz contiguous channels.

*v)* The frequency bands4 146-4 152 kHz, 6 224-6 233 kHz, 8 294-8 300 kHz, 12 353-12 368 kHz, 16 528-16 549 kHz, 18 825-18 846 kHz, 22 159-22 180 and 25 100-25 121 kHz may be used for simplex digitally modulated emissions as described in the most recent version of Recommendation ITU‑R M.1798 on condition that it shall not cause harmful interference to, or claim protection from other stations in the maritime mobile service using radiotelephony operations. The digitally modulated emissions may be used provided that their occupied bandwidth does not exceed 2 800 Hz, it is situated wholly within one frequency channel and the peak envelope power of coast stations does not exceed 10 kW and the peak envelope power of ship stations does not exceed 1.5 kW per channel.      (WRC-15)

*w)* (SUP WRC-19)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15** and the new ACS system will utilize the frequencies previously used by NBDP for distress and safety communications. Similar footnote with *o)* for NAVTEX is added for the NAVDAT.

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PART B – Channelling arrangements     (WRC‑15)

Section II – Narrow-band direct-printing telegraphy (paired frequencies)

1 Each coast station which uses paired frequencies is assigned one or more frequency pairs from the following series; each pair consists of a transmitting and a receiving frequency.

2 The speed of the narrow-band direct-printing telegraphy and data systems shall not exceed 100 Bd for FSK and 200 Bd for PSK.

Table of frequencies for two-frequency operation by coast stations (kHz)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Channel No. | 4 MHz band | | 6 MHz band | | 8 MHz band | |
| Transmit | Receive | Transmit | Receive | Transmit | Receive |
| 1  2  3  4  5 | 4 210.5 4 211 4 211.5 4 212 4 212.5 | 4 172.5 4 173 4 173.5 4 174 4 174.5 | 6 314.5 6 315 6 315.5 6 316 6 316.5 | 6 263 6 263.5 6 264 6 264.5 6 265 | 8 417 8 417.5 8 418 8 418.5 | 8 377 8 377.5 8 378 8 378.5 |
| 6  7  8  9 10 | 4 213 4 213.5 4 214 4 214.5 4 215 | 4 175 4 175.5 4 176 4 176.5 4 177 | 6 317 6 317.5 6 318 6 318.5 6 319 | 6 265.5 6 266 6 266.5 6 267 6 267.5 | 8 419 8 419.5 8 420 8 420.5 8 421 | 8 379 8 379.5 8 380 8 380.5 8 381 |
| 11 12 13 14 15 | 4 215.5 4 216 | 4 178 4 178.5 | 6 319.5 6 320 6 320.5 | 6 268.5 6 269 6 269.5 | 8 421.5 8 422 8 422.5 8 423 8 423.5 | 8 381.5 8 382 8 382.5 8 383 8 383.5 |

Table of frequencies for two-frequency operation by coast stations (kHz)

| Channel No. | 12 MHz band | | 16 MHz band | | 18/19 MHz band | |
| --- | --- | --- | --- | --- | --- | --- |
| Transmit | Receive | Transmit | Receive | Transmit | Receive |
| 1  2  3  4  5 | 12 579.5 12 580 12 580.5 12 581 12 581.5 | 12 477 12 477.5 12 478 12 478.5 12 479 | 16 807 16 807.5 16 808 16 808.5 16 809 | 16 683.5 16 684 16 684.5 16 685 16 685.5 |  |  |
| 6  7  8  9 10 | 12 582 12 582.5 12 583 12 583.5 12 584 | 12 479.5 12 480 12 480.5 12 481 12 481.5 | 16 809.5 16 810 16 810.5 16 811 16 811.5 | 16 686 16 686.5 16 687 16 687.5 16 688 | 19 684 19 684.5 19 685 19 685.5 | 18 873.5 18 874 18 874.5 18 875 |
| 11 12 13 14 15 | 12 584.5 12 585 12 585.5 12 586 12 586.5 | 12 482 12 482.5 12 483 12 483.5 12 484 | 16 812 16 812.5 16 813 16 813.5 16 814 | 16 688.5 16 689 16 689.5 16 690 16 690.5 | 19 686 19 686.5 19 687 19 687.5 19 688 | 18 875.5 18 876 18 876.5 18 877 18 877.5 |
| 16 17 18 19 20 | 12 587 12 587.5 12 588 12 588.5 12 589 | 12 484.5 12 485 12 485.5 12 486 12 486.5 | 16 814.5 16 815 16 815.5 16 816 16 816.5 | 16 691 16 691.5 16 692 16 692.5 16 693 | 19 688.5 19 689 19 689.5 19 690 19 690.5 | 18 878 18 878.5 18 879 18 879.5 18 880 |
| 21 22 23 24 25 | 12 589.5 12 590 12 590.5 12 591 12 591.5 | 12 487 12 487.5 12 488 12 488.5 12 489 | 16 817 16 817.5 16 818  16 818.5 | 16 693.5 16 694 16 694.5  16 695.5 |  |  |
| 26 27 28 29 30 | 12 592 12 592.5 12 593 12 593.5 12 594 | 12 489.5 12 490 12 490.5 12 491 12 491.5 | 16 819 16 819.5 16 820 16 820.5 16 821 | 16 696 16 696.5 16 697 16 697.5 16 698 |  |  |
| 31 32 33 34 35 | 12 594.5 12 595 12 595.5 12 596 12 596.5 | 12 492 12 492.5 12 493 12 493.5 12 494 | 16 821.5 | 16 698.5 |  |  |
| 36 37 38 39 40 | 12 597 12 597.5 12 598 12 598.5 12 599 | 12 494.5 12 495 12 495.5 12 496 12 496.5 |  |  |  |  |
| 41 42 43 44 45 | 12 599.5 12 600 12 600.5 12 601 12 601.5 | 12 497 12 497.5 12 498 12 498.5 12 499 |  |  |  |  |

Table of frequencies for two-frequency operation by coast stations (kHz)

|  |  |  |
| --- | --- | --- |
| Channel No. | 12 MHz band (*end*) | |
| Transmit | Receive |
| 46 47 48 49 50 | 12 602 12 602.5 12 603 12 603.5 12 604 | 12 499.5 12 500 12 500.5 12 501 12 501.5 |
| 51 52 53 54 55 | 12 604.5 12 605 12 605.5 12 606 12 606.5 | 12 502 12 502.5 12 503 12 503.5 12 504 |
| 56 57 58 59 60 | 12 607 12 607.5 12 608 12 608.5 12 609 | 12 504.5 12 505 12 505.5 12 506 12 506.5 |
| 61 62 63 64 65 | 12 609.5 12 610 12 610.5 12 611 12 611.5 | 12 507 12 507.5 12 508 12 508.5 12 509 |
| 66 67 68 69 70 | 12 612 12 612.5 12 613 12 613.5 12 614 | 12 509.5 12 510 12 510.5 12 511 12 511.5 |
| 71 72 73 74 75 | 12 614.5 12 615 12 615.5 12 616 12 616.5 | 12 512 12 512.5 12 513 12 513.5 12 514 |
| 76 77 78 79 80 | 12 617 12 617.5 12 618 12 618.5 12 619 | 12 514.5 12 515 12 515.5 12 516 12 516.5 |
| 81 82 83 84 85 | 12 619.5 12 620 12 620.5 12 621 12 621.5 | 12 517 12 517.5 12 518 12 518.5 12 519 |
| 86 87 88 89 90 | 12 622  12 622.5 12 623 12 623.5 | 12 519.5  12 520.5 12 521 12 521.5 |
| 91 92 | 12 624 12 624.5 | 12 522 12 522.5 |

…

**Reasons:** Introduction of the ACS in RR Appendix **17** using the frequencies of NBDP previously used for distress.

MOD USA/4534A11/82

RESOLUTION 18 (Rev.WRC‑23)

Relating to the procedure for identifying and announcing the position of  
ships and aircraft of States not parties to an armed conflict

The World Radiocommunication Conference (Dubai, 2023),

…

resolves

1 that the frequencies for urgency signal and messages specified in the Radio Regulations may be used by ships and aircraft of States not parties to an armed conflict for self-identification and establishing communications; the transmission will consist of the urgency or safety signals, as appropriate, described in Article **33** followed by the addition of the single word “NEUTRAL” pronounced as in French “neutral” in radiotelephony; as soon as practicable, communications shall be transferred to an appropriate working frequency;

…

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI reception on certain frequencies which are contained in RR Appendix **15**. The frequencies for NBDP-COM in RR Appendix **15** are withdrawn.

MOD USA/4534A11/83

RESOLUTION 349 (REV.WRC‑23)

Operational procedures for cancelling false distress alerts in   
the Global Maritime Distress and Safety System

The World Radiocommunication Conference (Dubai, 2023),

…

noting

that the International Maritime Organization (IMO) is referring to this operational procedure to cancel false distress alerts in their documentation,

…

ANNEX TO RESOLUTION 349 (Rev.WRC‑23)

Cancelling of false distress alerts

If a distress alert is inadvertently transmitted, the following steps shall be taken to cancel the distress alert.

1 VHF digital selective calling

1) Follow the instructions on the radio screen, if applicable, or

Switch off and switch on after 10 seconds, and follow the instructions on the radio screen, if applicable;

2) If the DSC equipment is capable of cancellation, start the distress self-cancel operation in accordance with the most recent version of Recommendation ITU‑R M.493;

3) Set to channel 16; and

4) Transmit a broadcast message to “All Stations” giving the ship’s name, call sign and maritime mobile service identity (MMSI), and cancel the false distress alert;

Example of message:

– the words “ALL STATIONS”, spoken three times;

– the words “THIS IS”;

– the name of the vessel, spoken three times;

– the call sign or other identification;

– the MMSI;

– the words “PLEASE CANCEL MY DISTRESS ALERT OF” followed by the time in UTC.

2 MF digital selective calling

1) Follow the instructions on the radio screen, if applicable, or

Switch off and switch on after 10 seconds, and follow the instructions on the radio screen, if applicable;

2) If the DSC equipment is capable of cancellation, start the distress self-cancel operation in accordance with the most recent version of Recommendation ITU‑R M.493;

3) Tune for radiotelephony transmission on 2 182 kHz; and

4) Transmit a broadcast message to “All Stations” giving the ship’s name, call sign and MMSI, and cancel the false alert;

For example of message see section 1.

3 HF digital selective calling

1) Follow the instructions on the radio screen, if applicable, or

Switch off and switch on after 10 seconds, and follow the instructions on the radio screen, if applicable;

2) If the DSC equipment is capable of cancellation, start the distress self-cancel operation in accordance with the most recent version of Recommendation ITU‑R M.493;

3) Tune for radiotelephony on the distress and safety frequency in each frequency band in which a false distress alert was transmitted (see Appendix **15**); and

4) Transmit a broadcast message to “All Stations” giving the ship’s name, call sign and MMSI, and cancel the false alert on the distress and safety frequency in each frequency band in which the false distress alert was transmitted;

For example of message see section 1.

**Reasons:** Expression of “implement distress self-cancel operation” is more explicit and specific than the expression of “cancel the alert”.

4 Ship earth station

Notify the appropriate rescue coordination centre that the alert is cancelled by sending a distress priority message. Provide ship name, call sign and ship earth station identity with the cancelled alert message.

Example of message by telegraphy:

– NAME, CALL SIGN, IDENTITY NUMBER, POSITION;

– Cancel my distress;

– Alert of DATE, TIME UTC;

– =Master+

Example of message by radiotelephony:

– the words “ALL STATIONS”, spoken three times;

– the words “THIS IS”;

– the name of the vessel, spoken three times;

– the call sign or other identification;

– the identity number/MMSI;

– the words “PLEASE CANCEL MY DISTRESS ALERT OF” followed by the time in UTC.

5 Satellite emergency position indicating radiobeacon (EPIRB)

If for any reason an EPIRB is activated inadvertently or accidentally, immediately stop the inadvertent transmission and contact the appropriate rescue coordination centre through a coast station or land earth station and cancel the distress alert.

6 General

Notwithstanding the above, ships may use additional appropriate means available to them to inform the appropriate authorities that a false distress alert has been transmitted and should be cancelled.

No action will normally be taken against any ship or mariner for reporting and cancelling a false distress alert. However, in view of the serious consequences of false alerts, and the strict ban on their transmission, authorities may take actions in cases of repeated violation.

**Reasons:** This addendum is intended as guidance to the mariner. The upcoming IMO Resolution MSC.514(105) on avoidance of false distress alerts refers directly to Resolution **349 (Rev.WRC‑19)**, which is included in the ITU-R Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services (Maritime Manual).

MOD USA/4534A11/84

RESOLUTION 354 (REV.WRC‑23)

Distress and safety radiotelephony procedures for 2 182 kHz

The World Radiocommunication Conference (Dubai, 2023),

…

ANNEX TO RESOLUTION 354 (Rev.WRC‑23)

Distress and safety radiotelephony procedures for 2 182 kHz[[2]](#footnote-3)\*

PART A1 − GENERAL

…

§ 4 The abbreviations and signals of Recommendation ITU‑R M.1172 and the Phonetic Alphabet and Figure Code in Appendix **14** should be used where applicable[[3]](#footnote-4)2.

§ 5 Distress, urgency and safety communications may also be made using digital selective calling and satellite techniques, , in accordance with the provisions specified in Chapter **VII** and relevant ITU‑R Recommendations.    (WRC-23)

…

**Reasons:** NBDP has been deleted from the GMDSS. In order to avoid potential confusion, it is necessary to remind the mariners and administrations of the difference in pronunciations of figures in RR Appendix **14** and IMO SMCP.

PART A2 − FREQUENCIES FOR DISTRESS AND SAFETY

…

Section II − Protection of distress and safety frequencies

…

B − 2 182 kHz

§ 6 1) Except for transmissions authorized on the carrier frequency 2 182 kHz and on the frequencies 2 174.5 kHz, 2 177 kHz, 2 187.5 kHz and 2 189.5 kHz, all transmissions on the frequencies between 2 173.5 kHz and 2 190.5 kHz are forbidden (see No.**5.110** for 2 174.5 kHz, Nos.**52.130** to **52.136** for 2 177 kHz and 2 189.5 kHz and also Appendix **15** for 2 182 kHz and 2 187.5 kHz).

2) To facilitate the reception of distress calls, all transmissions on 2 182 kHz should be kept to a minimum.

**Reasons:** NBDP distress and safety communication has been deleted from the GMDSS. References to related footnotes in RR are also added to clearly indicate the usage of concerned frequencies to avoid any confusion.

ADD USA/4534A11/85

DRAFT NEW RESOLUTION [A111] (WRC‑23)

Coordination of NAVDAT system

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that the International Maritime Organization (IMO) has established procedures to coordinate the operational aspects of NAVDAT system, such as allocation of transmitter identification and time schedules, in the planning stages for transmissions on the international frequencies 500 kHz and/or 4 226 kHz and also on the other frequencies which are defined in No. **5.79** and Appendix **15**;

*b)* that coordination in the frequencies 500 kHz and/or 4 226 kHz and other frequencies which are defined in No. **5.79** and Appendix **15**, is essentially operational,

resolves

to invite administrations to apply the procedures established by IMO, taking into account the IMO NAVDAT Manual, for coordinating the use of the international frequencies 500 kHz and/or 4 226 kHz and also of the other frequencies which are defined in No. **5.79** and Appendix **15**,

instructs the Secretary-General

to invite IMO to provide ITU with information on a regular basis on operational coordination for NAVDAT system on the international frequencies 500 kHz and/or 4 226 kHz and also on the other frequencies which are defined in No. **5.79** and Appendix **15**,

instructs the Director of the Radiocommunication Bureau

to publish this information in the *List of Coast Stations and Special Service Stations* (List IV) (see No. **20.7**).

**Reasons:** New Resolution for the coordination of the NAVDAT system identical to the one for the NAVTEX (Resolution **339** **(Rev.WRC-07)**).

**SUP USA/4534A11/86**

RESOLUTION 361 (REV.WRC‑19)

Consideration of possible regulatory actions to support modernization of the Global Maritime Distress and Safety System and   
the implementation of e‑navigation

**Reasons:** This Resolution is proposed to be suppressed considering the finalization of the studies on WRC-23 agenda item 1.11 covered by *resolves* 1 (modernization of the GMDSS).

1. 1 Within the non-shaded boxes. [↑](#footnote-ref-2)
2. \* Distress and safety communications include distress, urgency and safety calls and messages. [↑](#footnote-ref-3)
3. 2 The use of the Standard Marine Communication Phrases (SMCP) and, where language difficulties exist, the International Code of Signals, both published by the International Maritime Organization, is also recommended. It needs to be noted that the pronunciations for figures in Appendix **14** and IMO SMCP are different.     (WRC‑23) [↑](#footnote-ref-4)