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| **US Radiocommunications Sector****Fact Sheet** |
| **Working Party:** WP 5B | **Document No:** USWP5B29-02-FD |
| **Ref:** Annex 6 to Document 5B/531-E | **Date:** 12 May 2022 |
| **Document Title:** Proposed modifications to Draft CPM text for WRC-23 agenda item 1.11 to satisfy WRC-23 Resolution 361  |
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| **Purpose/Objective:** The purpose of this document to provide U.S. input to the development of CPM text for WRC-23 agenda item 1.11 (GMDSS Modernization).  |
| **Abstract:** This document provides U.S. input to address *resolves 1* and *resolves 2* of WRC-23 agenda item 1.11 (WRC-23 Resolution 361) Draft CPM text. Specifically, this document will address text in the current Method A regarding the 1645.5-1646.5 MHz band subsequent to the IMO decision to discontinue the use of satellite EPIRBs in this frequency band. In addition, this document will provide input to ITU-R RR Articles 32 and 33 pertaining to the use of Narrow Band Direct Printing (NBDP). *Resolves 3* of WRC-23 Resolution 361 is under the remit of ITU-R WP 4C and will not be addressed in this document. |

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| **14 April 2022** |
| **English only** |
| Annex 6 to the Working Party 5B Chairman’s Report |
| WORKING DOCUMENT TOWARDS THE DRAFT CPM TEXT ON WRC-23 AGENDA ITEM 1.11 |
|  |

CHAPTER 2

Aeronautical and maritime issues

(Agenda items 1.6, 1.7, 1.8, 1.9, 1.10 and 1.11)

Agenda item 1.11

**(WP 5B[[1]](#footnote-1)\* / WP 4C[[2]](#footnote-2)\*\*, WP 7D)**

*1.11 to 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)****;*

Resolution **361 (Rev.WRC-19)** – *Consideration of possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of e‑navigation*

# 2/1.11/1 Executive summary

[Text of the executive summary, not more than half a page of text to describe briefly the purpose of the agenda item, summarize the results of the studies carried out and, most importantly, provide a brief description of the method(s) identified that may satisfy the agenda item. See also § A2.1 of Annex 2 to [Resolution ITU-R 2-8](http://www.itu.int/pub/R-RES-R.2-8-2019).]

# 2/1.11/2 Background

*[Text of the background, not more than half a page of text to provide general information in a concise manner, in order to describe the rationale of the agenda items (or issue(s)). See also § A2.2 of Annex 2 to* [*Resolution ITU-R 2-8*](http://www.itu.int/pub/R-RES-R.2-8-2019)*.]*

Resolution **361 (Rev.WRC-19)** through the section *resolves to invite the 2023 World Radiocommunication Conference* identifies three topics which are studied and solved independently.

## 2/1.11/2.1 Global maritime distress and safety system modernization

This topic is the continuation of the agenda item (AI) 1.8, Issue A of WRC-19. The modernization of global maritime distress and safety system (GMDSS), for which the work is undertaken by the International Maritime Organization (IMO) was not finalized at the time of WRC-19. That Conference has solely been able to take some preliminary decision regarding the NAVDAT in the MF and HF bands. 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 IMO work on modernization of the GMDSS.

One of the changes to the SOLAS Convention is the removal of non-406 MHz satellite emergency position indicating radio beacons (EPIRBs), leaving only satellite EPIRBs operating on 406 MHz. Consequently, satellite EPIRBs operating on 1.6 GHz (1 645.5-1 646.5 MHz) and EPIRBs using very high frequency digital Selective calling (VHF DSC) operating at 156.525 MHz no longer form a part of the GMDSS. Given the removal of 1.6 GHz EPIRBs by the IMO, and noting that the use of the 1.6 GHz EPIRB has already ceased operation, WRC-23 may consider possible changes to the RR related to use of the band 1 645.5-1 646.5 MHz (Earth-to-space) for EPIRBs under issue A of AI 1.11.

## 2/1.11/2.2 E-navigation

The 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 the e-navigation, quoting the strategy implementation plan (SIP) 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 VHF data exchange system (VDES) and in the future NAVDAT and be developed to facilitate wide information management solutions.

## 2/1.11/2.3 Introduction of additional satellite systems into the global maritime distress and safety system

[Editor’s note: This section was provided by WP 4C]

Two satellite systems have been providing safety communication in the GMDSS. IMO is considering introducing an additional GSO MSS system for GMDSS which may require new or modified regulatory provisions, based on the results of the ITU‑R studies.

…/…

# 2/1.11/3 Summary and Analysis of the results of ITU-R studies

[This section should contain a summary of the technical and operational studies performed within ITU-R, including a list of relevant ITU-R Recommendations. Depending on the agenda item, this section could be divided in two parts, one part dealing with the summary and the other part dealing with the analysis. The results of the ITU-R studies should also be analysed with respect to the possible methods of satisfying the agenda item and presented in a concise manner.]

Existing relevant ITU-R Recommendations and Reports: Recommendations ITU-R [M.476](http://www.itu.int/rec/R-REC-M.476/en), ITU‑R [M.492](http://www.itu.int/rec/R-REC-M.492/en), ITU-R [M.493](http://www.itu.int/rec/R-REC-M.493/en), ITU-R [M.541](http://www.itu.int/rec/R-REC-M.541/en), ITU-R [M.625](http://www.itu.int/rec/R-REC-M.625/en), [ITU-R M.1798](https://www.itu.int/rec/R-REC-M/recommendation.asp?lang=en&parent=R-REC-M.1798), [ITU-R M.2010](https://www.itu.int/rec/R-REC-M/recommendation.asp?lang=en&parent=R-REC-M.2010), [ITU-R M.2058](https://www.itu.int/rec/R-REC-M/recommendation.asp?lang=en&parent=R-REC-M.2058).

[Editor’s note: relevant Recommendations and Reports for issue C was provided by WP 4C]

Existing relevant Recommendations and Reports for Issue C:

 Recommendations [ITU-R M.1184-3](http://www.itu.int/rec/R-REC-M.1184/en), ITU-R [M.1188-1](http://www.itu.int/rec/R-REC-M.1188/en), [ITU-R RA.769](http://www.itu.int/rec/R-REC-RA.769/en)-2, [ITU-R RA.1513](http://www.itu.int/rec/R-REC-RA.1513/en)-2, [[ITU-R RA.1631-0](http://www.itu.int/rec/R-REC-RA.1631/en)/SA.509-3]

 Report ITU-R [M.2369-0](http://www.itu.int/pub/R-REP-M.2369); WDPDN Report ITU-R M.[ADD‑GSO-GMDSS].

## 2/1.11/3.1 Global maritime distress and safety system modernization

### 2/1.11/3.1.1 Current regulatory status of narrow band direct printing for global maritime distress and safety system

Technical characteristics of narrow band direct printing (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**).

### 2/1.11/3.1.2 An automatic connection system for MF and HF

Recommendations ITU-R M.493 and ITU-R M.541 have been revised in order to allow the introduction of an automatic connection system (ACS) based on DSC for communication in the MF and HF bands. Communication by MF/HF 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.

### 2/1.11/3.1.3 NAVDAT

The amendments to the 1974 Safety of Life at Sea (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.**

### 2/1.11/3.1.4 1.6 GHz 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 used by satellite EPIRBs (“1.6 GHz EPIRBs”) operating with GSO MSS networks. Recommendation ITU-R M.632-3, last revised in 1997, provides technical characteristics. The 1.6 GHz EPIRB service has already been withdrawn from GMDSS by the IMO and as far as can be determined; this band is currently unused and might be considered for re-allocation by the competent ITU-R Study Group.

## 2/1.11/3.2 E-navigation

The study in IMO has not introduced e-navigation in the GMDSS. NAVDAT may become part of the GMDSS as a result of the modernization and thereby potentially become one of the systems that support e-navigation; however, it will not change the regulatory status of e-navigation.

Various existing satellite networks, NAVDAT and VDES could support e-navigation .

The NAVDAT system is described in the Recommendations ITU-R M.2010 for the MF band and ITU-R M.2058 for the HF band. The VDES is described in the Recommendation ITU-R M.2092.

## 2/1.11/3.3 Introduction of additional satellite systems into the global maritime distress and safety system

[Editor’s note: This section to be fill in by WP 4C]

One additional GSO MSS system, which consists of five GSO satellites located at 58.75E, 80E, 110.5E, 140E and 160E, being considered by the IMO to provide GMDSS uses MSS allocations within the frequency bands 1 610-1 626.5 MHz and 2 483.5-2 500 MHz.

This system could provide two-way communication services for Asia and Western Pacific region with overlapping coverage. The filings used by the GSO system includes CHINASAT-31 (80E), -32 (140E), -33 (110.5E) and COMPASS-58.75E, -80E, -110.5E, -140E, -160E, which are recorded in the ITU MIFR under RR No. **11.41**.

[The band 1 610-1 626.5 MHz is allocated to the mobile-satellite service (MSS) (Earth-to-space) on a primary basis. The allocation used by this system for uplink is also used by other non-GSO MSS systems. The service uplink signals of the additional GSO MSS system have three carriers in frequency bands 1 610.18-1 618.34 MHz, 1 614.26-1 622.42 MHz and 1 618.34-1 626.5 MHz. Frequency coordination of the GSO MSS satellite systems being considered has not been completed with the existing NGSO MSS systems with global coverage. These carriers overlap the assignments of the existing satellite systems, there is potential harmful interference caused into the existing satellite systems without the possibility of frequency avoidance. In the event that harmful interference is caused to the frequency assignments of these systems by the GSO MSS satellite systems under consideration, such interference must be immediately eliminated (see RR No. **11.42**).]

The band 2 483.5-2 500 MHz is allocated to the mobile-satellite service (MSS) (space-to-Earth) on a primary basis. The allocation used by this system for downlink are also used by other non-GSO MSS systems. The service downlink signal of the additional GSO MSS system has one carrier in the frequency band 2 483.59-2 499.91 MHz.

{Editor’s note: Further studies are needed on the subject of harmful interference and frequency overlap avoidance and possible identification of mitigation techniques, if any.}

{Editor’s note: Add text for other systems including RAS and terrestrial systems for which coordination is not yet completed}

{Editor’s note: Spectrum requirements discussion need to be considered in this section.}

### 2/1.11/3.3.1 Allocations and other regulatory provisions to be taken into account

The frequency band 1 610.0-1 626.5 MHz is allocated to the following services:

– mobile-satellite service (MSS);

- aeronautical mobile-satellite (route) service (AMS(R)S);

– aeronautical radionavigation service (ARNS);

– radio astronomy service (RAS);

– fixed service (FS);

– radiodetermination-satellite service (RDSS), and

– maritime mobile- satellite services (MMSS) (space-to-Earth).

The frequency band 2 483.5-2 500 MHz is allocated to the following services:

– mobile-satellite service (MSS);

– radiodetermination-satellite service (RDSS);

– fixed service (FS);

– mobile service (MS), and

– radiolocation service (RLS).

#### 2/1.11/3.3.1.1 Allocations and the status of the current operational use

The allocations of the frequency band 1 610.0-1 626.5 MHz and their current operational status are described below:

– The frequency band 1 610.0-1 626.5 MHz is allocated to MSS (Earth to space) on a primary basis, as well as the sub-band 1 613.8-1 626.5 MHz on a secondary basis to MSS (space-to-Earth). These allocations are currently in use by two non-GSO global satellite systems and one regional satellite system.

– Pursuant to RR No. **5.367**,AMS(R)S is allocated on a primary basis in the frequency band 1 610.0‑1 626.5 MHz in both uplink and downlink directions, subject to the coordination provisions of RR No. **9.21**. At least one satellite system has notified assignments that operate under this allocation. It is worth to mention that RR No. **43.1** identifies AMS(R)S allocations are reserved for communications related to safety and regulatory of flight.

– ARNS is allocated in the frequency band 1 610.0-1 626.5 MHz. Some countries use this frequency band for ARNS operations and have plans for its further use.

– The frequency band 1 610.6-1 613.8 MHz is allocated to the RA service and used for RA observations.

– RR No. **5.359** provides an additional allocation to FS to the 27 countries listed in the footnote. Implementation of new FS station in this band is discouraged to the extent practicable in that footnote.

{Editor’s note: The rest of the document need to be drafted taking into account the formulation in the indent above (kindly suggested by NZL) and discussed at the next WP 4C meeting.}

***Note:*** ***The rest of the document was not discussed at the WP 4C meeting in October 2021.***

– The RDSS is allocated in the frequency band 1 610-1 626.5 MHz on a primary basis in Region 2, and on a secondary basis in Regions 1 and 3 and under RR No. **5.364** is subject to coordination under RR No. **9.11A**. [In addition, RR No. **5.369** provides for the RDSS (Earth-to-space) in the frequency band 1 610-1 626.5 MHz on a primary basis for countries identified in the footnote, subject to agreement under RR No. **9.21** from countries not listed in this provision. /Also see RR No. **5.369**.]

– MMSS (space-to-Earth) is allocated on a primary basis in the frequency band 1 621.35‑1 626.5 MHz. This allocation is currently in use by one non-GSO global satellite system for provision GMDSS. [It is noted that “*RR No.* ***5.373A*** *and No.* ***5.373****, the maritime mobile earth stations receiving in the frequency band 1 621.35-1 626.5 MHz shall not impose constraints on the mobile earth stations of the additional GSOs system operating in the frequency band 1 621.35-1 626.5 MHz and shall not impose additional constraints on maritime mobile earth stations of the system operating in the frequency band 1 610-1 621.35 MHz”/* It is worth to mention that RR Nos. **5.373** and **5.373A** identify the status between MMSS (space-to-Earth) in the band 1 621.35‑1 626.5 MHz and MSS and RDSS in the direction Earth to space in the band 1 610‑1 626.5 MHz/.

{Editor’s note: Look at RR No. **5.368** and ARNSS }

The allocations of the band 2 483.5-2 500 MHz and their current operational status are described below:

– The frequency band 2 483.5-2 500 MHz is allocated to MSS (space to Earth) on a primary basis. This allocation is currently in use by at least one NGSO global satellite system and one regional satellite system.

 RDSS is allocated in the frequency band 2 483.5-2 500 MHz on a primary basis. [It is noted that RR No. **5.401**, RDSS is allocated on a primary basis for countries identified in the footnote in the space-to-Earth direction before WRC-12, subject to agreement obtained under RR No. **9.21**, from countries not included in the footnote / [Also see RR No. **5.401**/].

– FS is allocated in the frequency band 2 483.5-2 500 MHz on a primary basis. The typical applications in the band include point-to-point fixed service, SAP/SAB (Ancillary applications used to support programme making, or broadcasting (i.e. wireless video camera links), operating in the fixed service or mobile service.)

– MS is allocated in the frequency band 2 483.5-2 500 MHz on a primary basis. The typical applications in the frequency band in some countries include Wireless Access, specifically IEEE 802.16e, Intelligent Transport Systems, SAP/SAB systems: In some countries services ancillary to broadcasting (SAB), services ancillary to programme-making (SAP), electronic news gathering (ENG) and outside broadcasting (OB), which can be considered to operate as mobile or fixed services, extensively use the band.

– RLS is allocated in the frequency band 2 483.5-2 500 MHz on a primary basis in Regions 2 and 3 and on a secondary basis in Region 1. In addition, RR No. **5.369** provides for the RLS in the frequency band 2 483.5-2 500 MHz on a primary basis for countries identified in the footnote, which shall not cause harmful interference to, or claim protection from stations of the MSS operating in the frequency band 2 483.5-2 500 MHz. The frequency band 2 483.5-2 500 MHz is allocated on a primary basis to the RLS in the countries in the RR No. **5.398A**.

#### 2/1.11/3.3.1.2 Other regulatory provisions

– RR No. **1.59**, which defines a safety service.

– RR No. **5.368**, which references RR No. **4.10** and its applicability (if any) to the MSS, MMSS, ARNS and ARNSS.

– RR No. **9.52C** including reference to RR No. **9.47** and RR No. **9.48** which describes the nature of coordination.

– RR No. **11.41**, which define an entry of the assignment in the Master Register.

– RR No. **11.42**, which defines the operation of the assignment recorded under RR No. **11.41**.

– RR Appendix **15** including all frequencies and frequency bands used by the GMDSS.

– RR No. **33.50** including the frequencies used for transmission of Maritime safety information.

– RR No. **33.53** including the other frequencies used for safety.

# 2/1.11/4 Methods to satisfy the agenda item

[This section should contain the brief description of the Method or Methods to satisfy the agenda item as per section A2.4 of Annex 2 to [Resolution ITU-R 2-8](http://www.itu.int/pub/R-RES-R.2-8-2019).]

## 2/1.11/4.1 Unique Method A for Issue A: global maritime distress and safety system modernization

This method proposes:

– The deletion of the NBDP 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.

– The implementation of an ACS 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. It is proposed to implement this 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.

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

– To implement Automatic identification system search and rescue transmitter (AIS SART) as locating equipment for which frequencies are protected by reference in RR Appendix **15.** Taking into account studies performed within ITU-R, especially in Recommendation ITU-R M.1371, it is proposed to amend RR No. **31.7** that survival craft stations may carry this equipment as an alternative to the RADAR-SART to be in line with SOLAS Chapter IV.

– To supress RR No. **5.375** and modify Table 15-2 of RR Appendix **15** by removing 1 645.5-1 646.5 from the table due to the frequency band 1 645.5-1 646.5 MHz is no longer authorized to support satellite EPIRBS under GMDSS and does not require protection provided by appendix 15.

## 2/1.11/4.2 Unique Method B for Issue B: E-Navigation

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

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

– E-navigation is not part of the GMDSS.

These elements bring to the conclusion that no additional frequency allocation is necessary in RR Article **5** for the e-navigation. Therefore*,* it is proposed a no change to RR Article**5**.

## 2/1.11/4.3 Issue C: Introduction of additional satellite systems into the global maritime distress and safety system

[Editor’s note: This section was provided by WP 4C]

*{Editor’s note: IMO’s action to introduce a new GMDSS satellite system is an important element in development of methods.}*

One existing geostationary-satellite system operating on 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space‑to-Earth) is under consideration by IMO in order to become a new GMDSS satellite provider.

These frequency bands under study contained already primary allocation for MSS, for this reason no new allocation is necessary by WRC-23 in order to accommodate the GMDSS.

What is needed during this study period is to determine the quantity of spectrum, among the frequency bands under consideration in the *recognizing d)*, necessary for this geostationary-satellite system to provide GMDSS functionalities, and the status of coordination with the satellite systems already operating in them as well as if the IMO has introduced the indicated satellite network.

### 2/1.11/4.3.1 Method C1: [title of Method C1, if any]

[In view of the above, in order to support the requirement of safety of life aspects by the GMDSS and implement applicable provision of RR, Method C1 propose the addition of the band 1 610.18-1 622.42 MHz (Carrier 1 and Carrier 2), 2 483.59-2 499.91 MHz to Table 15-2 of RR Appendix **15**, as well as provisions RR No. **33.50** and RR No. **33.53** of RR Article **33**.

Method C1 also propose to modify the RR No. **5.368** to apply that MMSS (Earth-to-space) in the band 1 610.18-1 622.42 MHz is used for safety services and the RR No. **4.10** applies.]

***4C/258 (RUS)***

Proposed by CHN:

Method C1 also propose to modify the RR No. **5.368** to apply that MMSS (Earth-to-space) in the band 1 610.18-1 622.42 MHz is used for safety services and the RR No. **4.10** applies and keep the status to protect the ARNS service.

***4C/260 R1 (USA)***

### 2/1.11/4.3.2 Method C2: International Maritime Organization does not approve the new global maritime distress and safety system satellite provider

If the IMO does not provide Recognition of the proposed satellite network than there is no requirement to modify the Radio Regulations in any way. This Method is NO Change (NOC).

Another text:

No Change (**NOC**).

The Radio Regulations address the use and protection of radio frequencies, including those used for provision of GMDSS. However, the Regulations do not identify or regulate systems that may provide GMDSS, which is the responsibility of the IMO. Resolution **361** **(WRC-19)** recognises that IMO is evaluating an application from an existing geostationary-satellite system to become a new GMDSS satellite provider.

If the IMO does not approve the application for the proposed satellite network, then the satellite network cannot provide GMDSS. In this case there would be no requirement to modify the Radio Regulations at this time.

**4C/260 R1 (USA)**

### 2/1.11/4.3.3 Method C3: [Non Successful Coordination]

Provisions of Article **9** of the Radio Regulations require coordination resulting in protection of the MSS satellite systems operating in the same frequency bands as the proposed satellite network. If such coordination has not been successfully completed that the MSS network should not be included in the GMDSS, and no modification to the Radio Regulations is required.

Proposal by CHN:

If the coordination has not been successfully completed, a new footnote may be considered to protect the relative satellite networks with date priority.

# 2/1.11/5 Regulatory and procedural considerations

2/1.11/5.1 For Method A (Issue A): global maritime distress and safety system modernization

ARTICLE 5

Frequency allocations

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

MOD

495-1 800 kHz

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

MOD

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 5.132 5.128 |
|  |

ADD

5.A111 When establishing coast stations in the NAVDAT service on the frequencies 500 kHz and 4 226 kHz, 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)

**Reasons:** Coordination of the NAVDAT services 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)**.

MOD

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 for the automatic connection system 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.

MOD

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 and AIS-SART 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:** The AIS-SART also use AIS frequencies for locating signal.

SUP

5.375

**Reasons:** IMO has discontinued the use of 1.6 GHz EPIRBS in the GMDSS.

**Editor note:** There is no information available at WP 5B regarding use of the frequency band 1 645.5-1 646.5 MHz for Inter-satellite links and potential impact resulting from its deletion.  Consideration of these proposed edits may be of interest of WP 4C.

ARTICLE 31

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

Section II − Survival craft stations

MOD

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

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

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

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‑23)

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

SUP

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

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**).     (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**. If the provision of RR No. **32.38** is deleted, this provision number should be amended.

MOD

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‑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, distress communication by NBDP is not effective.

32.36 D − Preparations for handling of distress traffic

SUP

32.38

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

32.43 § 27 1) Error correction techniques in accordance with relevant ITU‑R Recommendations shall be used for distress traffic by direct-printing telegraphy. All messages shall be preceded by at least one carriage return, a line feed signal, a letter shift signal and the distress signal MAYDAY.

**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

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

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

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

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

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‑23)

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

SUP

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.

32.54 B − On-scene communications

MOD

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

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

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:** Except NBDP, all the frequencies for on-scene communications identified in the RR Nos. **32.57** and **32.58** are the frequencies for radiotelephony. Therefore, teleprinter watch is not required to maintain.

32.60 C − Locating and homing signals

MOD

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, by 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

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

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

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 message by NBDP is not appropriate.

SUP

33.17

**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

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

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

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

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

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 message by NBDP is not appropriate.

SUP

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

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

ADD

33.40*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 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

MOD

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

33.43 § 23 Where maritime safety information is transmitted using the international NAVTEX system, taking into account **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

33.46A1 D − International NAVDAT system

**ADD**

33.46A2 § 25 Where maritime safety information is transmitted using international NAVDAT system, taking into account 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

33.47E − High seas maritime safety information

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

MOD

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 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

33.49F − Maritime safety information via satellite

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

MOD

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. Paragraph Nos. **33.51** to **33.53** to be renumbered.

ARTICLE 34

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

MOD

Section I – Satellite emergency position-indicating radiobeacon (EPIRB) signals      (WRC-23)

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

ARTICLE 47

Operator’s certificates

Section III − Conditions for the issuing of certificates

MOD

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 anasterisk in the appropriate box | 1st-classradio 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 radiocommunication equipment, including radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, satellite emergency position-indicating radio beacons, 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, radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations (including telegraphy), satellite emergency position-indicating radio beacons, 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 anasterisk in the appropriate box** | **1st-classradio electronic certificate** | **2nd-class radio electronic certificate** | **General operator’s certificate** | **Restricted operator’s certificate** |
| … |  |  |  |  |
| Ability to send and to receive correctly by radiotelephony and telegraphy with ship earth station. | \* | \* | \* |  |
| Ability to send and to receive correctly by radiotelephone. | \* | \* | \* | \* |
| … |  |  |  |  |

**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

51.24 C − Ship stations using digital selective calling

SUP

51.26

SUP

51.27

**Reasons:** The Annex 6 of the Recommendation ITU-R M.541-10 on the operational procedure for the use of DSC equipment in the maritime mobile service indicates working frequencies that may be used for DSC as follows:

 1 606.5-3 400 kHz (Regions 1 and 3)

 1 605.5-3 400 kHz (Region 2) (For the band 1 605-1 625 kHz, see RR No. **5.89**)

 4 000-27 500 kHz

 156-1620.025 MHz.

There are no working frequencies identified for DSC in the frequency band 415-535 kHz.

The frequency bands 415-526.5 kHz (Regions 1 and 3) and 415-525 kHz (Region 2) was deleted from the previous version of this Recommendation, ITU-R M.541-9.

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

SUP

51.40

**Reasons:** NBDP has been deleted from the GMDSS. with the exception of MSI on certain frequencies which are contained in RR Appendix **15**. If distress traffic frequency is deleted from this sentence, this provision will have no longer any meaning.\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

MOD

**51.41** §17 ) The characteristics of the narrow-band direct-printing equipment shall be in accordance with Recommendations ITU-R M.476-5 and ITU-R M.625-4. The characteristics should also be in accordance with the most recent version of Recommendation ITU-R M.627. (WRC-23)

**Reasons:** Renumbering due to the suppression of 51.40

51.42 CA1 − Bands between 415 kHz and 535 kHz

…/…

 [ADD

51.64A1 *E − Ship stations receiving data transmissions’*

Reasons: TBD

ADD

51.64A2       E1 − Bands between 415 kHz and 526.5 kHz

Reasons: TBD

ADD

51.**64A3**       § 23    All ship stations equipped with apparatus for receiving digital data transmissions in the authorized bands between 415 kHz and 535 kHz shall be capable of receiving class [the three-character emission designator corresponding to OFDM] emission on 500 kHz, if complying with the provisions of Chapter **VII**. (WRC‑23)

**Reasons:** TBD

ADD

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

**Reasons:** TBD

ADD

51.64A5        § 24    All ship stations equipped with apparatus for receiving digital data transmissions in the authorized bands between 4 000 kHz and 27 500 kHz shall be capable of receiving class [the three-character emission designator corresponding to OFDM] emission on 4 226 kHz, if complying with the provisions of Chapter VII.  (WRC‑23)]

**Reasons:**

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

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 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

52.97 § 45 All ship stations equipped with narrow-band direct-printing apparatus to work in the authorized bands between 415 kHz and 535 kHz shall be able to 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.

[52.99 C − Bands between 1 606.5 kHz and 4 000 kHz     (WRC‑03)

SUP

52.100

**Reasons:** There is no MSI frequencies in the frequency band 1 606.5-4 000 kHz, according to RR Appendix **15**, therefore this provision is not needed anymore. The sub section C title could perhaps be deleted.]

MOD

52.101 Narrow-band direct-printing telegraphy is forbidden in the band 2 170‑2 194 kHz. (WRC-23)

**Reasons:** NBDP being taking out from GMDSS, there is no further need for a possible exception for the usage of NBDP in the frequency band 2 170-2 194 kHz.

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

MOD

52.103 § 47 All ship stations equipped with narrow-band direct-printing telegraph apparatus to work in the authorized bands between 4 000 kHz and 27 500 kHz shall be able to receive class F1B emissions as specified in No. **51.49**. The assignable frequencies are indicated in Appendix 17.     (WRC‑03)

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

SUP

52.108**−**52.109

**Reasons:** There is no frequency for NBDP on VHF.

Section IV − Use of frequencies for digital selective-calling

SUP

52.114−52.123

**Reasons:** The Annex 6 of Recommendation ITU-R M.541-10 indicates working frequencies for DSC as follows:

 1 606.5-3 400 kHz (Regions 1 and 3)

 1 605.5-3 400 kHz (Region 2) (For the band 1 605-1 625 kHz, see RR No. **5.89**)

 4 000-27 500 kHz

 156-162.025 MHz

There is no working frequency for DSC in the frequency band 415-526.5 kHz.

The frequency bands 415-526.5 kHz (Regions 1 and 3) and 415-525 kHz (Region 2) was deleted from Recommendation ITU-R M.541-9.

Editor’s note: Consequential renumbering needed from RR Nos. **52.124** to **52.162**.

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

52.261 A – General    (WRC‑12)

52.262 Frequencies assigned to coast stations for data transmissions shall be indicated in the List of Coast Stations and Special Service Stations (List IV). This List shall also indicate any other useful information concerning the service performed by each coast station.    (WRC‑12)

**[ADD**

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

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

**ADD**

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.

 **MOD**

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

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

**MOD**

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 Recommedation 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 Recommedation ITU-R M.2058.    (WRC‑23)

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

**MOD**

52.265 Coast stations employing the class of emissions in accordance with the most recent version of Recommendation ITU R M.1798 in the frequency bands between 4 000 kHz and 27 500 kHz shall not exceed a peak envelope power of 10 kW.    (WRC‑23)

**ADD**

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.    (WRC‑23)

|  |  |
| --- | --- |
| *Band* | *Maximummean 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 |

**MOD**

52.266 Ship stations employing the class of emissions in accordance with the most recent version of Recommendation ITU R M.1798 in the frequency bands between 4 000 kHz and 27 500 kHz shall not exceed a peak envelope power of 1.5 kW.    (WRC‑23) ]

APPENDIX 15 (REV.WRC‑19)

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

(See Article 31)

The frequencies for distress and safety communications for the GMDSS are given in Tables 15‑1 and 15‑2 for frequencies below and above 30 MHz, respectively.

MOD

TABLE 15-1     (WRC‑23)

Frequencies below 30 MHz

|  |  |  |
| --- | --- | --- |
| Frequency(kHz) | Descriptionof 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 | By means of narrow-band direct-printing telegraphy. |
| 4 226 | MSI | The frequency 4 226 kHz is exclusively used for 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‑23)

|  |  |  |
| --- | --- | --- |
| Frequency(kHz) | Descriptionof usage | Notes |
| 6 314 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| 6 337.5 | MSI-HF | By means of 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 NAVDAT system |
| \*12 290 | RTP-COM |  |
|  |  |  |
| \*12 577 | DSC |  |
| 12 579 | MSI-HF | By means of narrow-band direct-printing telegraphy. |
| 12 663.5 | MSI-HF | By means of NAVDAT system |
| \*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 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 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 or NAVDAT system.**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 NAVDAT system.**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

TABLE 15-2     (WRC‑23)

Frequencies above 30 MHz (VHF/UHF)

|  |  |  |
| --- | --- | --- |
| Frequency(MHz) | Descriptionof usage | Notes |
| \*121.5 | AERO-SAR | The aeronautical emergency frequency 121.5 MHz is used for the purposes of distress and urgency for radiotelephony by stations of the aeronautical mobile service using frequencies in the frequency band between 117.975 MHz and 137 MHz. This frequency may also be used for these purposes by survival craft stations. Use of the frequency 121.5 MHz by emergency position-indicating radio beacons shall be in accordance with Recommendation ITU‑R M.690‑3.Mobile stations of the maritime mobile service may communicate with stations of the aeronautical mobile service on the aeronautical emergency frequency 121.5 MHz for the purposes of distress and urgency only, and on the aeronautical auxiliary frequency 123.1 MHz for coordinated search and rescue operations, using class A3E emissions for both frequencies (see also Nos. **5.111** and **5.200**). They shall then comply with any special arrangement between governments concerned by which the aeronautical mobile service is regulated. |
| 123.1 | AERO-SAR | The aeronautical auxiliary frequency 123.1 MHz, which is auxiliary to the aeronautical emergency frequency 121.5 MHz, is for use by stations of the aeronautical mobile service and by other mobile and land stations engaged in coordinated search and rescue operations (see also No. **5.200**).Mobile stations of the maritime mobile service may communicate with stations of the aeronautical mobile service on the aeronautical emergency frequency 121.5 MHz for the purposes of distress and urgency only, and on the aeronautical auxiliary frequency 123.1 MHz for coordinated search and rescue operations, using class A3E emissions for both frequencies (see also Nos. **5.111** and **5.200**). They shall then comply with any special arrangement between governments concerned by which the aeronautical mobile service is regulated. |
| 156.3 | VHF-CH06 | The frequency 156.3 MHz may be used for communication between ship stations and aircraft stations engaged in coordinated search and rescue operations. It may also be used by aircraft stations to communicate with ship stations for other safety purposes (see also Note *f* ) in Appendix **18**). |
| \*156.525 | VHF-CH70 | The frequency 156.525 MHz is used in the maritime mobile service for distress and safety calls using digital selective calling (see also Nos. **4.9**, **5.227**, **30.2** and **30.3**). |
| 156.650 | VHF-CH13 | The frequency 156.650 MHz is used for ship-to-ship communications relating to the safety of navigation in accordance with Note*k*) in Appendix **18**. |
| \*156.8 | VHF-CH16 | The frequency 156.8 MHz is used for distress and safety communications by radiotelephony. Additionally, the frequency 156.8 MHz may be used by aircraft stations for safety purposes only. |
| \*161.975 | AIS-SARTVHF CH AIS 1 | AIS 1 is used for AIS search and rescue transmitters (AIS-SART) for use in search and rescue operations. |
| \*162.025 | AIS-SARTVHF CH AIS 2 | AIS 2 is used for AIS search and rescue transmitters (AIS-SART) for use in search and rescue operations. |

TABLE 15-2 (*end*)     (WRC‑23)

|  |  |  |
| --- | --- | --- |
| Frequency(MHz) | Descriptionof usage | Notes |
| \*406-406.1 | 406-EPIRB | This frequency band is used exclusively by satellite emergency position-indicating radio beacons in the Earth-to-space direction (see No. **5.266**). |
| 1 530-1 544 | SAT-COM | In addition to its availability for routine non-safety purposes, the band 1 530‑1 544 MHz is used for distress and safety purposes in the space-to-Earth direction in the maritime mobile-satellite service. GMDSS distress, urgency and safety communications have priority in this band (see No. **5.353A**). |
| \*1 544-1 545 | D&S-OPS | Use of the band 1 544-1 545 MHz (space-to-Earth) is limited to distress and safety operations (see No. **5.356**), including feeder links of satellites needed to relay the emissions of satellite emergency position-indicating radio beacons to earth stations and narrow-band (space-to-Earth) links from space stations to mobile stations. |
| 1 621.35-1 626.5 | SAT-COM | In addition to its availability for routine non-safety purposes, the frequency band 1 621.35-1 626.5 MHz is used for distress and safety purposes in the Earth-to-space and space-to-Earth directions in the maritime mobile-satellite service. GMDSS distress, urgency and safety communications have priority in this band over non-safety communications within the same satellite system.     (WRC‑19) |
| 1 626.5-1 645.5 | SAT-COM | In addition to its availability for routine non-safety purposes, the band 1 626.5‑1 645.5 MHz is used for distress and safety purposes in the Earth-to-space direction in the maritime mobile-satellite service. GMDSS distress, urgency and safety communications have priority in this band (see No. **5.353A**). |
|  |  |  |
| 9 200-9 500 | SARTS | This frequency band is used by radar transponders to facilitate search and rescue. |
| **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.**D&S-OPS**     The use of these bands is limited to distress and safety operations of satellite emergency position-indicating radio beacons (EPIRBs).**SAT-COM**     These frequency bands are available for distress and safety purposes in the maritime mobile-satellite service (see Notes).**VHF-CH#**     These VHF frequencies are used for distress and safety purposes. The channel number (CH#) refers to the VHF channel as listed in Appendix **18**, which should also be consulted.**AIS**    These frequencies are used by automatic identification systems (AIS), which should operate in accordance with the most recent version of Recommendation ITU‑R M.1371.     (WRC‑07)\* 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:** The frequency band 1 645.5-1 646.5 MHz is no longer used by EPIRBs and 1.6 GHz EPIRBs are no longer part of the GMDSS.

APPENDIX 17 (REV.WRC‑23)

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

(See Article 52)

MOD

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

…

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 |
| ... |  |  |  |  |  |  |  |  |

…

*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)

**Reasons:** NBDP has been deleted from the GMDSS, with the exception of MSI on certain frequencies which are contained in RR Appendix **15** and new ACS system will utilized the frequencies previously used by the NBDP for distress and safety communications.

MOD

RESOLUTION 349 (REV.WRC‑23)

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

The World Radiocommunication Conference (xxx, 2023),

considering

*a)* that the 1974 International Convention for the Safety of Life at Sea (SOLAS), as amended, prescribes that ships subject to that Convention shall be fitted with Global Maritime Distress and Safety System (GMDSS) equipment as appropriate;

*b)* that non-SOLAS vessels are also being equipped with GMDSS equipment;

*c)* that the transmission and relay of false distress alerts is a significant problem within the GMDSS,

noting

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

resolves

1 to urge administrations to take all necessary measures to avoid false distress alerts and to minimize the unnecessary burden on rescue organizations which occurs;

2 to urge administrations to encourage the correct use of GMDSS equipment, with particular attention to appropriate training;

3 to urge administrations to implement the operational procedures contained in the Annex to this Resolution;

4 that administrations should take any consequential appropriate action in this respect,

instructs the Secretary-General

to bring this Resolution to the attention of IMO.

MOD

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)

 [switch off and switch on after 10 seconds]

2) If the DSC equipment is capable of cancellation, cancel the alert 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)

 [switch off and switch on after 10 seconds]

 ;

2) If the DSC equipment is capable of cancellation, cancel the alert 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)

 [switch off and switch on after 10 seconds]

2) If the DSC equipment is capable of cancellation, cancel the alert 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.

# 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:

NAME, CALL SIGN, IDENTITY NUMBER, POSITION

Cancel my distress

Alert of DATE, TIME UTC

=Master+

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 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 of 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, Governments may prosecute in cases of repeated violation.

**Reasons:** TBD

MOD

RESOLUTION 354 (Rev.WRC‑23)

Distress and safety radiotelephony procedures for 2 182 kHz

MOD

ANNEX TO RESOLUTION 354 (Rev.WRC‑23)

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

PART A1 − GENERAL

…

§ 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.

ADD

DRAFT NEW RESOLUTION [**A111] (WRC‑23)**

Coordination of NAVDAT services

The World Radiocommunication Conference (YYY, 2023),

considering

*a)* that the International Maritime Organization (IMO) has established a [Coordinating Panel on NAVDAT] to, *inter alia*, coordinate the operational aspects of NAVDAT services, 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 RR **5.79** and Appendix **15**;

*b)* that coordination in the frequencies 500 kHz and/or 4 226 kHz 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 RR **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 services on the international frequencies 500 kHz and/or 4 226 kHz and also on the other frequencies which are defined in RR **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 services identical as the one for the NAVTEX (Resolution **339** (Rev.WRC-07)).

SUP

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).

2/1.11/5.2 For Method B (Issue B): E-Navigation

NOC

ARTICLE 5

Frequency allocations

**Reasons:** The e-navigation does not need additional frequency allocation to operate.

SUP

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* 2 (e-navigation).

## 2/1.11/5.3 For Issue C: Introduction of additional satellite systems into the global maritime distress and safety system

[Editor’s note: This section to be fill in by WP 4C]

2/1.11/5.3.1 For Method C1: [title of Method C1]

[ARTICLE 5

Frequency allocations

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

MOD

5.368 The provisions of No. **4.10** do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1 610-1 626.5 MHz. However, No. **4.10** applies in the frequency band 1 610-1 626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. **5.366**, the aeronautical mobile satellite (R) service when operating in accordance with No. **5.367**, and in the frequency band 1 610.18-1 622.42 MHz (Earth-to-space), 1 621.35‑1 626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS.     (WRC‑23)

**Reasons:** To apply that MMSS (Earth-to-space) in the band 1 610.18-1 622.42 MHz is used for safety services. Consequently, RR No. **4.10** applies.

4C/258 (RUS):

NOC

5.368 The provisions of No. **4.10** do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1 610-1 626.5 MHz. However, No. **4.10** applies in the frequency band 1 610-1 626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. **5.366**, the aeronautical mobile satellite (R) service when operating in accordance with No. **5.367**, and in the frequency band 1 621.35-1 626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS.     (WRC-19)

**Reasons:** Do not expand the application of item RR No. **4.10** on MMSS in the frequency band 1 610.1 8‑1 621.35 MHz to uphold the existing priority of the ARNSS and AMS(R)S systems.

Proposed by CHN:

MOD

5.368 The provisions of No. **4.10** do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1 610-1 626.5 MHz. However, No. **4.10** applies in the frequency band 1 610-1 626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. **5.366**, the aeronautical mobile satellite (R) service when operating in accordance with No. **5.367**, and in the frequency band 1 610.18-1 622.42 MHz (Earth-to-space), 1 621.35-1 626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS. Maritime mobile earth stations receiving in the frequency band 1 610.18-1 622.42 MHz (Earth-to-space) shall not impose additional constraints on aeronautical radionavigation service operating in this band.     (WRC-23)

**Reasons:** To apply that MMSS (Earth-to-space) in the band 1 610.18-1 622.42 MHz is used for safety services. Consequently, RR No. **4.10** applies and keep the status to protect the ARNS service.

MOD

APPENDIX 15 (REV.WRC‑23)

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

(See Article 31)

The frequencies for distress and safety communications for the GMDSS are given in Tables 15‑1 and 15‑2 for frequencies below and above 30 MHz, respectively.

MOD

TABLE 15-2 (*end*)     (WRC‑23)

|  |  |  |
| --- | --- | --- |
| Frequency(MHz) | Descriptionof usage | Notes |
| ... | ... | ... |
| 1 610.18-1 622.42 | SAT-COM | In addition to its availability for routine non-safety purposes, the band 1 610.18‑1 622.42 MHz is used for distress and safety purposes in the Earth-to-space direction in the maritime mobile-satellite service. GMDSS distress, urgency and safety communications have priority in this band.4C/258 (RUS): In addition to its availability for routine non-safety purposes, the band 1 610.18‑1 622.42 MHz is used for distress and safety purposes in the Earth-to-space direction in the maritime mobile-satellite service. The provisions of No. 4.10 do not apply with respect to the maritime mobile-satellite services in the frequency band 1 610.18‑1 622.42 MHz in the Earth-to-space direction.Noted by CHN: The priority in the sentence proposed to be deleted is mean that GMDSS distress, urgency and safety communications have priority to the other communications in the same one system. It’s none business with the application of No**. 4.10**. |
| ... | ... | ... |
| 2 483.59-2 499.91 | SAT-COM | In addition to its availability for routine non-safety purposes, the frequency band 2 483.59-2 499.91 MHz is used for distress and safety purposes in the space-to-Earth direction in the maritime mobile-satellite service. GMDSS distress, urgency and safety communications have priority in this band. |
| ... | ... | ... |
| **Legend:**... |

**Reasons:** To add the band 1 610.18-1 622.42 MHz in the direction of Earth-to-space, 2 483.59‑2 499.91 MHz in the direction of space-to-Earth as being available for distress and safety communications for the Global Maritime Distress and Safety System (GMDSS).

ARTICLE 33

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

Section V − Transmission of maritime safety information2

33.49 E − Maritime safety information via satellite

MOD

33.50 § 26 Maritime safety information may be transmitted via satellite in the maritime mobile-satellite service using the frequency bands 1 530-1 545 MHz, 1 621.35-1 626.5 MHz and 2 483.59-2 499.91 MHz (see Appendix 15).     (WRC‑23)

**Reasons:** To include the 2 483.59-2 499.91 MHz band as being available for transmitting maritime safety information via satellite.

Section VII − Use of other frequencies for safety     (WRC‑07)

MOD

33.53 § 28 Radiocommunications for safety purposes concerning ship reporting communications, communications relating to the navigation, movements and needs of ships and weather observation messages may be conducted on any appropriate communications frequency, including those used for public correspondence. In terrestrial systems, the frequency bands 415-535 kHz (see Article **52**), 1 606.5-4 000 kHz (see Article **52**), 4 000-27 500 kHz (see Appendix **17**) and 156‑174 MHz (see Appendix **18**) are used for this function. In the maritime mobile-satellite service, frequencies in the frequency bands 1 530-1 544 MHz, 1 610.18-1 622.42 MHz (Earth-to-space), 1 621.35‑1 626.5 MHz, 1 626.5-1 645.5 MHz and 2 483.59-2 499.91 MHz are used for this function as well as for distress alerting purposes (see No. **32.2**).     (WRC‑23)

**Reasons:** To apply RR No. **33.53** to the 1 610.18-1 622.42 MHz, 2 483.59-2 499.91 MHz band for use by mobile-satellite service systems approved by the International Maritime Organization to participate in the Global Maritime Safety and Distress System.]

### 2/1.11/5.3.2 For Method C2: [title of Method C2]

[Example(s) of regulatory text for the second method to satisfy Issue C]

[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue C, if any]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. \* Note: See relevant text in CPM23-1 meeting report (Annex 4 to BR Administrative Circular [CA/251](https://www.itu.int/md/R00-CA-CIR-0251/en)). [↑](#footnote-ref-1)
2. \*\* WP 4C is responsible for developing studies and draft CPM text on *resolves* *to invite the 2023 World Radiocommunication Conference* 3 and sending this to WP 5B. [↑](#footnote-ref-2)
3. \* Distress and safety communications include distress, urgency and safety calls and messages. [↑](#footnote-ref-3)