



Office of
Deputy Commissioner
of Maritime Affairs

THE REPUBLIC OF LIBERIA LIBERIA MARITIME AUTHORITY

Marine Notice

RAD-010
Rev. 04/25

**TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF
MERCHANT SHIPS, AND AUTHORIZED CLASSIFICATION SOCIETIES**

SUBJECT: SOLAS CHAPTER IV: Radiocommunications

- References:**
- (a) International Convention for the Safety of Life at Sea (SOLAS) 1974, Chapter IV, as amended by Resolution MSC.496(105)
 - (b) [MSC.1/Circ.1645](#)
 - (c) [MSC.1/Circ.1676](#)
 - (d) [MSC.1/Circ.1460/Rev.5](#)
 - (e) [COMSAR.1/Circ.32 as amended](#)
 - (f) [Resolution A.803\(19\) as amended](#)
 - (g) [MSC.1/Circ.1389](#)
 - (h) [MSC.1/Circ 1656](#)
 - (i) Liberian Maritime Regulation 2.35 and 6.180.

Supersedes: Marine Notice RAD-010, dated 02/25

The following changes have been included:

- a. Paragraph 1.8 amended to include guidance in MSC.1/Circ.1460/Rev.5 regarding validity of radiocommunication equipment installed and used on ships.
- b. Added new paragraph 1.11 related to GMDSS Operating Guidance for Ships in Distress

PURPOSE:

The purpose of this Marine Notice is to inform shipowners, operators, recognized organizations and Masters of implementation of the revised SOLAS Chapter IV: Radiocommunications and the new requirements and regulatory amendments that affect maritime radiocommunication equipment, GMDSS and vessel operations.

BACKGROUND:

The International Maritime Organization (IMO), during the 105th meeting of the Maritime Safety Committee (MSC), adopted comprehensive amendments to SOLAS Chapter IV: Radiocommunications. These amendments updated the requirements of Chapter IV regarding GMDSS, the transmission and receipt of Maritime Safety Information (MSI), and reformatted

and revised certain sections of SOLAS Chapter IV regarding the radiocommunication equipment required for vessels. The revised SOLAS Chapter IV addresses the modernization of GMDSS and the future use of modern communication systems in the GMDSS and maritime communications, while removing obsolete requirements.

The amended SOLAS Chapter IV came into force on 01 January 2024. Liberian flagged vessels must comply with the requirements of revised Chapter IV as of that date.

APPLICABILITY:

This Marine Notice applies to all the vessels to which SOLAS Chapter IV applies.

1.0 REQUIREMENTS

The amendments to SOLAS Chapter IV contain many editorial amendments and reformatting of Chapter IV that do not substantially change the communication equipment or operation requirements for ships. This Marine Notice provides information on the amendments and changes to SOLAS Chapter IV that will affect a ship's operation and/or equipment required on board effective 01 January 2024.

1.1 Regulation 2 of the amended SOLAS Chapter IV - Terms and Definitions:

The following definitions have been removed:

1. *Direct-printing telegraphy* means automated telegraphy techniques which comply with the relevant recommendations of the International Radio Consultative Committee (CCIR).
2. *INMARSAT* means the Organization established by the Convention on the International Maritime Satellite Organization adopted on 3 September 1976.
3. *International NAVTEX service* means the coordinated broadcast and automatic reception on 518 kHz of maritime safety information by means of narrow-band direct-printing telegraphy using the English language.
4. *Polar orbiting satellite service* means a service which is based on polar orbiting satellites which receive and relay distress alerts from satellite EPIRBs and which provides their position.

The following definitions have been added:

1. *AIS-SART* means an automatic identification system search and rescue transmitter capable of operating on frequencies dedicated to AIS (161.975 MHz (AIS1) and 162.025 MHz (AIS2)).
2. *Emergency position-indicating radio beacon (EPIRB)* means a transmitter operating in the frequency band 406.0-406.1 MHz capable of transmitting a distress alert via satellite to a rescue coordination centre and transmitting signals for on-scene locating.
3. *Global Maritime Distress and Safety System (GMDSS)* means a system

that performs the functions set out in regulation 4.1.1.

4. *Radar SART* means a search and rescue transponder operating on radar frequencies in the frequency band 9.2-9.5 GHz.
5. *Satellite service on 406 MHz* means a service operating through a satellite system having global availability designed to detect EPIRBs transmitting in the frequency band 406.0-406.1 MHz.

The following definitions have been amended:

1. *Sea area A3* means an area, excluding sea areas A1 and A2, within the coverage of a recognized mobile satellite service supported by the ship earth station carried on board, in which continuous alerting is available.
2. *GMDSS identities* means information which may be transmitted to uniquely identify the ship or its associated rescue boats and survival craft. These identities are the ship's call sign, Maritime Mobile Service Identity (MMSI), EPIRB hexadecimal identity, recognized mobile satellite service identities and equipment serial numbers.

1.2 Regulation 2 of the amended SOLAS Chapter IV - Terms and Definitions:

Regulation 4.1 has been amended to clarify that every ship, while at sea, shall be capable of performing the GMDSS functions. The capabilities listed in the amended regulation 4.1.1 of SOLAS Chapter I are the same as those previously listed in the old regulation 4, except with regards to the GMDSS, ships are only required to be capable of receiving MSI and ships are only required to be capable of transmitting and receiving urgency and safety communications.

The requirement for transmitting and receiving general radiocommunication previously contained in old regulation 4.1.8 is now prescribed in a new regulation 4.2.

1.3 Regulation 2 of the amended SOLAS Chapter IV - Terms and Definitions:

Regulation 7.1.3 has been amended to state that each ship shall be provided with:

- .1 a radar SART or an AIS-SART, which:
 - .1 shall be so stowed that it can be easily utilized; and
 - .2 may be one of those required by paragraphs 2.1 or 3.1.

Regulation 7.1.4 has been amended to no longer require the mandatory installation of a NAVTEX.

The amended regulation requires:

a receiver or receivers capable of receiving MSI and search and rescue related information throughout the entire voyage in which the ship is engaged.

The old regulation 7.1.5 regarding reception of MSI by a recognized mobile satellite service enhanced group calling system if the ship is engaged in voyages in sea area A1, or A2 or A3 but in which an international NAVTEX service is not provided has been removed and replaced by old regulation 7.1.6. The amended regulation 7.1.4 (as mentioned above) is applicable to ships throughout the entire voyage without regard to the Sea Area in which the ship operates.

Regulation 7.1.6 is a new regulation that requires a radio installation capable of transmitting and receiving general radiocommunications operating on working frequencies in the band between 156 MHz and 174 MHz.

Regulation 7.2 is a new regulation that prescribes SART and two -way VHF radiotelephone requires for every cargo ship of 300 gross tons but less than 500 gross tons be provided with at least:

- .1 one radar SART or AIS-SART; and
- .2 two two-way VHF radiotelephone apparatuses.

Regulation 7.3 is a new regulation that prescribes SART and two -way VHF radiotelephone requires for every passenger ship and cargo ships of 500 gross tons and upwards be provided with at least:

- .1 one radar SART or AIS-SART on each side of the ship; and
- .2 three two-way VHF radiotelephone apparatuses.

Regulation 7.5 is a new regulation that prescribes the stowage locations for radar SARTS or AIS-SARTS with regards to a ship's lifeboats.

1.4 Regulation 8 of revised SOLAS Chapter IV - Radio equipment: Sea Area A1

Regulations 8.1 and 8.2 have been amended and re-formatted to remove language that duplicated the requirements of Regulation 7 and more clearly specify the requirements for operation in Sea Area 1. The functional and equipment requirements for Sea Area 1 remain the same.

1.5 Regulation 9 of revised SOLAS Chapter IV - Radio equipment: Sea Area A2

Regulation 9.3 is a new regulation that provides three options for installing the 406 MHz EPIRB as one of the secondary means of initiating the transmission of ship-to-ship distress alerts by a radio service other than MF. The old regulation 9.3 has been re-numbered 9.4.

The old regulation 9.4 regarding exempting ships constructed before 1 February 1997 and which operate exclusively in Sea Area 2 from complying with the requirements of certain sections of regulation 7 has been removed.

1.6 Regulation 10 of revised SOLAS Chapter IV - Radio equipment: Sea Area A3

Old regulation 10.1.1.4 regarding transmitting and receiving general radiocommunications, using either radiotelephony or direct-printing telegraphy has been removed from the regulations. Direct printing telegraphy is no longer required.

While old regulation 10.2 regarding the alternate compliance with the requirements of regulation 10.1 has been removed, in accordance with **COMSAR.1/Circ.32, as amended**, a single MF/HF radio installation may be accepted both as a primary MF radio installation and a duplicated MF/HF radio installation.

Regulation 10.3 is a new regulation that provides three options for installing the 406 MHz EPIRB as the secondary means of initiating the transmission of ship-to-ship distress alerts by a radio service other than MF. The old regulation 10.3 regarding a ship being capable of initiating transmission of distress alerts by the radio installations specified in paragraphs 10.1.1, 1.2 and 1.4 from the position from which the ship is normally navigated has been re-numbered as 10.2.

Old regulation 10.4 has been revised to is a requirement for a ship with regards to the capability to transmit and receive general communications. The authorization to exempt ships constructed before 01 February 1997 and which operate exclusively in Sea Area 2 and Sea Area 3 from complying with the requirements of certain sections of regulation 7 that were contained in the text of old regulation 10.4 has been removed.

1.7 Regulation 11 of revised SOLAS Chapter IV - Radio equipment: Sea Area A4

Regulation 11 has been revised to specifically list the radiocommunication equipment required for ships operating in Sea Area 4

The authorization to exempt ships constructed before 1 February 1997 and which operate exclusively in Sea Area 2, Sea Area 3, and 4 from complying with the requires of certain sections of regulation 7 that was contained in the previous text of regulation 10.4 has been removed.

1.8 Regulation 14 of revised SOLAS Chapter IV – Performance Standards

[MSC.1/Circ.1676](#) has extended the due date for installation of VHF radio installations, MF and MF/HF radio installations and Inmarsat C ship earth stations that comply with the performance standards listed in amended Regulation 14 until 01 January 2028 due to delays affecting the availability of the new equipment.

Therefore, Liberian flagged vessels may continue until 01 January 2028 to use:

1. shipborne VHF radio installations conforming to performance standards not inferior to those specified in the annex to resolution A.803(19), as

amended; and as specified in Section of this Notice.

2. shipborne MF and MF/HF radio installations conforming to performance standards not inferior to those specified in the annex to resolutions A.804(19), as amended and A.806(19), as amended; and
3. Inmarsat-C ship earth stations conforming to performance standards not inferior to those specified in the annex to resolution A.807(19), as amended.

1.9 VHF Radios

The ITU World Radiocommunication Conferences in 2012, 2015 and 2019 made extensive changes to appendix 18 of the ITU Radio Regulations (RR). While these changes do not affect the Global Maritime Distress and Safety System (GMDSS), they do affect the use of other frequencies used for VHF meteorological, navigational and urgent marine information broadcasts, port operations and Vessel Traffic Service (VTS).

In accordance with the guidelines in [MSC.1/Circ.1460/Rev.5](#), to ensure radiocommunication capability in the ship to ship, ship to shore and shore to ship directions, all VHF radiocommunication equipment on board ships required by SOLAS regulations IV/7.1.1, 7.1.2 and 7.1.6, including the duplicated equipment in accordance with regulations IV/15.6 and 15.7, should comply with the latest channel arrangements in appendix 18 of the RR, by the first radio survey scheduled on or after 1 January 2028, or earlier, as appropriate.

With regards to the changes in VHF frequencies and channeling arrangements for the VHF bands, please note the following:

1. The changes do not affect the designated VHF channels used for navigation safety, distress communications, and internship (i.e. ship to ship) VHF communications. The channels designated for use for the afore-mentioned communications are Channels 6, 13, 15,16, 17, and 70. These channels remain unchanged.
2. The changes to the VHF frequencies do not affect the AIS VHF channels (AIS1 and AIS2).
3. Some coast stations may change their operating channel designations or frequencies because of changes to the RR, but the timing of any change is a local matter.
4. A small number of 4-digit channel numbers are now explicitly stated in the RR. Radio operators should be aware of these new channels and the corresponding older 2-digit channel designations. Existing 2-digit, international, simplex channels are unchanged.
5. Where a frequency is supported by equipment in accordance with the RR, but the channel indication is no longer correct, a cross-reference table should be displayed at the operating station(s).

As noted above, existing VHF radios will continue to work for safety, distress, and ship to ship communications. However, many PSC authorities and Vessel Traffic Services (VTS) for communicating with ships and other vessels within their regions. may change over to the new VHF frequency prior to 01 January 2028. Therefore, prior to any passage the Master and Radio Operator should review radio channel and frequency requirements for the vessel's voyage and area of operation to ensure that the vessel is outfitted with the proper VHF equipment. Masters/Radio operators should refer to ITU List IV – List of Coast Stations and Special Service Stations or optionally the Admiralty List of Radio Stations (ALRS) to ensure that the on-board VHF equipment is capable of operating on the frequencies necessary for the vessel's voyage and/or area of operation, e.g. the ability to communicate with all applicable ports and coast stations. Please note that carriage on board of the ALRS is not mandatory for Liberian flagged ship/vessels.

1.10 Notable Changes and Revisions to SOLAS CHAPTER IV- Radiocommunications

A. The mandatory requirements to install an Inmarsat-C system on board a ship have been removed from SOLAS Chapter IV. With the approval of Iridium as a GMDSS system, SOLAS Chapter IV, in lieu of specifying Inmarsat-C equipment, requires ships, when applicable, to be outfitted with a recognized mobile satellite service ship earth station capable of:

- .1 Transmitting and receiving distress, urgency and safety communications;
- .2 initiating and receiving distress priority calls; and
- .3 maintaining watch for shore-to-ship distress alert relays, including those directed to specifically defined geographical areas.

The recognized mobile satellite service (RMSS) ship earth station may be any such system that has been approved by IMO for use in the GMDSS.

B. NAVTEX and NBDP are no longer mandatory required equipment that must be installed on ships no matter which Sea Area the ship operates.

C. Ships are required to be outfitted with a receiver or receivers capable of receiving MSI and search and rescue related information throughout the entire voyage in which the ship is engaged. The mandatory requirement for an MSI and SAR related information receiver may be combined with RMSS equipment. It should be noted that currently not every NAVAREA or METAREA coordinator is transmitting MSI on all available RMSS.

The alternative method of compliance for operation in Sea Area A3 using VHF + MF/HF (DSC + radiotelephony + NBDP) + Secondary means (EPIRB or Ship Earth Station (SES)) has been deleted from Regulation 10.2. However, in accordance with [COMSAR.1/Circ.32, as amended](#), a single MF/HF radio installation may be accepted both as a primary MF radio installation and a

duplicated MF/HF radio installation.

D. For vessels equipped with an Iridium GMDSS system which provides complete global coverage, Sea Area A4, as defined in regulation 2.1.1.18 of SOLAS Chapter IV does not exist, as Sea Area A3 for such vessels includes all water beyond Sea Areas A1 and A2, including polar regions.

The chart below provides the equipment that shall be installed on ships operating in Sea Areas with regards to GMDSS.

GMDSS equipment requirements in force for all ships to which SOLAS chapter IV applies:

| Equipment | A1 | A2 | A3 | A4 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|------------------|----------------|
| VHF telephony installation with DSC capable of: | x | x | x | x |
| DSC watch on channel 70 | x | x | x | x |
| Radiotelephony watch on channel 16 | x | x | x | x |
| Watch on other appropriate frequency or frequencies for urgency and safety communications for the area in which the ship is navigating | x | x | x | x |
| MF telephony ⁶ installation with MF DSC capable of: | | x | x | |
| DSC watch on 2 187.5 kHz | | x | x | |
| Watch on other appropriate frequency or frequencies for urgency and safety communications for the area in which the ship is navigating | | x | x | |
| SES providing RMSS | | | x | |
| MF/HF telephony ⁶ installation with DSC capable of: | | | | x |
| DSC watch on 2 187.5 kHz and 8 414.5 kHz | | | | x |
| Depending on time of day and geographical position, DSC watch on at least one of the frequencies 4 207.5 kHz, 6 312 kHz, 12 577 kHz or 16 804.5 kHz | | | | x |
| Watch on other appropriate frequency or frequencies for urgency and safety communications for the area in which the ship is navigating | | | | x |
| Duplicated VHF with DSC | x ⁷ | x ⁷ | x | x |
| Duplicated MF ⁶ with DSC | | x ⁷ | | |
| Duplicated SES providing RMSS | | | x ^{4,5} | |
| Duplicated MF/HF telephony ⁶ with DSC | | | x ⁴ | x |
| Receiver(s) for MSI and SAR-related information ³ | x | x | x | x |
| Float-free EPIRB | x | x | x | x |
| Radar SART or AIS SART | x ¹ | x ¹ | x ¹ | x ¹ |
| Portable GMDSS VHF transceivers | x ² | x ² | x ² | x ² |
| Automatic updating of position to all relevant radiocommunication equipment | x | x | x | x |
| The following additional requirements apply to passenger ships | | | | |
| "Distress panel" and "distress alarm panel" (SOLAS regulations IV/6.4 and 6.6) | x | x | x | x |
| Two-way-on-scene radiocommunication on 121.5 MHz and 123.1 MHz from the navigating bridge. (SOLAS regulation IV/7.6) | x | x | x | x |

1. Cargo ships between 300 and 500 GT: 1 set. Cargo ships of 500 GT and upwards and passenger ships: 2 sets.
2. Cargo ships between 300 and 500 GT: 2 sets. Cargo ships of 500 GT and upwards and passenger ships: 3 sets.

3. This may be either a combined ship earth station and EGC receiver or separate pieces of equipment.
4. Ships in sea area A3 may choose between duplication with either complete MF/HF transceiver or SES providing an RMSS with coverage equal to or broader than the primary RMSS (See section 1.6.3 of [COMSAR.1/Circ.32, as amended](#)).
5. See section 1.6.3.2 of [COMSAR.1/Circ.32, as amended](#).
6. A single MF/HF radio installation may be accepted both as a primary MF radio installation and a duplicated MF/HF radio installation, as provided in [COMSAR.1/Circ.32, as amended](#).
7. See section 1.6.3.1 of [COMSAR.1/Circ.32, as amended](#).

1.11 GMDSS Operating Guidance for Ships in Distress

[MSC.1/Circ 1656](#) provides guidance on the use of appropriate radiocommunication equipment in distress situations in accordance with applicable provisions of SOLAS Chapter IV. Shipowners, operators, and Masters should follow this guidance with regards to the use of appropriate radiocommunication equipment in distress situations. The Administration recommends that the Guidance be displayed on ships' bridges in a size at least equivalent to an A4 size poster.

If you have any questions on this Marine Notice or the guidance contained within, please contact RegsandStandards@lis.cr.com or call: +1 703 790 3434 and ask for the Regulations and Standards Department.

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