

**Federal Communications Commission**

**§ 80.1077**

the requirements set forth in IMO Assembly on Training for Radio Personnel (GMDSS), Annex 5 and IMO Assembly on Radio Maintenance Guidelines for the Global Maritime Distress and Safety System related to Sea Areas A3 and A4.

[51 FR 31213, Sept. 2, 1986, as amended at 63 FR 49872, Sept. 18, 1998]

EFFECTIVE DATE NOTE: At 68 FR 46976, Aug. 7, 2003, §80.1074 was amended by revising paragraph (b)(2) and removing paragraph (b)(3), effective October 6, 2003. For the convenience of the user, the revised text is set forth as follows:

**§80.1074 Radio maintenance personnel for at-sea maintenance.**

\* \* \* \* \*

(b) \* \* \*

(2) GB: GMDSS Operator's/Maintainer's License.

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**§80.1075 Radio records.**

A record must be kept, as required by the Radio Regulations and §80.409 (a), (b) and (e), of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.

**§80.1077 Frequencies.**

The following table describes the frequencies used in the Global Maritime Distress and Safety System:

Alerting:	
406 EPIRBs .....	406-406.1 MHz (Earth-tospace). 1544-1545 MHz (space-to-Earth).
INMARSAT A or C SES.	1626.5-1645.5 MHz (Earth-to-space).
VHF DSC Ch. 70	156.525 MHz <sup>1</sup> .
MF/HF DSC <sup>2</sup> .....	2187.5 kHz <sup>3</sup> , 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, and 16804.5 kHz.
On-scene communications:	
VHF Ch. 16 .....	156.8 MHz.
MF radiotelephony.	2182 kHz.
NBDP .....	2174.5 kHz.

Communications involving aircraft:	
On-scene, including search and rescue.	156.8 MHz <sup>4</sup> , 121.5 MHz <sup>5</sup> , 123.1 MHz, 156.3 MHz, 2182 kHz, 3023 kHz, 4125 kHz, and 5680 kHz <sup>6</sup> .
Locating signals:	
406 MHz EPIRB beacons.	121.5 MHz.
9 GHz radar transponders.	9200-9500 MHz.
Maritime safety information (MSI):	
International NAVTEX.	518 kHz <sup>7</sup> .
Warnings .....	490 kHz <sup>8</sup> , 4209.5 kHz <sup>9</sup> .
NBDP .....	4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5 kHz, 22376 kHz, 26100.5 kHz.
Satellite .....	1530-1545 MHz (space-to-Earth) <sup>10</sup> .
General distress and safety communications and calling:	
Satellite .....	1530-1544 MHz (space-to-Earth) and 1626.5-1645.5 (Earth-to-space) <sup>10</sup> .
Radiotelephony	2182 kHz, 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz, 16420 kHz, and 156.8 MHz.
NBDP .....	2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz, and 16695 kHz.
DSC .....	2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, 16804.5 kHz, and 156.525 MHz.
Survival craft:	
VHF radiotelephony.	156.8 MHz and one other 156-174 MHz frequency.
9 GHz radar transponders.	9200-9500 MHz.

<sup>1</sup>Frequency 156.525 MHz can be used for ship-to-ship alerting and, if within sea area A1, for ship-to-shore alerting.  
<sup>2</sup>For ships equipped with MF/HF equipment, there is a watch requirement on 2187.5 kHz, 8414.5 kHz, and one other frequency.  
<sup>3</sup>Frequency 2187.5 kHz can be used for ship-to-ship alerting and, if within sea areas A2, for ship-to-shore alerting.  
<sup>4</sup>Frequency 156.8 MHz may also be used by aircraft for safety purposes only.  
<sup>5</sup>Frequency 121.5 MHz may be used by ships for aeronautical distress and urgency purposes.  
<sup>6</sup>The priority of use for ship-aircraft communications in 4125 kHz, then 3023 kHz. Additionally, frequencies 123.1 MHz, 3023 kHz, and 5680 kHz can be used by land stations engaged in coordinated search and rescue operations.

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**47 CFR Ch. I (10–1–03 Edition)**

<sup>7</sup>The international NAVTEX frequency 518 kHz is the primary frequency for receiving maritime safety information. The other frequencies are used only to augment the coverage or information provided on 518 kHz.

<sup>8</sup>Frequency 490 kHz cannot be used for MSI employing NBDP transmissions until February 2, 1999.

<sup>9</sup>Frequency 4209.5 kHz is not used in the United States (see 47 CFR 2.106 footnote 520A).

<sup>10</sup>In addition to EPIRBs, 1544–1545 MHz can be used for narrowband distress and safety operations and 1645.5–1646.5 MHz can be used for relay of distress alerts between satellites. Feeder links for satellite communications are assigned from the fixed satellite service, see 47 CFR 2.106.

EFFECTIVE DATE NOTE: At 68 FR 46976, Aug. 7, 2003, § 80.1077 was revised, effective October 6, 2003. For the convenience of the user, the revised text is set forth as follows:

**§ 80.1077 Frequencies.**

The following table describes the frequencies used in the Global Maritime Distress and Safety System:

<b>Alerting:</b>	
406.0–406.1 EPIRBs .....	406.0–406.1 MHz (Earth-to-space). 1544–1545 MHz (space-to-Earth).
INMARSAT Ship Earth Stations capable of voice and/or direct printing.	1626.5–1645.5 MHz (Earth-to-space).
VHF DSC Ch. 70 .....	156.525 MHz <sup>1</sup> .
MF/HF DSC <sup>2 11</sup> .....	2187.5 kHz <sup>3</sup> , 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, and 16804.5 kHz.
<b>On-scene communications:</b>	
VHF Ch. 16 .....	156.8 MHz.
MF Radiotelephony .....	2182 kHz.
NBDP .....	2174.5 kHz.
<b>Communications involving aircraft:</b>	
On-scene, including search and rescue.	156.8 MHz <sup>4</sup> , 121.5 MHz <sup>5</sup> , 123.1 MHz 156.3 MHz, 2182 kHz, 3023 kHz, 4125 kHz, and 5680 kHz <sup>6</sup> .
<b>Locating signals:</b>	
406–406.1 EPIRB Beacons .....	121.5 MHz.
9 GHz radar transponders .....	9200–9500 MHz.
<b>Maritime safety information (MSI):</b>	
International NAVTEX .....	518 kHz <sup>7</sup>
Warnings .....	490 kHz, 4209.5 kHz.
NBDP .....	4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5 kHz, 22376 kHz, 26100.5 kHz.
Satellite .....	1530–1545 MHz <sup>10</sup> .
<b>General distress and safety communica- tions and calling:</b>	
Satellite .....	1530–1544 MHz (space-to-Earth) and 1626.5–1645.5 MHz (Earth-to-space) <sup>10</sup> .
Radiotelephony .....	2182 kHz, 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz, 16420 kHz, and 156.8 MHz.
NBDP .....	2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz, and 16695 kHz.
DSC .....	2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, 16804.5 kHz, and 156.525 MHz.
<b>Survival craft:</b>	
VHF radiotelephony .....	156.8 MHz and one other 156–174 MHz frequency.
9 GHz radar transponders .....	9200–9500 MHz.

<sup>1</sup>Frequency 156.525 MHz can be used for ship-to-ship alerting and, if within sea area A1, for ship-to-shore alerting.

<sup>2</sup>For ships equipped with MF/HF equipment, there is a watch requirement on 2187.5 kHz, 8414.5 kHz, and one other frequency.

<sup>3</sup>Frequency 2187.5 kHz can be used for ship-to-ship alerting and, if within sea areas A2, for ship-to-shore alerting.

<sup>4</sup>Frequency 156.8 MHz may also be used by aircraft for safety purposes only.

<sup>5</sup>Frequency 121.5 MHz may be used by ships for aeronautical distress and urgency purposes.

<sup>6</sup>The priority of use for ship-aircraft communications is 4125 kHz, then 3023 kHz. Additionally, frequencies 123.1 MHz, 3023 kHz and 5680 kHz can be used by land stations engaged in coordinated search and rescue operations.

<sup>7</sup>The international NAVTEX frequency 518 kHz is the primary frequency for receiving maritime safety information. The other frequencies are used only to augment the coverage or information provided on 518 kHz.

<sup>8</sup>[Reserved]

<sup>9</sup>[Reserved]

<sup>10</sup>In addition to EPIRBs, 1544-1545 MHz can be used for narrowband distress and safety operations and 1645.5-1646.5 MHz can be used for relay of distress alerts between satellites. Feeder links for satellite communications are assigned from the fixed satellite service, see 47 CFR §2.106.

<sup>11</sup>Routine calling is not permitted on MF and HF DSC frequencies.

EQUIPMENT REQUIREMENTS FOR SHIP STATIONS

§ 80.1081 Functional requirements.

Ships, while at sea, must be capable:

- (a) Except as provided in §§ 80.1087(a)(1) and 80.1091(a)(4)(iii), of transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service;
- (b) Of receiving shore-to-ship distress alerts;
- (c) Of transmitting and receiving ship-to-ship distress alerts;
- (d) Of transmitting and receiving search and rescue co-ordinating communications;
- (e) Of transmitting and receiving on-scene communications;
- (f) Of transmitting and receiving signals for locating;
- (g) Of transmitting and receiving maritime safety information;
- (h) Of transmitting and receiving general radiocommunications to and from shore-based radio systems or networks; and
- (i) Of transmitting and receiving bridge-to-bridge communications.

§ 80.1083 Ship radio installations.

(a) Ships must be provided with radio installations capable of complying with the functional requirements prescribed by § 80.1081 throughout its intended voyage and, unless exempted under § 80.1071, complying with the requirements of § 80.1085 and, as appropriate for the sea area of areas through which it will pass during its intended voyage, the requirements of either §§ 80.1087, 80.1089, 80.1091, or 80.1093.

(b) The radio installation must:

- (1) Be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful

interaction with other equipment and systems;

(2) Be so located as to ensure the greatest possible degree of safety and operational availability;

(3) Be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;

(4) Be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls for operating the radio installation; and

(5) Be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

(c) Control of the VHF radiotelephone channels required for navigational safety must be immediately available on the navigating bridge convenient to the conning position and, where necessary, facilities should be available to permit radiocommunications from the wings of the navigating bridge. Portable VHF equipment may be used to meet the latter provision.

EFFECTIVE DATE NOTE: At 68 FR 46976, Aug. 7, 2003, § 80.1083 was amended by adding paragraph (d), effective October 6, 2003. For the convenience of the user, the added text is set forth as follows:

§ 80.1083 Ship radio installations.

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(d) A Shipborne Integrated Radiocommunication System (IRCS) may be utilized to integrate all GMDSS equipment into a standard operator's console. Such installation must be type accepted in accordance with § 80.1103 and meet the requirements of IMO Assembly Resolution A.811(19), "Performance Standards for a Shipborne Integrated Radiocommunication System (IRCS) When Used in the GMDSS," with