Secondary Legislation

DCE - MTI 3G-1/1

Maritime Transport (Radio Equipment) Instrument [year]

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Contents

Section 1 Preliminary provisions

1.1 Title

This MTI is the Maritime Transport (Radio Equipment) Instrument [year].

1.2 Commencement

This MTI comes into force on [same date as Part 3G].

1.3 What this MTI does

This MTI specifies standards and requirements for the design, construction, maintenance, and testing of radio equipment, and supporting accessories, for the purposes of Part 3G: Maritime (Design, Construction, and Equipment – Radio Equipment) Rules.

1.4 Application of MTI provisions

This MTI specifies—

(a) requirements with which a ship, described in rule 3G: A1.3(1) must comply; and

(b) standards that are, for the purposes of rule 3G: C1.1, the relevant design, construction, and performance standards.

1.5 Interpretation

(1) If a conflict exists between this MTI and material incorporated by reference in this MTI, the MTI applies.

(2) A term used in this MTI that is defined in Part 3G has the same meaning as in Part 3G.

(3) In this MTI, unless the context otherwise requires,—

Administration means a state party to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978

coastal limits has the meaning set out in Part 20: Operating Limits

DSC means digital selective calling, being a technique using digital signalling codes which enables a radio station to establish contact with, and transfer information to, another radio station or group of stations

float-free means an auto-release bracket for a water-activated EPIRB, fitted with a hydrostatic release unit (HRU), which is designed to automatically deploy the EPIRB when submerged at depth

float-free EPIRB means a water-activated EPIRB fitted in a float-free bracket

GMDSS means Global Maritime Distress and Safety System

GMDSS ship means a ship that is—

(a) a ship of 45 metres or more in LOA that proceeds beyond restricted limits; or

(b) a non-passenger ship of 300 gross tonnage or more which proceeds beyond offshore limits; or

(c) a passenger ship which proceeds beyond offshore limits; or

(d) a fishing ship which proceeds beyond offshore limits

GNSS means global navigation satellite system

inshore limits has the meaning set out in Part 20: Operating Limits

International Radio Regulations means the Radio Regulations annexed to the International Telecommunications Convention, done at Geneva in 1992

MMSI number means Maritime Mobile Service Identity number

non-GMDSS ship means—

(a) a ship that does not proceed beyond restricted limits; or

(b) a non-passenger ship of less than 45 metres in LOA that proceeds beyond restricted limits but is not a ship of 300 gross tonnage or more that proceeds beyond offshore limits; or

(c) a passenger ship of less than 45 metres in LOA that does not proceed beyond offshore limits; or

(d) a fishing ship that does not proceed beyond offshore limits

radio installation means radio equipment that is permanently installed on a ship

radio station means radio apparatus comprising transmitters or receivers, or a combination of transmitters and receivers, installed at a fixed location for the purposes of carrying on a radiocommunications service

radiotelephone means a radio communication device set up for the transmission and reception of speech over a radio link or circuit

sailing ship has the meaning set out in section 2(1) of the Act

silence period means a period of 3 minutes beginning at each hour and at 30 minutes after each hour of each day, reckoned according to Coordinated Universal Time, during which no transmission other than for distress may be made, on the frequency of 2,182 kHz

survival craft means a craft capable of sustaining the lives of persons in distress from abandoning the ship.

(4) In this MTI, codes and official standards (such as *AS/NZS and IMO*) are referred to as standards and by the abbreviations listed in Appendix 2.

Section 2 Ship and equipment requirements

2.1 Application of requirements for ships to have radio equipment

This Section specifies requirements for radio equipment for the purposes of rule 3G: C2.1.

2.2 Requirements for ships to have radio equipment

Ships of 6 metres or less in LOA that do not proceed beyond enclosed water limits

(1) A ship of 6 metres or less in LOA that does not proceed beyond enclosed water limits must have—

(a) any 1 of the following:

(i) a cellular phone:

(ii) a VHF radio:

(iii) an EPIRB; and

(b) any 1 of the following carried by the master, if the ship is a passenger or a sailing ship, that does not otherwise have—

(i) a cellular phone:

(ii) a portable VHF radio:

(iii) a PLB.

Ships of more than 6 metres in LOA that do not proceed beyond enclosed water limits

(2) A ship of more than 6 metres in LOA that does not proceed beyond enclosed water limits must have—

(a) a VHF radio; and

(b) an EPIRB; and

(c) any 1 of the following carried by the master if the ship is less than 12 metres in LOA and is either a passenger ship or a sailing ship:

(i) a cellular phone:

(ii) a portable VHF radio:

(iii) a PLB.

Ships that proceed beyond enclosed water limits but not beyond the VHF coverage area

(3) A ship that proceeds beyond enclosed water limits but does not proceed beyond the VHF coverage area must have—

(a) a VHF radio; and

(b) an EPIRB; and

(c) if the ship is a passenger ship or a sailing ship, is less than 12 metres in LOA, and does not proceed beyond inshore limits, any 1 of the following carried by the master:

(i) a cellular telephone:

(ii) a portable VHF radio:

(iii) a PLB.

Ships that proceed beyond the VHF coverage area but do not proceed beyond offshore limits

(4) A ship that proceeds beyond the VHF coverage area but does not proceed beyond offshore limits must have—

(a) a VHF radio; and

(b) an EPIRB; and

(c) an MF/HF radiotelephone.

Radio equipment requirements for ships that proceed beyond offshore limits

(5) A ship that proceeds beyond offshore limits must have—

(a) a VHF radio that is capable of voice communication and DSC; and

(b) an EPIRB; and

(c) an MF/HF radiotelephone that is capable of voice communication and DSC; and

(d) any 1 of the following:

(i) a radar-SART that can be stowed so that it can be easily used:

(ii) an AIS-SART; and

(e) an RMSS ship earth station that is capable of receiving MSI and search and rescue related information, if the ship is—

(i) a passenger ship or a sailing ship carrying more than 12 passengers; or

(ii) a fishing ship; or

(iii) a ship of 300 gross tonnage or more that is not a passenger ship, a sailing ship, or a fishing ship.

Section 3 Performance standards and technical requirements

3.1 Application of performance standards and technical requirements

This Section specifies requirements for the type, design, settings, performance, and technical requirements for radio equipment for the purposes of rule 3G: C3.2.

3.2 Performance standards and technical requirements

Performance standards and technical requirements for cellular telephones

(1) A cellular telephone must be—

(a) waterproof or in a waterproof case; and

(b) capable of operating as intended in all locations during a voyage; and

(c) sufficiently charged, or have a source of power for the purpose of maintaining charge, to continue operating for the duration of the voyage; and

(d) always turned on during a voyage.

Performance standards and technical requirements for VHF radios

(2) A VHF radio must—

(a) comply with the requirements of the Radiocommunications Regulations (Radio Standards) Notice 2023; and

(b) be able to operate on channels 06, 13, 16, 67, 68, 69, and 71; and

(c) be capable of operating on channels 60 and 62, if the ship is based on the Chatham Islands and is operating within Chatham Islands VHF coverage; and

(d) be able to operate on all channels specified in Appendix 18 of the International Radio Regulations, if the radio has capacity to do so; and

(e) comply with the technical standards in Appendix 19 of the International Radio Regulations.

Additional performance standards and technical requirements for VHF radios that are capable of DSC

(3) A VHF radio that is capable of DSC must also—

(a) be able to operate on channel 70; and

(b) comply with a performance standard for such devices referred to in *regulation 14 of Chapter IV of SOLAS*.

(4) A portable 2-way VHF radiotelephone for survival craft, if on a ship, must comply with a performance standard for such devices referred to in *regulation 14 of Chapter IV of SOLAS*.

Performance standards and technical requirements for portable VHF radios

(5) A portable VHF radio must be—

(a) waterproof or in a waterproof case; and

(b) capable of operating as intended in all areas of the ship's voyage; and

(c) battery operated with sufficient spare batteries to operate for the duration of the voyage.

(6) A portable VHF radio must not be capable of interfering with other radio equipment that a ship is required to have.

Performance standards and technical requirements for EPIRBs

(7) An EPIRB must be a float-free EPIRB unless the ship—

(a) is less than 12 metres in LOA and does not proceed beyond restricted limits; or

(b) is a fishing ship or recreational dive boat that operates under a Safe Operational Plan, and does not proceed beyond restricted limits; or

(c) is a passenger ship that that does not proceed beyond inshore limits and does not have a space where a float-free bracket can be installed that cannot be accessed by passengers; or

(d) does not proceed beyond inshore limits and there is no space on the ship easily accessible by crew that would provide the EPIRB with adequate protection from the elements.

(8) An EPIRB must—

(a) be installed in an easily accessible position; and

(b) be capable of being manually activated; and

(c) be capable of being manually released; and

(d) be GNSS enabled; and

(e) comply with the relevant performance standard for such devices referred to in *regulation 14 of Chapter IV of SOLAS*.

(9) A float-free EPIRB must—

(a) be able to be automatically released; and

(b) be capable of floating freely if the ship sinks or capsizes; and

(c) comply with 1 of the following standards:

(i) *AS/NZS 4280.1*, except that it must be GNSS enabled:

(ii) the relevant performance standard for such devices referred to in *regulation 14 of Chapter IV of SOLAS*.

(10) An EPIRB that is not a float-free EPIRB must—

(a) be able to be manually activated; and

(b) comply with *AS/NZS 4280.1*, except that it must be GNSS enabled.

Performance standards and technical requirements for PLBs

(11) A PLB must—

(a) be waterproof or in a waterproof case; and

(b) be capable of operating as intended in all locations during a voyage; and

(c) be battery operated with sufficient charge or spare batteries to continue operating for the duration of the voyage; and

(d) comply with *AS/NZS 4280.2*.

Performance standards and technical requirements for MF/HF radios

(12) An MF/HF radio must—

(a) be capable of transmitting and receiving distress signals on frequencies 2,182 kHz, 4,125 kHz, 6,215 kHz, 8,291 kHz, 12,290 kHz, and 16,420 kHz; and

(b) be capable of receiving MSI on frequencies 2,207 kHz, 4,146 kHz, 6,224 kHz, and 8,297 kHz; and

(c) comply with the Radiocommunications Regulations (Radio Standards) Notice 2023.

Additional performance standards and technical requirements for MF/HF radios capable of DSC

(13) An MF/HF radio that is capable of DSC must also—

(a) be capable of transmitting and receiving for distress and safety purposes on all distress and safety frequencies in the bands between—

(i) 1,605 kHz and 4,000 kHz; and

(ii) 4,000 kHz and 27,500 kHz using DSC and radiotelephony; and

(b) be capable of maintaining DSC watch on the following frequencies:

(i) 2,187.5 kHz:

(ii) 4,207.5 kHz:

(iii) 6,312 kHz:

(iv) 8,414.5 kHz:

(v) 12,577 kHz:

(vi) 16,804.5 kHz; and

(c) comply with 1 of the following standards:

(i) *MSC.508(105)*:

(ii) *MSC.512(105)*.

Performance requirements and technical requirements for SARTs

(14) A radar-SART must comply with a performance standard for such devices referred to in *regulation 14 of Chapter IV of SOLAS*.

(15) An AIS-SART must comply with a performance standard for such devices referred to in *regulation 14 of Chapter IV of SOLAS*.

Performance standards and technical requirements for RMSS ship earth stations capable of receiving MSI

(16) An RMSS ship earth station capable of receiving MSI must—

(a) be capable of receiving MSI and search and rescue information throughout the entire voyage; and

(b) comply with a performance standard for such devices referred to in *regulation 14 of Chapter IV of SOLAS*.

Performance requirements and technical requirements for radio power and light

(17) The electrical power for radio equipment and a radio light must comply with the requirements of Part 3F: Maritime (Design, Construction, and Equipment – Electrical) Rules.[1]

Section 4 Accessories supporting the use of radio equipment

4.1 Application of requirements for accessories supporting the use of radio equipment

This Section specifies accessories that assist in the use of radio equipment for the purposes of rule 3G: C4.2.

4.2 Accessories supporting the use of radio equipment

Emergency electric light

(1) A ship that has a non-portable VHF radio must have an emergency electric light that—

(a) is independent of the system that supplies the normal lighting of the radio installations; and

(b) is permanently arranged so as to be capable of providing sufficient illumination of—

(i) the operating controls of the radio installations; and

(ii) the clock; and

(iii) the instructions for the use of the radio equipment; and

(c) is controlled by a switch, clearly labelled to indicate its purpose, placed at the operating position of the radio installations.

A clock

(2) A ship that has a non-portable VHF radio must have an accurate and reliable clock that is—

(a) mounted in the immediate vicinity of the ship's radio equipment; and

(b) visible to a person operating the ship's radio equipment.

(3) The clock on a ship that proceeds beyond the VHF coverage area must be marked with the radio silence periods.

Instructions

(4) A non-portable VHF radio on a ship must be accompanied at each location with operating instructions that are easily understandable to an untrained person relating to—

(a) how the radio equipment is operated; and

(b) the procedures for distress communications in Part 23: Operational Procedures and Training.

Documentation

(5) A ship that proceeds beyond enclosed water limits must have on board—

(a) an associated call sign and MMSI number (if provided); and

(b) the Radio Handbook,[2] if the ship does not have the New Zealand Nautical Almanac.[3]

[1] Draft Rule Part 3F and MTI consulted on concurrently with draft Rule Part 3G and MTI in 2025.

[2] Published by Maritime New Zealand.

[3] Published by Land Information New Zealand.

(6) Any call sign or MMSI number must be displayed in the vicinity of the radio equipment.

(7) A ship that proceeds into the unlimited operating area must have on board—

(a) a list of radio stations in countries that the ship is intended to visit; and

(b) the Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services.[4]

Section 5 Installation, serviceability, and maintenance

5.1 Application of requirements for installation, serviceability, and maintenance

This Section specifies requirements for the installation, serviceability, and maintenance of radio equipment for the purposes of rule 3G: C5.1.

5.2 Installation

Control of VHF radio

(1) A VHF radio's channel controls must be installed in a position that is immediately and easily accessible from the ship's normal navigation position.

(2) Facilities allowing radio equipment must be available, if necessary for effective communication from the space, in—

(a) the wings of the navigation bridge, if present; and

(b) any other remote station from which the ship can be navigated.

Power wiring

(3) The wiring that provides power to a VHF radio must be securely installed.

(4) Power wiring conductors that facilitate the supply of power to radio equipment must have a large enough cross-section to ensure that there is no more than a 500 mV voltage drop between the power source and the radio equipment when transmitting at full power.

(5) The connection of radio equipment to an emergency power source must be clearly labelled and easily accessible.

Antennas

(6) Each radio transmitter and receiver installed on a ship must have an antenna or antennas that are constructed and sited to enable each transmitter and receiver to perform its intended communication function effectively.

(7) The antennas of radio installations on a ship must be—

(a) fitted with suitable insulators; and

(b) protected against breaking, if suspended between supports liable to whipping; and

(c) placed at a sufficient distance from sources of electromagnetic interference, including LED lights, to prevent any negative effect on the installation's performance.[5]

(8) The antenna feeder of a non-portable VHF radio must—

(a) be of low-loss coaxial cable of the correct impedance; and

(b) be securely installed and as short as practicable; and

(c) be protected from mechanical damage, in particular from abrasions or cuts to the outer sheathing which would allow water to penetrate; and

[4] Published by the International Communications Union.

[5] Double screened coaxial cables with a maximum loss of 3dB are recommended.

(d) have any connectors waterproofed.

(9) The antenna of a non-portable VHF radio must be securely installed—

(a) as high as possible; and

(b) at a horizontal distance of at least 2 metres from other metallic objects, if space allows; and

(c) to give as close to vertical polarisation as possible; and

(d) so that the gain of the antenna—

(i) is no less than 2dBi and no more than 8dBi; and

(ii) has a nominally uniform gain pattern in the horizontal plane.

(10) Where radios and antennas are duplicated for reliability, any switching that is provided to allow changing antennas and power between radios must be—

(a) unambiguously labelled; and

(b) arranged in such a way that the switching will not damage the radios, power sources, or antennas.

Section 6 Tests and checks of radio equipment

6.1 Application of requirements for tests and checks of radio equipment

This Section specifies requirements for the tests and checks of radio equipment for the purposes of rule 3G: C6.2.

6.2 Tests and checks of radio equipment

Radio equipment tests and checks for non-GMDSS ships

(1) The following activities must be carried out daily when crew are on board, for non-GMDSS ships:

(a) the proper functioning of the receiver of the radiotelephone that is used for radio watch on distress frequencies must be checked by muting its circuits or those of the radiotelephone auto alarm receiver:

(b) the batteries providing energy for any part of any radio installation must be checked and if not fully charged must be brought to that state:

(c) the reserve source of energy must be tested, if it is not a battery (such as a motor generator).

(2) The following must be carried out weekly for non-GMDSS ships:

(a) the proper functioning of the generating device for the radiotelephone alarm signal must be tested, if the ship has an MF/HF radio, by ensuring that it can modulate the radiotelephone transmitter effectively:

(b) the operation of transmitters and receivers must be tested by making a 2-way radio call from radiotelephone apparatus:

(c) batteries forming part of a 2-way radiotelephone apparatus on survival craft must be checked, and if the batteries are not sufficiently charged,—

(i) recharging the batteries, if they are rechargeable and not sufficiently charged; or

(ii) replaced, if the batteries are non-rechargeable:

(d) the operation of transmitters and receivers must be tested by making a 2-way radio call from the radiotelephone apparatus.

(3) The following must be carried out monthly for non-GMDSS ships:

(a) the batteries that provide a source of energy for radio installations on a ship must be tested using either—

(i) a hydrometer; or

(ii) a suitable load test, if a hydrometer cannot be used because the battery is sealed or it does not have electrolytes:

(b) checking of the security of batteries and their connections that provide a source of energy used by any part of a radio installation, and of the conditions of the batteries and their compartments.

(4) An EPIRB on a non-GMDSS ship must—

(a) be tested annually and in accordance with the manufacturer's instructions (if any); and

(b) have the hydrostatic release unit checked annually, if the EPIRB is a float-free EPIRB; and

(c) have the expiry date of its battery checked annually; and

(d) be replaced on or before its expiry date.

(5) A radar-SART, if on a non-GMDSS ship (including where fitted to a lifejacket or liferaft), must—

(a) be tested annually and in accordance with the manufacturer's instructions (if any); and

(b) have the battery expiry date checked on an annual basis.

Radio equipment tests for GMDSS ships

(6) The following must be carried out daily when crew are on board, for GMDSS ships:

(a) DSC facilities must be tested, using the means provided on the radio equipment, without radiation of signals:

(b) batteries that provide a source of energy for any part of a radio installation must be checked and if not sufficiently charged must be brought to a full charge:

(c) the accuracy of the clock must be checked.

(7) The following must be carried out weekly for GMDSS ships:

(a) DSC facilities must be tested by means of a test call, unless the ship is outside the range of a coast radio station with DSC equipment for more than a week, in which case a test call must be made at the earliest opportunity once the ship is within range of such a coast station:

(b) any reserve source of energy that is not a battery (such as a motor generator) must be tested.

(8) The following must be carried out monthly for GMDSS ships:

(a) each EPIRB must be tested to verify that it operates properly, using the means provided on the device and without using the satellite system:

(b) each AIS-SART and radar-SART, other than one required for survival craft in accordance with Part 2A: Maritime (Design, Construction, and Equipment – SOLAS Ships) Rules,[6] must be checked for security and signs of damage:

(c) survival craft 2-way VHF equipment must be tested on a frequency other than 156.8 MHz (VHF channel 16):

[6] Draft Rule Part 2A to be consulted upon in 2026.

(d) the security and condition of batteries providing a source of energy for any part of a radio installation and the battery connections and compartments must each be checked and confirm that they are charged and in working order.

(9) The following must be carried out annually for GMDSS ships:

(a) each EPIRB must be tested in accordance with *MSC.1/Circ. 1040*:

(b) each AIS must be tested in accordance with *MSC.1/Circ. 1252*:

(c) the hydrostatic release unit of an EPIRB must be checked, if the ship has a float-free EPIRB:

(d) the expiry date of the EPIRB's battery must be checked and, if necessary, replaced on or before its expiry.

Section 7 Registration and provision of information

7.1 Requirements to register or provide information

(1) This Section specifies requirements for registering and providing information on a ship and its radio equipment for the purposes of rule 3G: C7.1.

Registration of EPIRBs and PLBs

(2) The operator must register an EPIRB or a PLB with the Director if it is required for use on the ship under Section 2.

(3) The following information must be supplied to the Director for registration:

(a) the hexadecimal identification of the EPIRB or PLB:

(b) the serial number of the beacon unit:

(c) the battery expiry date:

(d) the ship's name or other contact detail:[7]

(e) the ship's home port:

(f) the name and contact details of the EPIRB or PLB owner:

(g) alternative emergency contacts for the EPIRB or PLB owner:

(h) the manufacturer, type, and model number of the EPIRB or PLB.

Information that must be provided to Director

(4) The operator must immediately inform the Director in writing if—

(a) there is a change in any of the information provided to the Director under this Section; or

(b) there has been disposal of an EPIRB or a PLB.

Section 8 Radio personnel

8.1 Application of radio personnel requirements

This Section specifies the qualification requirements for a person operating radio equipment, for the purposes of rule 3G: C8.2.

8.2 Personnel operating radio equipment

[7] Such as a radio call sign.

(1) A certificate that a crew member is required to hold under this Section must, unless otherwise stated, be issued under the Radiocommunications Regulations 2001, including classes of certificates prescribed in the International Radio Regulations.

(2) The crew member operating a ship's non-portable VHF radio, on a ship that is not required to have an MF/HF radio, must hold—

(a) a valid maritime VHF operator's certificate if the ship—

(i) carries 6 persons or fewer; and

(ii) does not proceed beyond restricted limits; or

(b) a valid maritime restricted radiotelephone operator's certificate or a valid maritime short-range operator's certificate, that is a class of certificate prescribed in the International Radio Regulations, if the ship—

(i) carries more than 6 persons; or

(ii) proceeds beyond restricted limits.

(3) A crew member or the master of a non-GMDSS ship that is required to have an MF/HF radio must hold a valid maritime general radiotelephone operator's certificate or a valid maritime long-range operator's certificate.

(4) A crew member or the master of a GMDSS ship, operating any radio installation required under Section 2, must hold—

(a) a valid maritime general operator's certificate issued by an Administration, that complies with the requirements prescribed under *IMO Publications Model Course 1.25*; and

(b) 1 of the following:

(i) a valid certificate of competency as a GMDSS radio operator issued under Part 32: Seafarer Certification:

(ii) a valid radio certificate of competency as a radio officer issued under Part 32: Seafarer Certification.

Section 9 Radio watch

9.1 Application of radio watch requirements

This Section specifies requirements for radio watch on a ship and its radio equipment for the purposes of rule 3G: C9.2.

9.2 Radio watch

(1) A continuous radio watch must be kept on a ship required to have a VHF radio.

(2) The continuous radio watch required to be kept under rule 3G: C9.2 must be maintained at the frequencies specified in this Section.

Ships with a VHF radio

(3) A ship that is required to have a VHF radio, that is not a portable VHF radio, must have a continuous radio watch when within the VHF coverage area, using radiotelephony on—

(a) channel 16; and

(b) channel 70, if the radio is capable of DSC; and

(c) channels 60 and 62, if the ship is within Chatham Islands VHF coverage.

(4) A ship that is required to have a VHF radio, that is not a portable VHF radio and that is outside the VHF coverage area, must—

(a) if within the VHF coverage of a country other than New Zealand, have a continuously maintained radio watch using radiotelephony, on the channel specified in Appendix 18 of the International Radio Regulations for the location of the ship; or

(b) if outside the VHF radio coverage of another country have a continuously maintained radio watch on—

(i) channel 16; and

(ii) channel 70, if the VHF radio is capable of DSC.

Note that a "VHF coverage area" refers to areas described in Appendix 1 (see section 1.5). A ship may be outside of these areas but still able to receive VHF coverage if (4) applies.

Ships with an MF/HF radio

(5) A ship that is required to have an MF/HF radio must keep a continuous radio watch on the frequencies 2,182 kHz, 4,125 kHz, 6,215 kHz, and 8,291 kHz, 12,290 kHz, and 16,420 kHz.

(6) A GDMSS ship that is required to have an MF/HF radio capable of DSC must keep a continuous radio watch—

(a) on the distress and safety DSC frequencies 2,187.5kHz and 8,414.5kHz; and

(b) on the following distress and safety DSC frequency that, depending on the time of day and geographic position, gives the strongest signal:

(i) 4,207.5 kHz:

(ii) 6,312 kHz:

(iii) 12,577 kHz:

(iv) 16,804.5 kHz.

(7) A non-GDMSS ship that is required to have an MF/HF radio capable of DSC, must keep a continuous distress and safety DSC frequency for radiotelephony that, depending on the time of day and geographic position, gives a strong signal.

GDMSS ships with an RMSS ship earth station

(8) A GDMSS ship that is required to have an RMSS ship earth station must keep a continuous radio watch for satellite shore-to-ship distress alerts.

Appendix 1

Defined maritime VHF coverage area

The following co-ordinates[8] describe the seaward limit of Maritime Operations Centre's VHF coverage—

(a) commencing from an arc radius 41 nm centred on position 34° 28′·2S, 172° 46′·5E (Te Paki), between bearings of 201°(T) and 243°(T) from Te Paki; then

(b) following an arc radius 49 nm centred on position 34° 28′·2S, 173° 46′·5 E (Te Paki) to a bearing of 063°(T) from Te Paki; then

(c) following an arc radius 64 nm centred on position 35° 10′S, 173° 31′E (Maungataniwha) to a bearing of 066°(T) from Maungataniwha; then

(d) following an arc radius 62 nm centred on position 35° 32′·6S, 173° 55′E (Hikurangi) to a bearing of 084°(T) from Hikurangi; then

(e) following an arc radius 56 nm centred on position 36° 20′S, 175° 31′E (Mt Isaacs) to a bearing of 100°(T) from Mt Isaacs; then

(f) following an arc radius 76 nm centred on position 37° 32′·5S, 175° 44′·5E (Te Aroha) to a bearing of 066°(T) from Te Aroha; then

(g) from the latter bearing, an arc radius 51 nm centred on position 37° 33′·7S, 178° 00′·4E (Cape Runaway) to a bearing of 114°(T) from Cape Runaway; then

(h) following an arc radius 56 nm centred on position 38° 34′·4S, 178° 07′·7E (Pukeakura) to a bearing of 185°(T) from Pukeakura; then

(i) following an arc radius 58 nm centred on position 39° 44′·5S, 176° 50′E (Mount Erin) to a bearing of 153°(T) from Mount Erin; then

(j) following an arc radius 35 nm centred on position 39° 44′·5S, 176° 50′E (Mount Erin) to a bearing of 163°(T) from Mount Erin; then

(k) following an arc radius 58 nm centred on position 39° 44′·5S, 176° 50′E (Mount Erin) to a bearing of 174°(T) from Mount Erin; then

(l) thence, an arc radius 65 nm centred on position 41° 19′S, 175° 46′E (Mt Adams) to a bearing of 193°(T) from Mount Adams; then

(m) following an arc radius 75 nm centred on position 42° 12′S, 173° 47′E (Blue Duck) to a bearing of 171°(T) from Blue Duck; then

(n) following an arc radius 50 nm centred on position 43° 43′S, 172° 56′E (Mt Pearce) to a bearing of 080°(T) from Mt Pearce; then

(o) following an arc radius 63 nm centred on position 43° 43′S, 172° 56′E (Mt Pearce) to a bearing of 187°(T) from Mt Pearce; then

(p) following an arc radius 78 nm centred on position 44° 39′S, 170° 57′E (Mt Studholme) to a bearing of 137°(T) from Mt Studholme; then

[8] The local environment may cause variations in computer predicted coverage, and terrain shielding may occur close inshore in certain areas.

(q) following an arc radius 70 nm centred on position 45° 49′S, 170° 33′E (Mt Cargill) to a bearing of 210°(T) from Mt Cargill; then

(r) following an arc radius 60 nm centred on position 46° 05′·5S, 168° 42′·3E (Hedgehope) to a bearing of 156°(T) from Hedgehope; then

(s) following an arc radius 58 nm centred on position 46° 51′·7S, 167° 52′·9E (Mt Rakeahua) to a bearing of 246°(T) from Rakeahua; then

(t) following an arc radius 70 nm centred on position 46° 07′·6S, 166° 49′·2E (Wednesday Peak) to a bearing of 314°(T) from Wednesday Peak; then

(u) following an arc radius 76 nm centred on position 44° 53′·2S, 167° 19′E (Mt Elder) to a bearing of 028°(T) from Mt Elder; then

(v) following an arc radius 70 nm centred on position 43° 35′·5S, 169° 45′·7E (Karangarua) to a bearing of 006°(T) from Karangarua; then

(w) following an arc radius 63 nm centred on position 42° 24′S, 171° 21′E (Paparoa) to a bearing of 289°(T) from Paparoa; then

(x) following an arc radius 80 nm centred on position 41° 47′S, 171° 44′E (Rochfort) to a bearing of 344°(T) from Rochfort; then

(y) following an arc radius 63 nm centred on position 40° 38′S, 172° 38′E (Mt Burnett) to a bearing of 015°(T) from Mt Burnett; then

(z) following an arc radius 50 nm centred on position 39° 18′S, 173° 59′E (Kahui Trig) to a bearing of 338°(T) from Kahui Trig; then

(aa) following an arc radius 86 nm centred on position 39° 17′·6S, 174° 17′·6E (Mt Egmont) to a bearing of 352°(T) from Mt Egmont; then

(bb) following an arc radius 83 nm centred on position 37° 32′·5S, 175° 44′·5E (Te Aroha) to a bearing of 267°(T) from Te Aroha; then

(cc) following an arc radius 48 nm centred on position 36° 56′S, 174° 34′E (Waiatarua) to a bearing of 278°(T) from Waiatarua; then

(dd) following an arc radius 36 nm centred on position 36° 56′S, 174° 34′E (Waiatarua) to a bearing of 304°(T) from Waiatarua; then

(ee) following an arc radius 63 nm centred on position 35° 32′·6S, 173° 55′E (Hikurangi) to a bearing of 194°(T) from Hikurangi; then

(ff) following an arc radius 50 nm centred on position 35° 32′·6S, 173° 55′E (Hikurangi) to a bearing of 247°(T) from Hikurangi; then

(gg) following an arc radius 51 nm centred on position 35° 10′S, 173° 31′E (Maungataniwha) to a bearing of 201°(T) from position 34° 28′·2S, 173° 46′·5E (Te Paki).

Appendix 2

Codes of practice and official standards

AS/NZS means joint Australian and New Zealand Standard, in the following:

AS/NZS 4280.1: 2022 Global maritime distress and safety system (GMDSS) - Part 2: Cospas-Sarsat EPIRB - Emergency position indicating radio beacon operating on 406MHz - Operational and performance requirements, methods of testing and required test results

AS/NZS 4280.2: 2023 Global maritime distress and safety system (GMDSS), Part 2: 406MHz Satellite Personal Locator Beacons (PLBs)

IMO means International Maritime Organization in the following:

IMO Publications Model Course 1.25: General operator's certificate for the global maritime distress and safety system

MSC means the Maritime Safety Committee of the IMO in the following:

MSC.1/Circ. 1040/Rev.2 Guidelines on annual testing of emergency position-indicating radio beacons (EPIRBs)

MSC.1/Circ.1252 Guidelines on annual testing of the automatic identification system (AIS)

MSC.508(105): Performance standards for the reception of maritime safety information and search and rescue related information by MF (NAVTEX) and HF

MSC.512(105): Performance standards for shipborne MF and MF/HF radio installations capable of voice communication, digital selective calling and reception of maritime safety information and search and rescue related information

SOLAS means *International Convention for the Safety of Life at Sea, 1974* in the following:

regulation 14 of Chapter IV of SOLAS