

# DEPARTMENT OF TRANSPORT

No. R. 506

GG 23346 (RG 7336)

26 April 2002

MERCHANT SHIPPING ACT, 1951 (ACT No. 57 OF 1951)

## MERCHANT SHIPPING (RADIO INSTALLATIONS) REGULATIONS, 2002\*

The Minister of Transport has, under section 356 of the Merchant Shipping Act, 1951 (Act No. 57 of 1951), made the regulations in the Schedule.

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*Regulation  
No.*

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**PART I**  
**GENERAL**

**Title and commencement**

1. These regulations are called the Merchant Shipping (Radio Installations) Regulations, 2002, and come into operation on 1 June 2002.

**Interpretation**

2. (1) In these regulations any word or expression given a meaning in the Act has the meaning so given and, unless the context otherwise indicates—

**"area A1 ship"** means a ship to which Part 2 applies making a voyage in sea area A1 only;

**"area A2 ship"** means a ship to which Part 2 applies making a voyage in sea area A2 only, or in sea areas A1 and A2;

**"area A3 ship"** means a ship to which Part 2 applies making a voyage in sea area A3 only, or in sea area A3 and also in sea area A1 or A2 or both those sea areas;

**"area A4 ship"** means a ship to which Part 2 applies making a voyage in sea area A4 only, or in sea area A4 and also in one or more of sea areas A1, A2 and A3;

**"bridge-to-bridge communications"** means safety communications between ships from the position from which such ships are normally navigated;

**"cargo ship"** means any ship that is not—

- (a) a passenger ship;
- (b) a fishing vessel; or
- (c) a pleasure vessel;

**"connected"** means electrically connected;

**"conning position"** means the place on the bridge with a commanding view of the ship and its position used by navigators when commanding, manoeuvring and controlling the ship;

**"constructed"**, in relation to a ship, means having its keel laid or being at a similar stage of construction;

**"continuous watch"** means a radio watch that is not interrupted other than for brief intervals when the ship's receiving capability is impaired or blocked by its own communications or when the watchkeeping facilities are under periodical maintenance or checks;

**"contravene"**, in relation to a provision of these regulations, includes failing or refusing to comply with that provision;

**"Convention ship"** means—

- (a) a foreign-going passenger ship; or

(b) a foreign-going cargo ship of 300 tons or more;

**"Convention State"** means any State, other than the Republic, that is a State party to the Safety Convention;

**"COSPAS-SARSAT satellite service"** means a satellite aided search and rescue system designed to locate distress beacons transmitting in the 406 MHz band;

[Definition of "COSPAS-SARSAT satellite service" substituted by reg 3(a) GNR457/GG36623/2Jul2013]

**"direct-printing telegraphy"** means an automated telegraphy technique that complies with the relevant recommendations specified by the Authority in a marine notice;

**"DSC"** means Digital Selective Calling, being a technique using digital codes that enables a radio station to establish contact with, and transfer information to, another station or group of stations, and complying with the relevant recommendations specified by the Authority in a marine notice;

**"DSC watch"** means listening for an audible alarm from a ship's DSC equipment on VHF (channel 70), MF (2187.5 kHz) or HF (8414.5 kHz), and on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz or 16804.5 kHz;

**"enhanced group calling (EGC)"** means a system providing a simple and automated means of receiving marine safety information via satellite on board ships;

[Definition of "enhanced group calling (EGC)" substituted by reg 3(b) GNR457/GG36623/2Jul2013]

**"EPIRB"** means an emergency position-indicating radio beacon operating in a mobile service the emissions of which are intended to facilitate search and rescue operations;

**"existing ship"** means a ship that is not a new ship;

**"fishing vessel"** means any of the following classes of vessels used for catching fish or other living resources of the sea for financial gain or reward:

*Class A*—fishing vessels of 45 metres or more in length making voyages outside waters under South African jurisdiction;

*Class B*—fishing vessels of less than 45 metres in length making voyages outside waters under South African jurisdiction;

*Class C*—fishing vessels, other than of class D, making voyages exclusively within waters under South African jurisdiction;

*Class D*—fishing vessels making voyages exclusively within waters under South African jurisdiction, not more than 40 nautical miles from shore;

**"from shore"** means seaward from the low-water line as defined in section 1 of the Maritime Zones Act, 1998 (Act No. 15 of 1998);

**"general radio communications"** means operational and public correspondence traffic, other than distress, urgency and safety messages, conducted by radio;

**"GMDSS"** means the Global Maritime Distress and Safety System;

**"GMDSS radio operator certificates"** includes

(a) GMDSS First-class Radio Electronic Certificate

(b) GMDSS Second-class Radio Electronic Certificate,

(c) GMDSS General Operator's Certificate

which are respectively issued in accordance with the STCW Convention as amended and ITU Radio Regulations;

[Definition of "GMDSS general operator's certificate" and "GMDSS restricted operator's certificate" substituted by reg 3(c) GNR457/GG36623/Jul2013]

**"gross tonnage"** means the measure of the overall size of a ship determined in accordance with the provisions of the present convention (International Convention on Tonnage Measurement of Ships);

[Definition of "gross tonnage" inserted by reg 3(d) GNR457/GG36623/Jul2013]

**"HF"** means the frequency spectrum between 3 000 kHz and 30 MHz;

**"IMO"** means the International Maritime Organization;

**"INMARSAT"** means the Organization established by the Convention on the International Maritime Satellite Organization adopted on 3 September 1976;

**"INMARSAT enhanced group calling system"** means the SafetyNET service by which INMARSAT distributes meteorological, navigational and search and rescue messages to ships provided with an enhanced group calling system receiver;

**"INMARSAT geostationary satellite service"** means the mobile satellite service provided by INMARSAT through its geostationary satellites;

**"INMARSAT ship earth station"** means a mobile earth station in the maritime mobile-satellite service located on board a ship that is not permanently moored;

**"international NAVTEX service"** means the coordinated broadcast and automatic reception on 518 kHz, 490 kHz or 4209 kHz of maritime safety information by means of narrow-band direct-printing telegraphy;

[Definition of "international NAVTEX service" substituted by reg 3(e) GNR457/GG36623/Jul2013]

**"ITU Radio Regulations"** means the regulations annexed to, or regarded as being annexed to, the most recent International Telecommunication Convention in force at any time;

**"length"** means—

- (a) in the case of a registered ship, the length shown in the certificate of registry;
- (b) in the case of a ship licensed in terms of section 68 of the Act, the length shown in the licence; and
- (c) in the case of a ship that is not registered or licensed, the horizontal distance measured between perpendiculars erected at the extreme ends of the outside of the hull;

**"locating"** means the finding of ships, aircraft, units or persons in distress;

**"maintenance"** means any activity intended to keep a radio installation in efficient working condition, and includes tests, measurements, replacements, adjustments and repairs;

**"major conversion"**, in relation to an existing ship, means a conversion—

- (a) that substantially alters the dimensions or carrying capacity of the ship;
- (b) that changes the type of the ship;

- (c) the intent of which, in the opinion of the Authority, is substantially to prolong the life of the ship;
- (d) that otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of these regulations not applicable to it as an existing ship;

**"maritime safety information"** means navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages broadcast to ships;

**"MF"** means the frequency spectrum between 300 kHz and 3000 kHz;

**"MF coast station"** means a radio communication service located on the coast offering services in the medium frequency band (300–3000 kHz);

**"mobile satellite service"** means a radio communication service between—

- (a) mobile earth stations and one or more space stations, or between space stations used by this service; or
  - (b) mobile earth stations by means of one or more space stations,
- and this service may include feeder links necessary for its operation;

**"new ship"** means—

- (a) a ship constructed or undergoing major conversion after the commencement of these regulations; or
- (b) any ship that is registered or licensed anew in the Republic after the commencement of these regulations;

**"non-Convention ship"** means—

- (a) a passenger ship that is not foreign-going;
- (b) a cargo ship of 300 tons or more that is not foreign-going;
- (c) a cargo ship of less than 300 tons;
- (d) a fishing vessel; or
- (e) a pleasure vessel;

**"operating position"**, in relation to any radio equipment, means the position normally occupied by a person when operating that equipment;

**"pleasure vessel"** means a ship that is used solely for sport or recreation;

**"radar transponder"** means a survival craft radar transponder for search and rescue between ships or aircraft and survival craft;

**"radio communication"** means telecommunication by means of radio waves;

**"radio communication service"** means a service as defined in the ITU Radio Regulations involving the transmission, emission or reception of radio waves for specific telecommunication purposes;

**"radio installation"** means any radio installation provided on board a ship in compliance with these regulations, including its associated antennas, inter-connecting circuits and, where appropriate, sources of energy;

**"radio log"** means the diary of the radio communication service;

**"radiotelephone operator"** means a person holding a valid appropriate certificate issued in accordance with the ITU Radio Regulations;

**"Radio operator certificates"** includes

- (a) Long Range Certificate
- (b) Short Range Certificates

which are respectively issued in accordance with the ITU Regulations;

[Definition of "Radio operator certificates" inserted by reg 3(f) GNR457/GG36623/Jul2013]

**"radiotelephone ship"** means a ship provided with a radiotelephone installation in accordance with Part 3;

**"radiotelephone installation"** means the equipment operating in the frequency band 1605–27500 kHz;

**"SART"** means a Search and Rescue Transponder capable of operating in the 9 GHz radar frequency band;

[Definition of "SART" inserted by reg 3(h) GNR457/GG36623/Jul2013]

**"radiotelephone station"** means the place on board a ship where a radiotelephone installation is located;

**"satellite EPIRB"** means an EPIRB that is in the mobile-satellite service;

**"sea area A1"** means an area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available;

**"sea area A2"** means an area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available;

**"sea area A3"** means an area, excluding sea areas A1 and A2, within the coverage of an INMARSAT geostationary satellite in which continuous alerting is available;

**"sea area A4"** means an area outside sea areas A1, A2 and A3;

**"service"**, in relation to a reference to any particular type of radio communication service, means a reference to that service as defined in the ITU Radio Regulations;

**"ship station"** means a mobile station, other than a survival craft station, in the maritime mobile service located on board a ship that is not permanently moored;

**"silence period"** ...

[Definition of "silence period" deleted by reg 3(g) GNR457/GG36623/Jul2013]

**"similar stage of construction"** means the stage at which—

- (a) construction identifiable with a specific ship begins; and
- (b) assembly of the ship has commenced and comprises at least 50 tons or one per cent of the estimated mass of all structural material, whichever is less;

**"survival craft"** means a vessel that is capable of sustaining the lives of persons in distress after abandoning ship;

**"survival craft station"** means a mobile station in the maritime mobile service intended solely for survival purposes and located on any lifeboat, life-raft or other survival equipment;

**"the Act"** means the Merchant Shipping Act, 1951 (Act No. 57 of 1951);

**"ton"**, in relation to a ship, means its gross tonnage calculated in accordance with the tonnage measurement regulations contained in Annex 1 to the Tonnage Convention;

**"VHF"** means the frequency spectrum between 30 MHz and 300 MHz;

**"VHF coast station"** means a radio communication service located on the coast offering services in the very high frequency band (30–300 MHz);

**"VHF radiotelephone installation"** means the equipment operating in the frequency band 156.025–162.025 MHz;

**"VHF radiotelephone station"** means the place on board a ship where a VHF radiotelephone installation is located;

**"waters under South African jurisdiction"** means waters comprising—

- (a) the internal and territorial waters of the Republic; and
- (b) the exclusive economic zone of the Republic.

(2) For the purposes of these regulations, a ship is to be taken to be making a voyage or to be at sea at any time when it is not securely ashore or moored in a safe berth.

### **Application**

3. (1) Subject to this regulation, these regulations apply to—

- (a) ships that are registered or licensed in the Republic wherever they may be; and
- (b) other ships while they are in the Republic or its territorial waters.

(2) Regulations 5, 6 and Part 2 apply to Convention ships and class A fishing vessels.

(3) Regulations 5, 6 and Part 3 apply to non-Convention ships, other than class A fishing vessels.

(4) Parts 4 and 5 apply both to Convention ships and to non-Convention ships.

(5) A provision of these regulations does not apply to a ship that is registered or licensed in the Republic in the waters of a country other than the Republic where the provision is inconsistent with a law of that country which, by its terms, applies to the ship when in the waters of that country.

(6) These regulations do not apply to—

- (a) ships of less than 25 tons; or
- (b) pleasure vessels of less than 100 tons.

### **Equivalentents and exemptions**

4. (1) Where these regulations require that a particular fitting, material, appliance, apparatus, item of equipment, or type thereof, must be fitted or carried in a ship, or that any particular provision must be made, or any procedure or arrangement must be complied with, the Authority may allow any other fitting, material, appliance, apparatus,



item of equipment, or type thereof, to be fitted or carried, or any other provision, procedure or arrangement to be made in that ship if it is satisfied by trial thereof or otherwise that such other fitting, material, appliance, apparatus, item of equipment, or type thereof, or that any particular provision, procedure or arrangement is at least as effective as that required by these regulations.

(2) For the purposes of these regulations, the results of a verification or test are to be accepted if the verification or test was carried out—

- (a) in accordance with these regulations or with a standard, code of practice, specification or technical description of a Convention State offering equivalent levels of safety, suitability and fitness for the purpose; and
- (b) by a person in a Convention State offering suitable and satisfactory guarantees of technical and professional competence and independence.

(3) The Authority may exempt any individual ship or class of ships from any of the provisions of Part 3 or 4, on such terms (if any) as it may specify, and may, after reasonable notice, alter or cancel any such exemption.

### **Ships and persons in distress**

5. Nothing in these regulations is to be taken to prevent any ship, survival craft or persons in distress from using any means at their disposal to attract attention, make known their position or obtain help.

### **Performance standards**

6. (1) Subject to subregulation (2), radio equipment required by these regulations must—

- (a) in the case of Convention ships, comply with performance standards not inferior to the relevant performance standards adopted by the IMO and specified by the Authority in a marine notice as having been so adopted; and
- (b) in the case of non-Convention ships, comply with such performance standards as may be specified by the Authority in a marine notice; and
- (c) in either case, be of a type approved by the Independent Communications Authority of South Africa.

(2) In respect of a ship entitled to fly the flag of a Convention State, subregulation (1)(c) does not apply to equipment of a type approved by or on behalf of the competent maritime authority of that State.

(3) Every approval given pursuant to this regulation—

- (a) must be given in writing;
- (b) must specify the date on which it takes effect and the conditions (if any) on which it is given; and
- (c) may, after reasonable notice, be altered or cancelled.

## PART 2

### SOLAS REQUIREMENTS

[Heading substituted by reg 4 GNR457/GG36623/Jul2013]

#### Functional requirements

7. Every ship to which this Part applies, while at sea, must be capable of—
- (a) transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service, other than by the means provided for in regulation 11(1)(a) and paragraph (d)(iii) of ALTERNATIVE A in regulation 13(1);
  - (b) receiving shore-to-ship distress alerts;
  - (c) transmitting and receiving ship-to-ship distress alerts;
  - (d) transmitting and receiving search and rescue co-ordinating communications;
  - (e) transmitting and receiving on-scene communications;
  - (f) transmitting and, as required by regulation V/12(g) and (h) of the Safety Convention, receiving signals for locating;
  - (g) transmitting and receiving maritime safety information;
  - (h) transmitting and receiving general radio communications to and from shore-based radio systems or networks; and
  - (i) transmitting and receiving bridge-to-bridge communications.

#### Installation, location and control of radio equipment

8. (1) Every radio installation required by this Part must—
- (a) 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;
  - (b) be so located as to ensure the greatest possible degree of safety and operational availability;
  - (c) be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;
  - (d) be provided with reliable, permanently arranged electrical lighting, independent of both the main and emergency sources of electrical power, for the adequate illumination of the radio controls for operating the radio installation; and
  - (e) be clearly marked with the call sign, the ship station identity and such other codes as are applicable for the use of the radio installation.
- (2) Control of the VHF radiotelephone channels required for navigational safety must be immediately available on the navigation bridge convenient to the conning position and, where necessary, facilities such as portable two-way VHF radio equipment must be available to permit radio communications from the wings of the navigation bridge.

(3) Each radio transmitter and receiver fitted in accordance with this Part must be provided with a suitable antenna or antennas, so constructed and sited to enable each transmitter and receiver to perform effectively its intended communication function.

(4) (a) Where a radio installation is provided with a wire transmitting antenna—

- (i) the antenna must be provided with suitable insulators;
- (ii) if the antenna is suspended between supports liable to whipping, it must be protected against breakage; and
- (iii) a spare wire antenna, completely assembled for rapid replacement, must be provided.

(b) Where MF or MF/HF radio installations are provided with a transmitting antenna that is not a supported wire antenna, a spare antenna of similar electrical characteristics must be provided.

(5) Where in respect of any ship to which this Part applies it is impracticable to erect efficient and properly installed antennas for broadcast receivers that do not interfere with the efficiency of the ship's radio installation, the ship must be provided with a communal antenna system for broadcast receivers.

### **Installation of distress panel**

**9.** (1) In every passenger ship to which this Part applies a distress panel must be installed at the conning position.

(2) The distress panel must—

- (a) contain either—
  - (i) one single button that, when pressed, initiates a distress alert using all radio communication installations required on board for that purpose; or
  - (ii) one button for each individual installation;
- (b) clearly and visually indicate whenever any button on the distress panel has been pressed; and
- (c) provide visual and aural indication of any distress alert or alerts received on board and indicate through which radio communication service the distress alert or alerts have been received

(3) Means must be provided to prevent inadvertent activation of the button or buttons on the distress panel.

(4) If the satellite EPIRB required by regulation 10(1)(f) is used as the secondary means of initiating a distress alert and is not capable of remote activation, an additional satellite EPIRB must be installed in the wheelhouse near the conning position.

(5) Information about the ship's position must continuously and automatically be provided to all relevant radio equipment to be included in the initial distress alert when the button or buttons on the distress panel is pressed.

### **Radio equipment to be provided for all sea areas**

**10.** (1) Every ship to which this Part applies must be provided with—

- (a) a VHF radio installation capable of transmitting and receiving—
  - (i) DSC on the frequency 156.525 MHz (channel 70), whereby it must be possible to initiate the transmission of distress alerts on channel 70 from the position from which the ship is normally navigated; and
  - (ii) radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13) and 156.800 MHz (channel 16);
- (b) a radio installation capable of maintaining a continuous DSC watch on VHF channel 70, which may be separate from, or combined with, that required by paragraph (a)(i);
- (c) a radar transponder capable of operating in the 9 GHz band, which—
  - (i) must be stowed so as to enable rapid placement in a survival craft; and
  - (ii) may be one of those required by regulation 39 for a survival craft;
- (d) if the ship is at sea in an area in which an international NAVTEX service is provided, a receiver capable of receiving international NAVTEX service broadcasts;
- (e) if the ship is at sea in an area of INMARSAT coverage but in which an international NAVTEX service is not provided, a radio facility for the reception of maritime safety information by the INMARSAT enhanced group calling system, unless the ship is at sea exclusively in areas in which an HF direct-printing telegraphy maritime safety information service is provided and is fitted with equipment capable of receiving that service;
- (f) subject to regulation 11(3), a satellite EPIRB complying with the requirements of Annex 1.

(2) Every passenger ship to which this Part applies must be provided with means for two-way on-scene radio communications for search and rescue purposes using the aeronautical frequencies 121.5 MHz and 123.1 MHz from the position from which the ship is normally navigated.

#### **Additional radio equipment to be provided for area A1 ships**

**11.** (1) In addition to meeting the requirements of regulation 10, every area A1 ship must be provided with a radio installation capable of initiating the transmission of ship-to-shore distress alerts from the position from which the ship is normally navigated, operating either—

- (a) on VHF using DSC, which requirement may be met by the EPIRB specified in subregulation (3), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated; or
- (b) through the COSPAS-SARSAT satellite service in the 406 MHz band, which requirement may be met by the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated; or
- (c) if the ship is at sea within coverage of MF coast stations equipped with DSC, on MF using DSC; or
- (d) on HF using DSC; or

- (e) through the INMARSAT geostationary satellite service, which requirement may be met by—
  - (i) an INMARSAT ship earth station; or
  - (ii) the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated.
- (2) The VHF radio installation required by regulation 10(1)(a) must also be capable of transmitting and receiving general radio communications using radiotelephony.
- (3) An area A1 ship may, instead of being provided with the satellite EPIRB required by regulation 10(1)(f), be provided with a VHF EPIRB that is—
  - (a) capable of transmitting a distress alert using DSC on VHF channel 70 and providing for locating by means of a radar transponder operating in the 9 GHz band;
  - (b) installed in an easily accessible position;
  - (c) ready to be manually released and capable of being carried by one person into a survival craft;
  - (d) capable of floating free if the ship sinks;
  - (e) capable of being activated manually; and
  - (f) automatically activated when afloat.

**Additional radio equipment to be provided for area A2 ships**

**12.** (1) In addition to meeting the requirements of regulation 10, every area A2 ship must be provided with—

- (a) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies—
  - (i) 2187.5 kHz using DSC; and
  - (ii) 2182 kHz using radiotelephony;
- (b) a radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz, which may be separate from, or combined with, that required by paragraph (a)(i); and
- (c) means of initiating the transmission of ship-to-shore distress alerts by a radio communication service, other than MF, operating either—
  - (i) through the COSPAS-SARSAT satellite service in the 406 MHz band, which requirement may be met by the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated; or
  - (ii) on HF using DSC; or
  - (iii) through the INMARSAT geostationary satellite service, which requirement may be met by—
    - (aa) the equipment specified in subregulation (3)(b); or

(bb) the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated.

(2) Means must be provided to initiate the transmission of distress alerts by the radio installations specified in subregulation (1)(a) and (c) from the position from which the ship is normally navigated.

(3) An area A2 ship must, in addition, be capable of transmitting and receiving general radio communications using radiotelephony or direct-printing telegraphy by either—

- (a) a radio installation operating on working frequencies in the bands between 1605 kHz and 4000 kHz or between 4000 kHz and 27500 kHz, which requirement may be met by the addition of this capability in the equipment required by subregulation (1)(a); or
- (b) an INMARSAT ship earth station.

### **Additional radio equipment to be provided for area A3 ships**

**13.** (1) In addition to meeting the requirements of regulation 10, every area A3 ship must be provided with either the following equipment:

#### **ALTERNATIVE A**

- (a) an INMARSAT ship earth station capable of—
  - (i) transmitting and receiving distress and safety communications using direct-printing telegraphy;
  - (ii) initiating and receiving distress priority calls;
  - (iii) maintaining watch for shore-to-ship distress alerts, including those transmitted to specifically defined geographical areas; and
  - (iv) transmitting and receiving general radio communications, using either radiotelephony or direct-printing telegraphy; and
- (b) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies—
  - (i) 2187.5 kHz using DSC; and
  - (ii) 2182 kHz using radiotelephony;
- (c) a radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz, which may be separate from, or combined with, that required by paragraph (b)(i) of this ALTERNATIVE; and
- (d) means of initiating the transmission of ship-to-shore distress alerts by a radio communication service operating either—
  - (i) through the COSPAS-SARSAT satellite service in the 406 MHz band, which requirement may be met by the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated; or
  - (ii) on HF using DSC; or

- (iii) through the INMARSAT geostationary satellite service, either by an additional ship earth station, or by the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated,

or the following equipment:

**ALTERNATIVE B**

- (a) an MF/HF radio installation capable of transmitting and receiving, for distress and safety purposes, on all distress and safety frequencies in the bands between 1605 kHz and 4000 kHz and between 4000 kHz and 27500 kHz using—
  - (i) DSC;
  - (ii) radiotelephony; and
  - (iii) direct-printing telegraphy; and
- (b) equipment capable of maintaining DSC watch on the frequencies 2187.5 kHz, 8414.5 kHz and on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz or 16804.5 kHz, which equipment must be such that it is possible at any time to select any of these DSC distress and safety frequencies, and which may be separate from, or combined with, that required by paragraph (a) of this ALTERNATIVE; and
- (c) means of initiating the transmission of ship-to-shore distress alerts by a radio communication service, other than HF, operating either—
  - (i) through the COSPAS-SARSAT satellite service in the 406 MHz band, which requirement may be met by the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated; or
  - (ii) through the INMARSAT geostationary satellite service, which requirement may be met by—
    - (aa) an INMARSAT ship earth station; or
    - (bb) the satellite EPIRB required by regulation 10(1)(f), if it is installed close to, or capable of remote activation from, the position from which the ship is normally navigated; and
- (d) an MF/HF radio installation capable of transmitting and receiving general radio communications on working frequencies in the bands between 1605 kHz and 4000 kHz and between 4000 kHz and 27500 kHz, using radiotelephony or direct-printing telegraphy, which requirement may be met by the addition of this capability in the equipment required by paragraph (a) of this ALTERNATIVE.

(2) Means must be provided to initiate the transmission of distress alerts by the radio installations specified in paragraphs (a), (b) and (d) of ALTERNATIVE A or paragraphs (a) and (c) of ALTERNATIVE B in subregulation (1) from the position from which the ship is normally navigated.

**Additional radio equipment to be provided for area A4 ships**

14. In addition to meeting the requirements of regulation 10, every area A4 ship must—

- (a) be provided with the radio installations and equipment specified in paragraphs (a), (b), (c)(i) and (d) of ALTERNATIVE B in regulation 13(1); and
- (b) comply with the requirements of regulation 13(2).

### **Radio watches**

**15.** (1) Every ship to which this Part applies, while at sea, must maintain a continuous watch—

- (a) on VHF DSC channel 70, if the ship, in accordance with regulation 10(1)(b), is fitted with a VHF radio installation;
- (b) on the distress and safety DSC frequency 2187.5 kHz, if the ship, in accordance with regulation 12(1)(b) or paragraph (c) of ALTERNATIVE A in regulation 13(1), is fitted with an MF radio installation;
- (c) on the distress and safety DSC frequencies 2187.5 kHz and 8414.5 kHz and on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz or 16804.5 kHz, appropriate to the time of day and the geographical position of the ship, if the ship, in accordance with paragraph (b) of ALTERNATIVE B in regulation 13(1) or in accordance with regulation 14, is fitted with an MF/HF radio installation; this watch may be kept by means of a scanning receiver;
- (d) for satellite shore-to-ship distress alerts, if the ship, in accordance with paragraph (a) of ALTERNATIVE A in regulation 13(1), is fitted with an INMARSAT ship earth station.

(2) Every ship to which this Part applies, while at sea, must maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the ship is being navigated.

(3) From the commencement of these regulations until 1 February 2005 every ship to which this Part applies, while at sea, must maintain, when practicable, a continuous watch on VHF channel 16; this watch must be kept at the position from which the ship is normally navigated.

### **Sources of energy**

**16.** (1) There must be available at all times while a ship to which this Part applies is at sea a main source of energy sufficient to operate the radio installations required by this Part and to charge any batteries used as part of a reserve source or sources of energy for those radio installations.

(2) A reserve source or sources of energy must be provided on every ship to which this Part applies, to supply radio installations, for the purpose of conducting distress and safety radio communications, in the event of failure of the ship's main and emergency sources of electrical power.

(3) Subject to subregulations (4) to (12), the reserve source or sources of energy must be capable of simultaneously operating the VHF radio installation required by regulation 10(1)(a) and, as appropriate for the sea area or sea areas for which the ship is equipped, either—

- (a) the MF radio installation required by regulation 12(1)(a);



- (b) the MF/HF radio installation required by paragraph (a) of ALTERNATIVE B in regulation 13(1) or by regulation 14; or
- (c) the INMARSAT ship earth station required by paragraph (a) of ALTERNATIVE A in regulation 13(1),

and the additional loads mentioned in subregulations (7), (8) and (12), for the minimum period specified in subregulation (4).

(4) For the purposes of subregulation (3), the minimum period is—

- (a) in the case of ships constructed on or after 1 February 1995, one hour;
- (b) in the case of ships constructed before 1 February 1995—
  - (i) one hour, if the emergency source of electrical power complies with the relevant provisions of regulation II-1/42 or 43 of the Safety Convention, including the supply of such energy to the radio installations; or
  - (ii) six hours, if the emergency source of electrical power does not so comply, or no emergency source of electrical power is provided.

(5) The reserve source or sources of energy need not be capable of supplying independent HF and MF radio installations simultaneously.

(6) The reserve source or sources of energy must be independent of the ship's propelling power and main electrical system.

(7) Where, in addition to the VHF radio installation, two or more of the other radio installations referred to in subregulation (2) can be connected to the reserve source or sources of energy, such source or sources must be capable of simultaneously supplying, for the minimum period specified, as appropriate, in subregulation (4)(a) or (b), the VHF radio installation and either—

- (a) all other radio installations that can be connected to the reserve source or sources of energy at the same time; or
- (b) if only one of the other radio installations can be connected to the reserve source or sources of energy at the same time as the VHF radio installation, whichever of the other radio installations will consume the most power.

(8) The reserve source or sources of energy may be used to supply the electrical lighting required by regulation 8(1)(d).

(9) Where a reserve source of energy consists of one or more rechargeable accumulator batteries—

- (a) a means of automatically charging each battery must be provided, that is capable of recharging them to minimum capacity requirements within 10 hours; and
- (b) the capacity of each battery must be checked at intervals not exceeding 12 months when the ship is not at sea.

(10) The siting and installation of a reserve source of energy consisting of one or more accumulator batteries must be such as to ensure—

- (a) the highest degree of service;
- (b) a reasonable lifetime;
- (c) reasonable safety;

- (d) that battery temperatures remain within the manufacturer's specifications, whether under charge or idle; and
- (e) that, when fully charged, the one or more batteries provide a reserve source of energy for at least the minimum period specified in subregulation (4), under all weather conditions.

(11) For the purpose of calculating the required capacity of the reserve source of energy, the total current used in calculations is to be equal to the sum of the total current consumption of all the radio installations that simultaneously can be connected to the source of energy, calculated by adding—

- (a) the current consumption of the VHF receiver;
- (b) one fifth of the current consumption of the VHF transmitter;
- (c) the current consumption of an MF or MF/HF receiver and of the transmitter when it is in such a condition that operation of the "press to transmit" switch will make it ready for immediate transmission;
- (d) one third of the current that may be drawn by an MF or MF/HF transmitter for speech transmission on the frequency at which the current consumption of the transmitter is at a maximum;
- (e) the current consumption of an INMARSAT ship earth station when it is receiving transmissions;
- (f) one quarter of the current that may be drawn by an INMARSAT ship earth station when it is transmitting in the mode at which the current consumption is at a maximum; and
- (g) the total current consumption of all additional loads to which the reserve source may supply energy in times of distress or emergency.

(12) If an uninterrupted input of information from the ship's navigational or other equipment to a radio installation required by this Part, including the navigation receiver referred to in regulation 20, is needed to ensure its proper performance, means must be provided to ensure the continuous input of such information in the event of failure of the ship's main or emergency source of electrical power.

### **Serviceability and maintenance requirements**

17. (1) Radio equipment required by this Part must be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.

(2) Where appropriate, the equipment must be so constructed and installed that it is readily accessible for inspection and on-board maintenance purposes.

(3) Adequate information, at least in the English language, must be provided on board the ship to enable the equipment to be properly operated and maintained.

(4) Adequate tools and spare parts must be provided on board the ship to enable the equipment to be maintained. Spare parts must be appropriately labelled and must be stowed so as to be readily accessible.

(5) The radio equipment must be maintained to provide the availability of the functional requirements specified in regulation 7 and to meet the performance standards recommended by the IMO for such equipment, as specified pursuant to regulation 6(1)(a).

(6) While a ship is at sea, the availability of the functional requirements specified in regulation 7 must be ensured in accordance with such requirements as the Authority may specify in a marine notice, taking into account the recommendations of the IMO.

(7) (a) The master of every ship to which this Part applies, being a ship that is registered or licensed in the Republic, must designate a person (in this subregulation called the designated person), being a person qualified as described in regulation 18(2), who is to have the function of carrying out, while the ship is at sea, the appropriate tests and checks specified in Annex 2.

(b) If any of the radio installations required by this Part is not in working order, the designated person must inform the master and record details of the deficiencies in the GMDSS radio log required by regulation 19.

### **Radio operators**

**18.** (1) Subject to section 73(4) of the Act, every ship to which this Part applies must carry the number of radio operators required by regulation 16 of the Merchant Shipping (Safe Manning) Regulations, 1999, as amended, each of whom must be a person who is qualified for distress and safety radio communications purposes, as specified in subregulation (2).

[Subreg (1) substituted by reg 5(a) GNR457/GG36623/Jul2013]

(2) A person is qualified for the purposes of subregulation (1) where—

(a) in the case of an area A1 ship, he or she holds a GMDSS general operator's certificate issued in accordance with Article 47 of the ITU Radio Regulations;

[Para (a) substituted by reg 5(b) GNR457/GG36623/Jul2013]

(b) in the case of an area A2, area A3 or area A4 ship, he or she holds a GMDSS general operator's certificate issued in accordance with Article 47 of the ITU Radio Regulations.

[Para (b) substituted by reg 5(c) GNR457/GG36623/Jul2013]

(3) The master of every passenger ship to which this Part applies must designate at least one such person as mentioned in subregulation (1) to perform only radio communications duties during distress incidents.

(4) The master of every ship to which this Part applies, other than a passenger ship, must designate one such person as mentioned in subregulation (1) to have primary responsibility for radio communications during distress incidents.

### **Radio records**

**19.** (1) There must be kept in respect of every ship to which this Part applies a record (in this regulation called the GMDSS radio log) of the matters specified in Part 1 of Annex 3.

(2) The master must inspect and sign each day's entries in the GMDSS radio log.

(3) The master must, on demand, produce the GMDSS radio log for inspection by a surveyor or a proper officer.

(4) The GMDSS radio log forms part of the ship's official logbook, but is to be kept separate from the official logbook, and, for the purposes of section 187 of the Act, is deemed to be a document relating to the navigation of the ship.

### **Position-updating**

**20.** If radio equipment required by this Part is capable of automatically providing the ship's position when transmitting a distress alert, the ship's position and the time the ship was at that position must be made available for transmission by the radio equipment—

- (a) from a navigation receiver, if one is fitted; or
- (b) manually, at intervals not exceeding four hours, while the ship is at sea.

### **Exemptions from Part 2**

**21.** (1) The Authority may exempt any ship, on such terms as it may specify, from a provision in regulation 10, 11, 12, 13 or 14.

(2) When considering whether to exempt a ship, the Authority must take into account the effect of such exemption on the ship's ability to maintain proper communication for distress and safety purposes.

(3) An exemption may be granted under subregulation (1) only—

- (a) if the circumstances in relation to safety are such as to render the full application of regulation 10, 11, 12, 13 or 14, as the case may be, unreasonable or unnecessary; or
- (b) in exceptional circumstances, for a single voyage outside the sea area or sea areas for which the ship is equipped.

(4) The Authority may, after reasonable notice, alter or cancel any exemption granted under subregulation (1).

(5) The Authority must, within 30 days after the first day of January in each year, submit to the IMO a report showing all exemptions granted under this regulation during the previous calendar year in respect of ships to which the Safety Convention applies and giving the reasons for granting them.

## **PART 3**

### **NON-SOLAS REQUIREMENTS**

[Heading substituted by reg 6 GNR457/GG36623/Jul2013]

### **Provision of radio equipment**

**22.** (1) Every ship to which this Part applies must be provided with a VHF radiotelephone installation capable of transmitting and receiving—

- (i) DSC on the frequency 156.525 MHz (channel 70), whereby it must be possible to initiate the transmission of distress alerts on channel 70 from the position from which the ship is normally navigated; and

(ii) radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13) and 156.800 MHz (channel 16)

(iii) A radio installation capable of maintaining a DSC watch on VHF channel 70.

[Subreg (1) substituted by reg 7(a) GNR457/GG36623/Jul2013]

(2) Every ship to which this Part applies, being—

- (a) a passenger ship;
- (b) a cargo ship of 100 gross tonnage or more;
- (c) a cargo ship of less than 100 gross tonnage making a voyage more than 40 nautical miles from shore;
- (d) a class B or C fishing vessel; or
- (e) a pleasure vessel of 100 gross tonnage or more,

must be provided with—

(i) an MF/HF radio installation capable of transmitting and receiving, for distress and safety purposes, on all distress and safety frequencies in the bands 1605 kHz and 4000 kHz and between 4000 kHz and 27500 kHz using—

(aa) DSC;

(bb) radiotelephony

(ii) equipment capable of maintaining a DSC watch on the frequencies 2187.5 kHz, 8414.5 kHz and at least one of the distress and safety frequencies 4207.5 kHz, 6312 kHz, 12577 kHz or 16804 kHz;

(iii) a receiver capable of receiving international NAVTEX services broadcast;

(iv) a satellite EPIRB of the kind referred to in regulation10(1)(f).

[Subreg (2) substituted by reg 7(b) GNR457/GG36623/Jul2013]

(3) If radio equipment required by this Part is capable of automatically providing a ship's position when transmitting a distress alert, the ship's position and the time the ship was at that position must be available for transmission by the radio equipment—

- (a) from a navigation receiver, if one is fitted; or
- (b) manually, at intervals not exceeding four hours, while the ship is at sea.

[Subreg (3) substituted by reg 7(c) GNR457/GG36623/Jul2013]

### **Interference with reception and other installations**

**23.** (1) At no time while the ship is at sea is the operation of a radio installation required by this Part to prevent in any way the efficient operation of any other equipment installed on board the ship.

(2) At no time while the ship is—

- (a) at sea; or
- (b) in a port when a radio watch is required by the master,

is the operation of any equipment in the ship to affect the efficient reception of radio signals by means of a radio installation required by this Part.

(3) Where in respect of any ship to which this Part applies it is impracticable to erect efficient and properly installed antennas for broadcast receivers that do not interfere with the efficiency of the ship's radio installation, the ship must be provided with a communal antenna system for broadcast receivers.

### **Charging of batteries**

24. (1) Where batteries are provided as a source of energy for any part of the radio equipment required by this Part, means must be provided on board the ship for charging such batteries from the ship's main source of electrical power. The charging facilities must be adequate to ensure that the batteries can be fully charged within a period of 16 hours: Provided that where more than one battery is provided and each has sufficient capacity to comply with regulation 34(2), the charging facilities must be adequate to ensure that each battery can be fully charged within a period of 16 hours, but not necessarily simultaneously.

(2) Where practicable, the batteries must be fully charged on every occasion immediately before the ship leaves port.

### **Serviceability and maintenance requirements**

25. (1) Radio equipment required by this Part must be in an efficient working condition—

- (a) whenever the ship goes to sea; and
- (b) at all times when the ship is at sea, unless there is a defect in the equipment and maintenance is being carried out or such maintenance is not practicable.

(2) Where any additional equipment, which is not required by this Part, is provided, it must be of such design that any malfunction of any part of that equipment will not adversely affect the operation of the radio equipment required by this Part.

(3) Where appropriate, radio equipment required by this Part must be so constructed and installed that it is readily accessible for inspection and on-board maintenance purposes.

(4) Adequate tools, testing equipment and spare parts, but at least those specified in Annex 4, must be provided on board the ship to enable the equipment to be maintained. Spare parts must be appropriately labelled and must be stowed so as to be readily accessible.

(5) Adequate information, at least in the English language, must be provided on board the ship to enable the equipment to be properly operated and maintained.

(6) In respect of ships to which this Part applies, being ships that are registered or licensed in the Republic, there must be available on board—

- (a) a rigging plan of the fitted antennas showing—
  - (i) elevation and plan views of the antennas; and
  - (ii) the dimensions of transmitting antennas; and

(b) complete information on the wiring of the radio installation showing all cable interconnections and terminations.

(7) In all ships to which this Part applies a radiotelephone operator must, while at sea, carry out the appropriate equipment tests and battery and reserve energy checks specified in Annex 5. Where the ship has two or more radiotelephone operators, the master must designate one of them to carry out those tests and checks.

(8) If any of the radio equipment required by this Part is not in a working condition, the radiotelephone operator discovering the deficiency must without delay report that fact to the master and record the details of the deficiency in the ship's official logbook or in the radio log required by regulation 37, as the case requires.

### **VHF radiotelephone station**

26. (1) The VHF radiotelephone station must be located in the upper part of the ship. Control of the VHF channels required for navigational safety must be immediately available on the navigation bridge convenient to the conning position and, where necessary, facilities such as portable two-way VHF radio equipment must be available to permit radio communications from the wings of the navigation bridge.

(2) A card of instructions giving a clear summary of the distress, urgency and safety procedures must be displayed in full view of each VHF radiotelephone operating position.

### **Provision of VHF radiotelephone antennas**

27. Every ship to which this Part applies must be provided with an antenna suitable for the efficient radiation and reception of signals in the frequency band 156.025–162.025 MHz. The antenna must be vertically polarised and, so far as practicable, have an unobstructed view in all directions.

### **Sources of energy (VHF radiotelephone installation)**

28. (1) At all times while a ship to which this Part applies is at sea and at all reasonable times when it is in port, there must be available a source of energy sufficient to operate the VHF radiotelephone installation at its nominal rated output power.

(2) Where batteries are provided as a source of energy for any part of the VHF radiotelephone installation, they must have the capacity required by subregulation (1) and must be maintained at all times while at sea in such condition as to be able to supply continuously for at least six hours a total current equal to the sum of—

- (a) the current consumption of the VHF receiver; and
- (b) one fifth of the current consumption of the VHF transmitter.

(3) In every ship to which this Part applies, being a fishing vessel of 24 metres or more in length or a passenger ship, means must be provided, where practicable, to operate the VHF radiotelephone installation from an alternative source of energy situated in the upper part of the ship, unless the source of energy referred to in subregulation (1) is situated there. The alternative source of energy may be the reserve source of energy required by

regulation 34(3), in which case the VHF usage thereof is to be limited to distress, urgency and safety communications.

(4) Where provision is made for operating the VHF radiotelephone installation from alternative sources of energy, clearly indicated means must be provided for rapid changing from one source of energy to another.

### **Use of VHF DSC radiotelephone installations**

**29.** Every radio operator using the VHF DSC radiotelephone installation must have practical knowledge of operating the VHF DSC equipment and general knowledge of the ITU Radio Regulations applying to VHF DSC radiotelephone communications and specifically that part of those Regulations relating to distress, urgency and safety procedures.

[Reg 29 substituted by reg 8 GNR457/GG36623/Jul2013]

### **VHF Radio watches**

**30.** (1) Every ship to which this Part applies, while at sea, must maintain a continuous watch on the navigation bridge on VHF DSC channel 70 and on the frequency 156.8 MHz (VHF channel 16).

[Subreg (1) substituted by reg ?(a) GNR457/GG36623/Jul2013]\*

- (2) This radio watch may be discontinued—
- (a) when the receiver is being used for traffic on a frequency other than 156.8 MHz;
  - (b) when the ship is maintaining a watch on a frequency other than 156.8 MHz for the purpose of a port operation, ship movement or safety of navigation service;
  - (c) when, at the direction of the master, the watch is being maintained elsewhere in the ship; or
  - (d) if, in the opinion of the master, the watch is prejudicial to the safety of the ship.

(3) Where the radio watch is discontinued pursuant to subregulation (2)(c) or (d), entries must be made in the ship's official logbook or in the radio log required by regulation 37, as the case requires, of the times and duration for which the watch on the navigation bridge was discontinued and of the circumstances in which the watch was transferred elsewhere or in which the safety of the ship was prejudiced, as the case may be.

(4) A written summary must be maintained of all communications relating to distress, urgency and safety traffic received or transmitted on the VHF radiotelephone installation during the radio watch.

(5) Every ship to which this Part applies, while at sea, must maintain a radio watch for broadcasts of maritime safety information on the appropriate channel or channels on which such information is broadcast for the area in which the ship is being navigated.

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\* Amending regulation number omitted in English language text of gazette notice (compare Afrikaans text).



### **Radiotelephone station**

**31.** (1) The radiotelephone station must be in the upper part of the ship and must be so sited that it is protected to the greatest possible extent from interference and noise that might impair the accurate reception of messages and signals.

(2) There must be an efficient means of two-way communication, independent of the ship's main communication system and main source of electrical power, between the radiotelephone station and any other place from which the ship is normally navigated.

(3) A reliable clock must be securely mounted in such a position that the entire dial can easily be observed from the radiotelephone operating position.

[Subreg (3) substituted by reg 9(a) GNR457/GG36623/2Jul2013]

(4) A reliable emergency light, independent of the system that supplies the normal lighting of the radiotelephone installation, must be provided and permanently arranged so as to be capable of providing adequate illumination of the operating controls of the radiotelephone installation, the clock required by subregulation (3) and the card of instructions required by subregulation (6). The emergency light must be controlled by two-way switches clearly labelled to indicate their purpose, placed respectively near an entrance to the room in which the radiotelephone installation is fitted and at the operating position in that room: Provided that where the radiotelephone installation is fitted on the navigation bridge, only the switch at the operating position needs to be provided.

(5) Where a source of energy for the radiotelephone installation consists of a battery or batteries, means must be provided at the radiotelephone station to indicate continuously whether the battery voltage is adequate to supply energy for the radiotelephone installation.

(6) A card of instructions, at least in the English language, giving a clear summary of the radiotelephone distress, urgency and safety procedures must be displayed in full view of each radiotelephone operating position.

(7) ...

[Subreg (7) deleted by reg 9(b) GNR457/GG36623/2Jul2013]

### **Provision of radiotelephone antennas**

**32.** (1) Every radiotelephone ship must be provided with suitable antennas and insulators. Where wire antennas are suspended between supports liable to whipping, they must be protected against breakage. In addition, every such ship must carry—

- (a) if the radiotelephone antenna is a supported wire antenna, a spare antenna completely assembled for rapid replacement of the radiotelephone antenna; or
- (b) if the radiotelephone antenna is not a supported wire antenna, a spare antenna of similar electrical characteristics,

and the necessary means to erect an antenna.

(2) ...

[Subreg (2) deleted by reg 10 GNR457/GG36623/2Jul2013]

**Range of radiotelephone transmitter**

**33.** (1) The normal range of the radiotelephone transmitter required by this Part must not be less than 150 nautical miles on the frequency 2182 kHz. The range is normally to be determined by calculation of the metre-amperes (which is the product of the maximum height of the antenna in metres, measured from the lead-out insulator, and the current in amperes, measured at the base of the antenna), but if an antenna arrangement causes difficulty in determining the range of a transmitter by calculation, it must be determined by trial.

(2) A radiotelephone transmitter is to be taken to comply with subregulation (1) if the product calculated in accordance with that subregulation is not less than—

- (a) 7.5 metre-amperes, in the case of an antenna having a horizontal top-length of not less than 50 per cent of its maximum height, measured from the lead-out insulator; or
- (b) 12.8 metre-amperes, in the case of any other antenna.

(3) The radiotelephone transmitter must have a minimum rated output power of not less than 100 watts peak envelope power, measured between the transmitter final stage and the antenna tuning unit.

**Sources of energy (Radiotelephone ship)**

**34.** (1) At all times while a radiotelephone ship is at sea and at all reasonable times when it is in port, there must be available a main source of energy sufficient to operate the radiotelephone installation over the normal range required by regulation 33(1).

(2) Where batteries are provided as a source of energy, they must have the capacity required by subregulation (1) and must be maintained at all times while at sea in such condition as to be able to supply continuously for at least six hours a total current equal to the sum of—

- (a) the current consumption of the radiotelephone receiver and of the transmitter when it is in a condition that operation of the "press to transmit" switch will make it ready for the immediate transmission of speech;
- (b) one third of the current that may be drawn by the radiotelephone transmitter for speech transmission on the frequency at which the current consumption of the transmitter is at a maximum;
- (c) the current consumption of all additional loads to which the battery may supply energy in time of distress or emergency; and
- (d) where the source of energy is also used by the VHF radiotelephone installation, the current consumption of the VHF radiotelephone receiver and one fifth of the current consumption of the VHF radiotelephone transmitter.

(3) In respect of radio installations in radiotelephone ships, being fishing vessels of 24 metres or more in length or passenger ships, a reserve source of energy must be provided in the upper part of the ship unless the main source of energy is situated there.

(4) The reserve source of energy, if provided, may be used to supply only—

- (a) the radiotelephone installation;
- (b) the emergency light required by regulation 31(4);

- (c) the device for generating the radiotelephone alarm signal by automatic means;
- (d) the VHF radiotelephone installation;
- (e) a number of low-power emergency circuits that are wholly confined to the upper part of the ship, if such circuits are adequately fused and capable of being readily disconnected from the reserve source of energy, and that source has sufficient capacity to carry the additional load; and
- (f) the receiver required by items (aa)(B) and (bb) of regulation 22(2)(iii).

### **Radio watch (Radiotelephone ship)**

**35.** (1) Every ship to which this Part applies, while at sea, must maintain a DSC watch—

- (a) on VHF DSC channel 70; or
- (b) on the distress and safety DSC frequencies 2187.5 kHz or 8414.5 kHz and on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz or 16804.5 kHz.

(2) Every ship to which this Part applies, while at sea, must maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the ship is being navigated.

(3) Every ship to which this Part applies, while at sea, must maintain, when practicable, a continuous watch on VHF channel 16, and this watch must be kept at the position from which the ship is normally navigated.

[Reg 35 substituted by reg 11 GNR457/GG36623/2Jul2013]

### **Radiotelephone operators**

**36.** Subject to section 73(4) of the Act, every ship to which this Part applies must carry the number of appropriately qualified radiotelephone operators as specified in regulation 16 of the Merchant Shipping (Safe Manning) Regulations, 1999, as amended.

[Reg 36 substituted by reg 12 GNR457/GG36623/2Jul2013]

### **Radio records (Radiotelephone ship)**

**37.** (1) The radio log required by the ITU Radio Regulations for a radiotelephone ship must be kept at the place where radio watch is maintained during the voyage.

(2) Every radiotelephone operator and every master, officer or crew member, when carrying out a radio watch in accordance with regulation 35, must enter in the radio log the information specified in Part 2 of Annex 3.

(3) The radiotelephone operator or, if there is more than one operator, the one designated by the master, must inspect and sign each day the entries in the radio log for that day, confirming that the requirements of this Part have been complied with.

(4) The master must inspect and sign each day's entries in the radio log.

(5) The master must, on demand, produce the radio log for inspection by a surveyor or a proper officer.

(6) The radio log forms part of the ship's official logbook, but is to be kept separate from the official logbook, and, for the purposes of section 187 of the Act, is deemed to be a document relating to the navigation of the ship.

## PART 4

### RADIO LIFE-SAVING EQUIPMENT

#### Two-way VHF radiotelephone apparatus

**38.** (1) Three portable two-way VHF radiotelephone apparatus must be provided on every Convention ship, other than a cargo ship of less than 500 tons.

(2) Two portable two-way VHF radiotelephone apparatus must be provided—

- (a) on every Convention ship that is a cargo ship of 300 tons or more but less than 500 tons; and
- (b) on every non-Convention ship that is—
  - (i) a passenger ship;
  - (ii) a cargo ship of 300 tons or more; or
  - (iii) a fishing vessel of 24 metres or more in length.

(3) One portable two-way VHF radiotelephone apparatus must be provided on every non-Convention ship that is—

- (a) a cargo ship of less than 300 tons;
- (b) a fishing vessel of less than 24 metres in length; or
- (c) a pleasure vessel of 100 gross tonnage or more.

[Para (c) added by reg 13 GNR457/GG36623/2Jul2013]

(4) The portable two-way VHF radiotelephone apparatus required by subregulations (1), (2) and (3) must be made watertight through integral design and may also be used for on-board radio communication if it is capable of operating on appropriate frequencies.

(5) If a fixed two-way VHF radiotelephone apparatus is provided in a survival craft, it must comply with the appropriate performance standards specified pursuant to regulation 6.

(6) The battery included in survival craft fixed radio equipment must not be used for any purpose other than the operation of such equipment and the searchlight carried in the survival craft.

#### Radar transponders

**39.** (1) One radar transponder must be carried on each side of every Convention ship, other than a cargo ship of less than 500 tons.

- (2) One radar transponder must be carried—
- (a) on every non-Convention ship; and
  - (b) on every Convention ship that is a cargo ship of less than 500 tons.
- (3) The radar transponders required by this regulation must be capable of operating in the 9 GHz band and must be stowed so as to enable rapid placement in a survival craft.
- (4) A vessel that is equipped with free-fall lifeboats should have a Search and Rescue Radar Transponder permanently and securely mounted therein.

[Subreg (4) added reg 14 GNR457/GG36623/2Jul2013]

## **PART 5**

### **ENFORCEMENT**

#### **Inspection etc. of Convention ships not registered or licensed in Republic**

40. When considering whether a Convention ship that is neither registered nor licensed in the Republic complies with the requirements of these regulations, a proper officer or a surveyor, as the case may be, need not satisfy himself or herself in relation to—

- (a) regulation 6(1)(a), if the equipment is of a type approved by the competent maritime authority of the State whose flag the ship is entitled to fly and that State is a Convention State; or
- (b) subregulation 6(1)(c), if the ship is entitled to fly the flag of a Convention State.

#### **Ships not to be detained in certain cases**

41. No ship may be detained in a port where repair facilities are not readily available, because of malfunction of the equipment for providing general radio communications referred to in regulation 7(h), if the ship is capable of performing all distress and safety functions as required by that regulation.

#### **Offences and penalties**

42. (1) If a radiotelephone operator or a person designated under regulation 18(3) or (4) contravenes any provision of these regulations imposing a duty on him or her, he or she commits an offence and is liable on conviction to a fine or to imprisonment for a period not exceeding six months; and if any person, being the owner or master of the ship, permits such a contravention, he or she also commits an offence and is liable on conviction to a fine or to imprisonment for a period not exceeding one year.

(2) If these regulations are contravened in any other respect in relation to any ship, the owner and master of the ship each commit an offence and are liable on conviction to a fine or to imprisonment for a period not exceeding one year.

**Defence**

43. It is a defence for a person charged under regulation 42 to show that he or she took reasonable precautions and exercised due diligence to avoid the commission of the offence.

**PART 6**  
**FINAL PROVISIONS**

**Repeal of regulations**

44. The Merchant Shipping (Radio Installations) Regulations, 1996, published by Government Notice No. R. 1401 of 22 August 1996, as amended by Government Notice No. R. 447 of 8 April 1999, are repealed.

**ANNEX 1**

(Regulation 10(1)(f))

[Annex 1 substituted by reg 15 GNR457/GG36623/2Jul2013]

**SATELLITE EPIRBs**

Every satellite EPIRB required by these regulations must be—

- (a) capable of transmitting a disaster alert either through the COSPAS-SARSAT satellite service operating in the 406 MHz band;
- (b) installed in an easily accessible position;
- (c) ready to be manually released and capable of being carried by one person into a survival craft;
- (d) capable of floating free if the ship sinks;
- (e) capable of being activated manually; and
- (f) automatically activated when afloat.

**ANNEX 2**

(Regulation 17(7)(a))

**GMDSS EQUIPMENT TESTS AND RESERVE ENERGY CHECKS**

1. *Daily*
  - (a) The proper functioning of the DSC facilities must be tested at least once each day, without radiation of signals, by use of the means provided on the equipment.
  - (b) Batteries providing a source of energy for any part of the radio installations must be tested daily and, where necessary, brought to a fully charged condition.
  - (c) Each printer must be checked at least once each day to ensure its serviceability.
2. *Weekly*
  - (a) The proper operation of the DSC facilities must be tested at least once a week by means of a test call, when within communication range of a coast station fitted with DSC equipment. Where a ship has been out of communication range of a coast station fitted with DSC equipment for a period of longer than one week, a test call must be made on the first opportunity that the ship is within communication range of such a coast station.
  - (b) Where the reserve source of energy is not a battery (for example a motor generator), the reserve source of energy must be tested weekly.
  - (c) Each item of survival craft two-way VHF radio equipment must be tested at least once a week on a frequency other than 156.8 MHz (VHF channel 16), unless the equipment is of a sealed type where such testing is not practical.
3. *Monthly*
  - (a) Each EPIRB must be examined at least once a month to check—
    - (i) its capability to operate properly as per the manufacturer's specification, the expiry date of the battery, checking of the built-in magnet and particularly its ability to float free (where required) in the event of the ship sinking;  
[Subpara (i) substituted by reg 16 GNR457/GG36623/2Jul2013]
    - (ii) how secure it is in its mounting; and
    - (iii) for signs of damage.
  - (b) Each radar transponder must be examined at least once a month to check how secure it is in its mounting and for signs of damage.
  - (c) A check must be made at least once a month on the condition of all batteries providing a source of energy for any part of a radio installation and on how secure they are in their mountings. The battery connections and compartment must also be checked.



4. *Recording of results*

Results of the tests and checks required by this Annex must be entered in the GMDSS radio log or battery log, as appropriate.

**ANNEX 3**

(Regulations 19(1) and 37(2))

**RADIO RECORDS**

**PART 1**

**GMDSS RADIO LOG**

(Regulation 19(1))

The following must be recorded in the GMDSS radio log as they occur:

- (a) A summary of communications relating to distress, urgency and safety traffic and the time such communications occurred;
- (b) a record of important incidents connected with the radio communication service and the time such incidents occurred;
- (c) where appropriate, the position of the ship at least once each day and the time at which the ship was in that position;
- (d) particulars of the tests and checks carried out pursuant to regulation 17(7)(a);
- (e) particulars of the ship and of the radio operator(s) on board.

**PART 2**

**RADIO LOG (RADIOTELEPHONE SHIP)**

(Regulation 37(2))

The radio log for a radiotelephone ship must contain—

- (a) particulars of the ship and of the radiotelephone operator(s) on board; and
- (b) the diary of the radio communication service, in which must be entered—
  - (i) the name of the radiotelephone operator and the times at which the watch commences and ends;
  - (ii) the times at which radio watch is, for any reason, discontinued, together with the reason and the time at which the radio watch is resumed;
  - (iii) a summary of communications exchanged between the ship station and coast stations or other ship stations, including the serial numbers and the dates of any messages passed;
  - (iv) a summary of all communications relating to distress, urgency and safety traffic;
  - (v) a record of all incidents connected with the radio communication service, including the radiotelephone installation and the VHF radiotelephone

installations, occurring during the watch and appearing to be of importance to safety of life at sea;

- (vi) particulars of the tests and checks carried out pursuant to regulation 25(7); and
- (vii) the position of the ship at least once each day, preferably at midday.

**ANNEX 4**

(Regulation 25(4))

[Annex 4 substituted by reg 17 GNR457/GG36623/2Jul2013]

**TOOLS, TESTING EQUIPMENT AND SPARE PARTS**

*Tools*

- 1 smooth file of 15 cm length
- 1 jointing knife
- 1 pair 18 cm insulated wireman's pliers with side cutters
- 1 set of screwdrivers (flat-head and/or phillips) suitable for use on the radiotelephone equipment
- 1 adjustable spanner with 25 mm gap
- 1 hacksaw and spare blades to suit
- 1 lockable tool box or compartment (for containing the above-mentioned tools)

*Measuring instruments*

- 1 hydrometer, not required if vessels are fitted with non-maintenance batteries

*Spare parts and miscellaneous items*

- 5 fuses for each type and rating of fuse in use
- 1 spare bulb for the emergency light required by regulation 31(4)
- 250 g petroleum jelly or general purpose grease

Where special nuts or screws are used for fastening, suitable tools must be provided in addition to those specified above.

## ANNEX 5

(Regulation 25(7))

[Annex 5 substituted by reg 18 GNR457/GG36623/2Jul2013]

### NON-SOLAS EQUIPMENT TESTS AND BATTERY AND RESERVE ENERGY CHECKS

1. *Daily*
  - (a) Batteries providing a source of energy for any part of the radio installation must be tested daily and, where necessary, brought up to the fully charged condition.
  - (b) Each printer must be checked at least once each day to ensure its serviceability.
2. *Weekly*
  - (a) Survival craft fixed radio equipment, if provided, must be tested at least once every week using suitable artificial antennas.
  - (b) Batteries forming part of survival craft fixed radio equipment, if provided, and the two-way radiotelephone apparatus for survival craft must be tested weekly and, where necessary, brought up to a fully charged condition. Where non-rechargeable batteries are provided as a source of energy, the expiry date of the batteries must be checked and the batteries replaced if necessary.
  - (c) Each item of survival craft two-way VHF radio equipment must be tested at least once a week on a frequency other than 156.8 MHz (VHF channel 16), unless the equipment is of a sealed type where such testing is not practical.
3. *Monthly*
  - (a) Each EPIRB must be examined at least once a month to check—
    - (i) its capability to operate properly as per manufacturer instructions and by checking the battery expiry date and the fitted magnet and particularly its ability to float free (where required) in the event of the ship sinking;
    - (ii) how secure it is in its mounting; and
    - (iii) for signs of damage.
  - (b) Each radar transponder must be examined at least once a month to check how secure it is in its mounting and for signs of damage.
  - (c) A check must be made at least once a month on the condition of all batteries providing a source of energy for any part of a radio installation and on how secure they are in their mountings. The battery connections and compartment must also be checked.
  - (d) Survival craft fixed radio equipment must be tested at least once a month using an antenna provided with the equipment.
  - (e) The proper functioning of the DSC facilities must be tested without radiation of signals by use of the means provided on the equipment.

4. *Annually*

Survival craft radar transponders must be inspected, tested and, if necessary, have their source of energy replaced at least once every twelve months. The Authority may extend this interval to a maximum of 17 months to permit the inspection to take place concurrently with a radio survey.

5. *Recording of results*

Results of the tests and checks required by this Annex must be entered in the radio log.

## Compilation note

### Amending notices

<i>No.</i>	<i>Gazette</i>	<i>Commencement on publication unless otherwise indicated</i>		<i>Notes</i>
		<i>Date of publication</i>	<i>Date of commencement</i>	
R457	36623	2 July 2013		Regulation numbering error in English language text of gazette notice (compare Afrikaans text).