Statutory Document 50/99

**MERCHANT SHIPPING ACT 1985**

# MERCHANT SHIPPING (RADIO INSTALLATIONS) REGULATIONS 1999

*Coming into operation : 1st February 1999*

## Arrangement of the Regulations

### PART 1
### GENERAL



### PART II
### SHIP REQUIREMENTS




Price : £2.10
Text includes amendments made by: SD 396/03 MS (Pleasure Vessel) Regulations 2003
SD 269/04 MS (Safety of Navigation - SOLAS Chapter V) Regulations 2004
SD2014/0238 MS (Manning and STCW) Regulations 2014

In exercise of the powers conferred on the Department of Trade and Industry by sections 1 and 2 of the Merchant Shipping Act 1985[1] and of all other powers enabling it in that behalf, after consultation with the Secretary of State and those persons referred to in section 2(2) of that Act, the following Regulations are hereby made:-

## PART I - GENERAL

### Citation, commencement and revocation

1. (1) These Regulations may be cited as the Merchant Shipping (Radio Installations) Regulations 1999 and shall come into operation on 1st. February 1999.

(2) The Public Documents referred to in the Schedule are revoked to the extent specified in column 3 of the Schedule.

### Interpretation

2. In these Regulations -

"Area A1" means an area within the radio telephone coverage of at least one VHF coast station and in which continuous DSC alerting is available, and as advised by a Contracting Government to the Organization;

"Area A2" means an area, excluding area A1, within the radiotelephone coverage of at least one MF coast station and in which continuous DSC alerting is available, and as advised by the Contracting Government to the Organization;

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

"Area A4" means an area of the sea which is not area A1, A2 or A3;

"A1 ship" means a ship which goes to sea only in area A1;

"A2 ship" means a ship which goes to sea only in areas A1 and A2;

"A3 ship" means a ship which goes to sea only in areas A1, A2 and A3;

"A4 ship" means a ship which goes to sea in areas A1, A2, A3 and A4;

"bridge-to-bridge communications" means safety communications between ships from the conning position;

"cargo ship" means a ship other than a passenger ship, a fishing vessel or a pleasure vessel;

[1] 1985 c. 3 Functions now transferred to the Department of Trade and Industry by the Transfer of Functions (Marine Administration) Order 1997, SD 51/97

"channel 6" in respect to VHF radio installations means a frequency of 156.300 MHz.

"channel 13" in respect to VHF radio installations means a frequency of 156.650 MHz.

"channel 16" in respect to VHF radio installations means a frequency of 156.800 MHz.

"channel 70" in respect to VHF radio installations means a frequency of 156.525 MHz.

"conning position" means the position on the navigating bridge with a commanding view of the ship and its position so as to provide the necessary information and equipment for a pilot to carry out his functions;

"continuous watch" means a radio watch which 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 facilities are under periodical maintenance or checks;

"Department" means the Department of Trade and Industry[2];

"direct-printing telegraphy" means an automated telegraphy technique which complies with the relevant recommendations of the International Radio Consultative Committee (CCIR)[3];

"DSC" means Digital Selective Calling, being a technique using digital codes which enables a radio station to establish contact with, and transfer information to, another station or group of stations, and complying with the relevant recommendations of the International Radio Consultative Committee (CCIR);

"EPIRB" means an emergency position-indicating radiobeacon which is a station in the mobile service the emissions of which are intended to facilitate search and rescue operations;

"fishing vessel" means a vessel which is for the time being employed in sea fishing, but does not include a vessel used otherwise than for profit;

"GMDSS general operator's certificate" and "GMDSS restricted operator's certificate" ***definition omitted by SD2014/0238;***

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

"HF" means the frequency spectrum between 3000 kHz and 30 MHz;

[2] The functions in these Regulations have been transferred by SD155/10 to the Department of Economic Development and then to the Department for Enterprise by SD2017/0325 the Transfer of Functions (Economic Development and Education) Order 2017 with effect from 24 November 2017.
[3] The name of the Committee was changed to "ITU Radiocommunications Sector" (ITU-R) due to Article 1 of the International Telecommunications Constitution, Geneva, 1992.

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

***"inspector" means a person appointed as an inspector under section 3 of the Merchant Shipping Act 1985;***

"International NAVTEX service" means the co-ordinated broadcast and automatic reception on a frequency of 518 kHz of maritime safety information by means of narrow-band direct-printing telegraphy using the English language;

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

"Manx ship" has the meaning assigned to it by section 1 of the Merchant Shipping Registration Act 1991[4];

"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;

***"MSN" means a Manx Shipping Notice issued by the Department and includes any document amending the same;***

"operator" means the owner, manager, demise charterer or other person other than the master having immediate control over the day to day employment and operation of the ship;

"Organization" means the International Maritime Organization;

"passenger ship" means a ship carrying more than twelve passengers;

***Definition of Pleasure Vessel as amended by SD 396/03 MS (Pleasure Vessel) Regulations 2003***

***"Pleasure Vessel" means any vessel which at the time it is being used:***

***"Pleasure Vessel" means any vessel which at the time it is being used:***

***(a) is wholly owned by an individual or individuals, and is used only for the sport or pleasure of the owner or the immediate family or friends of the owner; or***

***(b) is owned by a body corporate, and is carrying only such persons as are the employees or officers of the body corporate, or their immediate family or friends; and***

***(c) is on a voyage or excursion which is one for which the owner does not receive money or money's worth for or in connection with the operation of the vessel or the carrying of any person other than as a contribution to the direct expenses of the operation of the vessel incurred during the voyage or excursion, and no other payments are made by, on***

[4] 1991 C. 15

***behalf of, or for the benefit of users of the vessel, other than by the owner; or***

***(d) is owned by a body corporate but pursuant to a long term lease agreement, is used only for the sport or pleasure of the lessee, and the immediate friends or family of the lessee, if an individual, or the employees or officers and their immediate friends and family, if a corporate lessee.***

***Such lease agreement must specify that:***

***(i) the vessel may only be used for private purposes and must not be used for commercial purposes;***

***(ii) the vessel must not be sub-leased or chartered, and***

***(iii) no other payments are made by, on behalf of, or for the benefit of users of the vessel, other than by the lessee.***

*(e) is wholly owned by or on behalf of a members' club formed for the purpose of sport or pleasure, and at the time it is being used, is used only for the sport or pleasure of members of that club or their immediate family, and any charges levied in respect of that use are paid into club funds and applied for the general use of the club, and no other payments are made by, on behalf of, or for the benefit of users of the vessel, other than by the club.*

"polar orbiting satellite service" means a service which is based on polar orbiting satellites which receive and relay distress alerts from satellite EPIRBs and which provides their position;

"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 Radio Regulations involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes;

"Radio Regulations" means the Radio Regulations annexed to, or regarded as being annexed to, the International Telecommunication Union Convention which is in force at any time;

**"*RO" means any recognised organisation specified in MSN 020 which is authorised by the Department to undertake the specified function;***

"satellite EPIRB" means an EPIRB which is in the mobile-satellite service and which is capable of transmitting a distress alert either through the polar orbiting satellite service operating in the 406 MHz band, or alternatively in the case of A1, A2 or A3 ships, through the INMARSAT geostationary satellite service operating in the 1.6 GHz band, and which is -

(a) installed in an easily accessible position;

(b) ready to be manually released and capable of being carried by one

person into a survival craft;

(c) capable of floating free from the ship and automatically activating in the event that the ship sinks; and

(d) capable of manual activation.

"service", that is references to any particular type of radio service, is a reference to such service as defined in the Radio Regulations;

"ship earth station" means a mobile earth station in the maritime mobile-satellite service located on board ship;

"tons" means gross tons and shall be, unless otherwise specified, the International Gross Tonnage derived under the International Convention on Tonnage Measurement of Ships 1969;

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

"VHF EPIRB" means an EPIRB which is capable of transmitting a distress alert using DSC on channel 70 and of providing for locating by means of a radar transponder operating in the 9 GHz band and which is:

(a) installed in an easily accessible location;

(b) ready for manual release and capable of being carried by one person into a survival craft;

(c) capable of floating free from the ship and automatically activating in the event that the ship sinks; and

(d) capable of manual activation.

**Application**

3. (1) These Regulations apply to sea-going Manx ships of more than 300 tons and to other sea-going ships of more than 300 tons while they are within the Island.

(2) These Regulations shall not apply to:

(a) troopships not registered in the Island;

(b) ships not propelled by mechanical means;

***(c) pleasure vessels***

(d) fishing vessels;

(e) ***high-speed craft to which the Merchant Shipping (High-Speed Craft) Regulations 1998[5] apply***

(f) Manx ships while they are within the Great Lakes of North America and their connecting and tributary waters as far east as the lower exit of the St. Lambert Lock at Montreal in the Province of Quebec, Canada.

[5] SD. 260/98

**Ships and persons in distress**

4. Nothing in these Regulations shall prohibit any ship, survival craft or person in distress from using any means at their disposal to attract attention, make known their position and obtain help.

**Equivalents and exemptions**

5. (1) Where these regulations require that a particular fitting, material, appliance or apparatus, or type thereof, shall be fitted or carried in a ship, or that any particular provision shall be made, the Department may permit any other fitting, material, appliance or apparatus or type thereof to be fitted or carried, or any other provision to be made in that ship if it is satisfied by trial thereof or otherwise that such other fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by these Regulations.

(2) The Department may exempt any individual ship or class or description of ships from any of the provisions of these Regulations, subject to such conditions as it may think fit.

***(3) An exemption or equivalent arrangement permitted by these Regulations is only valid if —***

***(a) it is in writing;***
***(b) it specifies the date on which it takes effect; and***
***(c) any conditions stated in it are complied with.***

**Performance Standards**

6. Equipment required to be provided under these Regulations shall conform to the performance standards adopted by the Organization and such conformance shall be proved by a type approval certificate in writing issued by an organisation acceptable to the Department specifying the date on which it takes effect and the conditions (if any) on which it is given.

## PART II

## SHIP REQUIREMENTS

**Functional requirements**

7. Every ship, while at sea, shall be capable of -

(a) transmitting ship-to-shore distress alerts by at least two separate and independent means, using a different radiocommunication service, except that the arrangements permitted in regulations 10(1)(a) and 13(1)(d)(iii) may be accepted as comprising two different radiocommunication services;

(b) receiving shore-to-ship distress alerts;

(c) transmitting and receiving ship-to-shore 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 19 of SOLAS Chapter V receiving signals for locating[6] ;***

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

8. (1) Every radio installation shall be:

(a) located so that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and the avoidance of harmful interaction with other equipment and systems;

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

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

(d) provided with reliable, permanently arranged electric lighting independent of the main and emergency sources of electrical power and arranged to provide adequate illumination of the radio controls necessary for operating the radio installation;

(e) provided with means for dimming any light output from any of the equipment when that light output is capable of interfering with safe navigation; and

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

(2) The controls of at least one VHF radiotelephone apparatus including control of transmission and reception channels required for navigational safety shall be immediately available on the navigating bridge convenient to the conning position and, where appropriate, on the wings of the navigation bridge provided that portable VHF equipment may be provided to meet this latter function.

(3) Passenger ships, in addition to the other requirements of these Regulations shall be provided with :

(a) a distress panel installed at the conning position and which contains either a single button which, when pressed, initiates a distress alert using all the radiocommunication installations required on board for that purpose, or one button for each individual installation. Buttons installed in the distress panel which initiate a distress alert shall be protected against inadvertent activation and the distress panel shall clearly indicate visually whenever any buttons have been pressed;

[6] Regulation 7 (f) as amended by SD269/04 Merchant Shipping (Safety of Navigation SOLAS Chapter V) Regulations 2004

(b) a continuous input of ship's position to be included in the initial distress alert supplied automatically to all relevant radiocommunications equipment and included in the distress alert whenever any button or buttons on the distress panel are pressed;

(c) a distress alarm panel which may be combined with the distress panel referred to in sub-paragraph (a) and which provides visual and aural indication of any distress alert or alerts received on board and the radiocommunication service through which the distress alert has been received; and

(d) a means for two way on-scene radiocommunications for search and rescue purposes capable of operating from the conning position solely on the aeronautical frequencies of 121.5 MHz and 123.1 MHz.

Provided that in any passenger ship constructed before 1st July 1997 the requirements of sub-paragraphs (a) and (c) need not be complied with until the ship's first periodical survey after 1st February 1999 if existing equipment otherwise in compliance with these Regulations is located at the conning position or immediately adjacent thereto and provided with distinct buttons capable of transmitting a distress alert and of indicating the reception of a distress alert without requiring further action by the operator.

(4) In a passenger ship, if the satellite EPIRB carried in compliance with Regulation 9 is intended as the secondary means of distress alerting it shall be capable of remote operation from the conning position, or alternatively if such remote operation is not provided, a second EPIRB may be fitted at the conning position or immediately adjacent thereto.

(5) In any passenger ship the navigational equipment which provides the position input to comply with sub-paragraph (3)(b) shall be capable of being supplied from the reserve source of power and arranged so that in the event of a loss of the ship's main and emergency sources of power the equipment is supplied from the reserve source and capable of maintaining the output of correct position to the radio installations without the need for any operator action.

(6) Each radio transmitter and receiver fitted in accordance with these Regulations shall be provided with a suitable antenna or antennae. Antennae shall be constructed and sited so as to enable each transmitter and receiver to perform its intended communication function effectively.

(7) Equipment shall be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.

(8) Where appropriate, equipment shall be constructed and installed in such a way that it is readily accessible for inspection and on-board maintenance purposes.

**Radio equipment to be provided for all ships**

9. (1) Every ship shall be provided with -

(a) a VHF radio installation capable of transmitting and receiving;

(i) DSC on channel 70 and provided with means to initiate the

transmission of distress alerts on channel 70 from the conning position or immediately adjacent thereto; and

(ii) radiotelephony on channel 6, channel 13 and channel 16;

(b) a VHF radio installation capable of maintaining a continuous DSC watch on channel 70. The installation for this purpose 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 -

(d) shall be so stowed that it can be easily utilised; and

(e) which may be one of those required for use in survival craft by virtue of any other Regulations.

(f) if the ship is at sea in any area in which an International NAVTEX service is provided, a receiver capable of receiving International NAVTEX service broadcasts;

(g) a radio facility for reception of maritime safety information by the INMARSAT enhanced group calling system if the ship is at sea in any area of INMARSAT coverage but in which an international NAVTEX service is not provided.

(h) subject to the provisions of regulation 10(3) a satellite EPIRB.

(2) Except as may be agreed by the Department, the EPIRB fitted in accordance with sub-paragraph (h) shall be coded in accordance with the serial number protocol system in use for EPIRBs recorded in the United Kingdom system.

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

10. (1) Every A1 ship in addition to meeting the requirements of regulation 9, shall be provided with a radio installation capable of initiating the transmission of ship-to-shore distress alerts from the conning position or immediately adjacent thereto, and which operates on either:

(a) VHF using DSC; this requirement may be fulfilled by the VHF EPIRB required by paragraph (3) if it is installed close to, or capable of remote activation from, the conning position or immediately adjacent thereto; or

(b) 406 MHz through the polar orbiting satellite service; this requirement may be fulfilled by the satellite EPIRB, required by regulation 9(1)(h) if it is installed close to, or capable of remote activation from, the conning position or immediately adjacent thereto; or

(c) MF using DSC if the ship is at sea within coverage of MF coast stations equipped with DSC; or

(d) HF using DSC; or

(e) the INMARSAT geostationary satellite service; this requirement may be fulfilled by an INMARSAT ship earth station or by the satellite EPIRB, required by regulation 9(1)(h) if it is installed close to, or capable of remote activation from, the conning position or immediately adjacent thereto.

(2) The VHF radio installation, required by regulation 9(a) shall also be capable of transmitting and receiving general radiocommunications using radiotelephony.

(3) Area A1 ships may, in lieu of being provided with the satellite EPIRB required by regulation 9(1)(h), be provided with a VHF EPIRB.

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

11. (1) In addition to meeting the requirements of regulation 9, every area A2 ship shall be provided with :

(a) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

(i) 2,187.5 kHz using DSC; and

(ii) 2,182 kHz using radiotelephony.

(b) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz; such installation 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 service other than MF operating either :

(i) through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by regulation 9(1)(h) 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; this requirement may be fulfilled by either the equipment specified in paragraph (3)(b); or by the satellite EPIRB, required by regulation 9(1)(h) if the EPIRB is installed close to, or is capable of remote activation from, the conning position or immediately adjacent thereto.

(d) Any INMARSAT ship earth station or any MF/HF radiotelephone station installed in compliance with regulation 22 as duplicated equipment may be accepted as satisfying the functional requirements of sub-paragraph (c).

(2) Means shall be provided to initiate transmission of distress alerts by the radio

installations specified in paragraphs (1)(a) and (1)(c) from the conning position.

(3) The ship shall, in addition, be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by either:

(a) a radio installation operating on working frequencies in the bands between 1,605 kHz and 4,000 kHz or between 4,000 kHz and 27,500 kHz. This requirement may be fulfilled by the addition of this capability in the equipment required by paragraph (1)(a) of this regulation; or

(b) an INMARSAT ship earth station.

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

12. Every A3 ship shall, in addition to meeting the requirements of Regulation 9, be provided with either the equipment specified in Regulation 13 or that specified in Regulation 14.

**INMARSAT option for A3 ships.**

13. (1) An A3 ship which is not provided with the equipment specified in Regulation 14 shall be provided with :

(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 a watch for ship-to-shore distress alerts, including those directed to specifically defined geographical areas; and

(iv) transmitting and receiving general radio-communications using either radiotelephony or direct-printing telegraphy;

(b) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

(i) 2,187.5 kHz using DSC; and

(ii) 2,182 kHz using radiotelephony;

(c) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz which may be separate from or combined with that required by paragraph (b)(i); and

(d) means of initiating the transmission of ship-to-shore distress alerts by a radio service operating either:

(i) through the polar orbiting satellite service on 406 MHz; this

requirement may be fulfilled by the satellite EPIRB, required by regulation 9(1)(h) if it is installed close to, or capable of remote activation from, the conning position; 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 9(1)(h) if it is installed close to, or capable of remote activation from the conning position.

(e) Any INMARSAT ship earth station or any MF/HF radiotelephone station installed in compliance with regulation 25 as duplicated equipment may be accepted as satisfying the functional requirements of sub-paragraph (d).

(2) Means shall be provided to initiate transmission of distress alerts from the conning position or immediately adjacent thereto by the radio installations specified in sub-paragraphs (a), (b) and (d)

**MF/HF option for A3 ships.**

14. (1) An A3 ship which is not provided with the equipment specified in Regulation 13 shall be provided with :

(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 1,605 kHz and 4,000 kHz and between 4,000 kHz
and 27,500 kHz:

(i) using DSC;

(ii) using radiotelephony; and

(iii) using direct-printing telegraphy;

(b) equipment capable of maintaining DSC watch on 2,187.5 kHz, 8,414.5 kHz and on at least one of the distress and safety DSC frequencies 4,207.5 kHz, 6312 kHz, 12,577 kHz or 16,804.5 kHz; the equipment shall be such that it shall be possible at any time to select any of these DSC distress and safety frequencies; this equipment may be separate from, or combined with, the equipment required by sub-paragraph (a);

(c) means of initiating the transmission of ship-to-shore distress alerts by a radiocommunication service other than HF operating either:

(i) through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by regulation 9(1)(h) if it is installed close to, or capable of remote
activation from, the conning position; or

(ii) through the INMARSAT geostationary satellite service; this requirement may be fulfilled by an INMARSAT ship earth station; or by the satellite EPIRB, required by regulation 9(1)(h) if it is installed close to, or capable of remote activation from, the conning position.

(d) in addition, means of transmitting and receiving general radiocommunications shall be provided using radiotelephony or direct-printing telegraphy by an MF/HF radio installation operating on working frequencies in the bands between 1,605 kHz and 4,000 kHz and between 4,000 kHz and 27,500 kHz; this requirement may be fulfilled by the addition of this capability in the equipment required by sub-paragraph (a).

(e) Any INMARSAT ship earth station or any MF/HF radiotelephone station installed in compliance with regulation 25 as duplicated equipment may be accepted as satisfying the functional requirements of sub-paragraph (d).

(2) Means shall be provided to initiate transmission of distress alerts from the conning position or immediately adjacent thereto by the radio installations specified in sub-paragraphs (a) and (c).

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

15. In addition to meeting the requirements of regulation 9, A4 ships shall be provided with the radio installations and equipment specified in regulation 14, except that the equipment required by paragraph (c)(ii) of that regulation shall not be accepted as an alternative to that required by paragraph (c)(i) of that regulation, which shall always be provided. Such ships shall in addition comply with the requirements of regulation 14(2).

**Radio watches**

16. (1) Every ship while at sea shall maintain a continuous watch:

(a) on VHF DSC channel 70;

(b) on the distress and safety DSC frequency 2,187.5 kHz, if the ship, in accordance with the requirements of regulation 11(1)(b) or regulation 13(1)(c), is fitted with an MF radio installation;

(c) on the distress and safety DSC frequencies 2,187.5 kHz and 8,414.5 kHz and also on at least one of the distress and safety DSC frequencies 4,207.5 kHz, 6,312 kHz, 12,577 kHz or 16,804.5 kHz, appropriate to the time of day and the geographical position of the ship, if the ship, in accordance with the requirements of regulation 14(1)(b) or regulation 15, 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 regulation 13(1)(a), is fitted with an INMARSAT ship earth station.

(2) Every ship while at sea shall 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 navigating.

(3) Every ship, when at sea, in addition to a watch on the frequencies specified in paragraphs (1) and (2), shall whenever practicable, from the date of these Regulations and until 31st January 2005, keep a watch on VHF channel 16.

**Sources of energy**

17. (1) There shall be available at all times while the ship is at sea a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source or sources of energy for the radio installations.

(2) A reserve source or sources of energy shall be provided on every ship, to supply radio installations, for the purpose of conducting distress and safety radiocommunications, in the event of failure of the ship's main and emergency sources of electrical power. The reserve source or sources of energy shall be capable of simultaneously operating the VHF radio installation required by regulation 9(1)(a) and, as appropriate for the sea area or sea areas for which the ship is equipped, either the MF radio installation required by regulation 11(1)(a), the MF/HF radio installation required by regulation 14(1)(a) or 15, or the INMARSAT ship earth station required by regulation 13(1)(a) and any of the additional loads mentioned in paragraphs (5), (6) and (9) for a period of at least:

(a) one hour, on ships provided with an emergency source of electrical power, if such source of power complies with all relevant provisions of the International Convention for the Safety of Life at Sea 1974, as amended (SOLAS), Chapter II-1 Regulations 42 or 43 as appropriate including the supply of power to the radio station; or

(b) six hours on ships not provided with an emergency source of electrical power which complies fully with the requirements of the International Convention for the Safety of Life at Sea 1974, as amended (SOLAS), Chapter II-1 Regulations 42 or 43 as appropriate including the supply of power to the radio station.

(3) The reserve source or sources of energy need not supply independent HF and MF radio installations at the same time.

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

(5) Where, in addition to the VHF installation, two or more of the other radio installations, referred to in paragraph (2), can be connected to the reserve source or sources of energy, such sources shall be capable of simultaneously supplying, for the period specified, as appropriate, in sub-paragraphs (2)(a) or (2)(b) the VHF radio installation and
either:

(a) all other radio installations which can be connected to the reserve
source or sources of energy at the same time; or

(b) whichever other radio installation will consume the most power, 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.

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

(7) Where a reserve source of energy consists of a rechargeable accumulator battery or batteries:

(a) a means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within ten hours;

(b) means shall be provided for an alarm to indicate any failure of the
main or emergency supply to the battery charger; and

(c) the capacity of the battery or batteries shall be checked, using an appropriate method, at intervals not exceeding twelve months, when the ship is not at sea.

(8) The siting and installation of accumulator batteries which provide a reserve source of energy shall 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 batteries will provide at least the minimum required hours of operation under all weather conditions.

(9) If an uninterrupted input of information from the ship’s navigational or other equipment to a radio installation is required to ensure its proper performance, means shall be provided to ensure the continuous and correct supply of such information in the event of any failure of the ship’s main or emergency source of electrical power.

(10) For the purpose of calculating the required capacity of the reserve source of energy, the total current used in calculations shall be equal to the highest sum of all the radio installations which simultaneously can be connected to the source of energy, based on the following:

(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 a condition that operation of the “press to
transmit” switch will make it ready for immediate transmission;

(d) one third of the current which 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 which 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.

**Configuration for reserve sources of electrical power.**

18. The requirements of Regulations 19, 20, 21, 22 and 23 apply to new installations fitted in ships after the date of these Regulations or to existing installations which are changed or renewed after the date of these Regulations. Existing installations which do not comply fully with the requirements of Regulations 19, 20, 21, 22, and 23 may continue to be accepted provided that they comply as nearly as possible.

19. (1) Whenever the reserve source of electrical power consists of rechargeable accumulator batteries, the arrangement may consist of either batteries used solely in the event of total failure of the ship's main and emergency power supplies or batteries used in an uninterruptable power supply configuration (UPS).

(2) If a manual changeover switch is used in the arrangement the switch shall be clearly marked and readily accessible to the operator and the changeover between the ship's main or emergency source of supply and the reserve source shall not require any equipment connected to the reserve source to be re-initialised manually and shall not result in the loss of any data stored in the memory of the equipment.

(3) There shall be provision of an aural alarm and a visual indication at the conning position or immediately adjacent thereto to indicate any interruption in the ship's supply to battery chargers for the reserve source of supply or UPS systems and it shall not be possible to disable this alarm and indication to any extent greater than acknowledging the alarm condition and silencing the aural alarm manually. The alarm and indication shall reset automatically when the ship's power supply is restored.

**Batteries used solely in the absence of the ship's main or emergency supply.**

20. Reserve batteries used in a configuration where they are used solely in the event of failure of the ship's main and emergency supplies may be arranged for either a manual changeover or an automatic changeover and shall -

(a) be arranged so that supply lines from the battery distribution panel to each radio installation of both the basic equipment and duplicated equipment are independent and fused separately;

(b) be arranged so that any fault in either the battery or the battery charging arrangements shall not impair or reduce the functional availability of any radio equipment while being energised from the ship's main or emergency supply.

**Batteries used in an uninterruptable power supply (UPS) configuration.**

21. (1) A single uninterruptable power supply (UPS) may be provided for the radio installation which shall comply with the requirements for electrical load specified in regulation 17 taking into account duplicated equipment where provided and which shall have :

(a) an automatic charger;

(b) rechargeable accumulator batteries of sufficient capacity;

(c) arrangements for an aural alarm and a visual indication at the conning position of any failure in the UPS which is not already monitored by any other alarm and indicator;

(d) the capability to be operational within 5 seconds of being switched on; and

(e) protection against damage resulting from disconnecting the batteries, or with the batteries disconnected, short-circuiting the UPS battery connections and such protection, if provided by electronic means, shall automatically reset following removal of the open or short-circuit condition.

(2) Either a second uninterruptable power supply or a means for supply directly from the ship's main or emergency electrical supply shall be provided and available permanently to provide for failure of the UPS. The means of changeover to the second UPS or to the ship's supplies may be either automatic or manual

**Rechargeable Accumulator Batteries used as a reserve supply or as a UPS system**

22. (1) Any type of accumulator batteries may be used as the reserve source of energy or as part of a UPS system provided that the selection of battery type is appropriate to the supply load in accordance with these Regulations and the environmental conditions at the location where they are installed. Batteries of different types, different cell constructions and different capacities should not be mixed in the same battery bank.

(2) Any accumulator battery used as a reserve source of energy or as a UPS

shall:

(a) maintain its rated capacity when inclined at an angle of up to 22.5 degrees in any orientation;

(b) be provided with an instruction manual which should include at least;

(i) the capacity and temperature range within which the stated capacity is maintained for the specified operating period of either 1 hour or 6 hours as appropriate;

(ii) charging voltage and current limits in order to keep the batteries fully charged while preventing overcharging;

(iii) actual specific gravity of the electrolyte, or the cell voltages, or the voltage of the fully charged battery;

(iv) guidelines on carrying out a controlled discharge test;

(v) methods to determine the condition of the battery;

(vi) requirements for ventilation and maintenance

(c) be properly marked with the type or construction, the rated capacity and the installation date such markings to be visible with the batteries
in their stowed position; and

(d) have a suitable label warning of explosion dangers displayed near the installed batteries.

(3) Accumulator batteries used as a reserve source of energy or as a UPS system shall be stowed :

(a) in an elevated position in the ship as close as practical to the radio equipment;

(b) either in a permanent locker constructed and ventilated in accordance with Section 14 of the Regulations for the Electrical and Electronic Equipment of Ships published by the Institution of Electrical Engineers, or in a dedicated battery box mounted on deck and effectively ventilated;

(c) away from other batteries of different types and constructions when such other batteries may adversely affect them;

(d) in a location separate from any other electrical installations or equipment except batteries provided that lighting may be fitted in any battery locker if such lighting and associated connections is approved for use in the appropriate type of explosive atmosphere; and

(e) with sufficient space between batteries and between battery banks to permit inspections and maintenance and secured so as to remain firmly fixed in all likely sea conditions.

(4) Cabling from batteries shall be protected against earth and short-circuit faults and be appropriately fused and installed according to recognised international standards with sufficient dimensions to prevent voltage reductions at peak current consumption.

**Automatic Battery Chargers**

23. (1) An automatic battery charger fitted as part of the reserve battery system shall provide protection against over charging or discharging of the batteries arising from a charger fault and shall be capable of :

(a) recharging the completely discharged batteries to the minimum required capacity within 10 hours;

(b) being operational within 5 seconds of being switched on or following a power failure;

(c) keeping the batteries charged as prescribed by the manufacturer for permanent automatic charging; and

(d) maintaining the supplied voltage and current within the tolerance levels prescribed by the manufacturer taking into account the environmental conditions likely to be experienced in service.

(2) An automatic battery charger shall be provided with a visual indication that it is in operation and shall have an aural alarm and a visual indication at the conning position indicating whenever the charging voltage or the charging current is outside the limits given by the manufacturer for automatic charging. The alarm and visual indication shall reset automatically whenever the normal charging condition is restored and may be acknowledged and silenced manually but the alarm and visual indication may not be disabled. Failure of the alarm system shall not interrupt the charging or discharging of the batteries.

(3) An automatic battery charger shall be designed and constructed such that it is protected against damage resulting from disconnection of the batteries or, with the battery disconnected, short circuiting of the battery connections, and if the protection is provided by electronic means, it should reset automatically following removal of the open or short circuit condition.

**Serviceability and maintenance requirements**

24. (1) Every A1 ship and every A2 ship shall, in addition to meeting the requirements of regulations 9, 10 and 11, as appropriate, ensure that the availability of the equipment is maintained by any one of the following arrangements :

(a) duplication of equipment in accordance with regulation 25;

(b) shore based maintenance in accordance with regulation 26; or

(c) at sea electronic maintenance capability in accordance with regulation 27.

(2) Every A3 ship and every A4 ship shall, in addition to meeting the requirements of regulations 9, 13, 14, and 15 as appropriate ensure that the availability of the equipment is maintained by at least any two of the following arrangements :

(a) duplication of equipment in accordance with regulation 25;

(b) shore based maintenance in accordance with regulation 26; or

(c) at sea electronic maintenance capability in accordance with regulation 27.

(3) Every ship shall have available the manufacturer’s instruction manuals for the radio equipment in English kept readily available to the radio installation and in addition

such tools, spare parts and test equipment as are required to maintain availability in compliance with the requirements of paragraphs (1) and (2).

**Duplication of Equipment.**

25. (1) In any installation where duplication of equipment is the method of ensuring availability or one of the methods of ensuring availability, the following additional equipment shall be installed :

(a) for A1 ships, an additional VHF radio installation capable of transmitting and receiving DSC on channel 70 and radiotelephony on channel 6, channel 13 and channel 16 and of maintaining a continuous DSC watch on channel 70.

(b) for A2 ships, an additional VHF radio installation capable of transmitting and receiving DSC on channel 70 and radiotelephony on channel 6, channel 13 and channel 16 and of maintaining a continuous DSC watch on channel 70 and an additional MF radio installation capable of transmitting and receiving for distress and safety purposes on the frequency of 2182 kHz and on 2187.5 kHz using DSC and of maintaining a continuous DSC watch on the frequency of 2187.5 kHz.

(c) for A3 ships, an additional VHF radio installation capable of transmitting and receiving DSC on channel 70 and radiotelephony on channel 6, channel 13 and channel 16 and of maintaining a continuous DSC watch on channel 70 and in addition to the MF/HF installation required by regulation 14 or the INMARSAT ship earth station required by regulation 13, either an additional MF/HF installation complying with regulation 14(1)(a) and (b) or an INMARSAT ship earth station complying with regulation 13(1)(a).

(d) for A4 ships, an additional VHF radio installation capable of transmitting and receiving DSC on channel 70 and radiotelephony on channel 6 , channel 13 and channel 16 and of maintaining a continuous DSC watch on channel 70 and in addition to the MF/HF installation required by regulation 15, an additional MF/HF installation complying with regulation 14(1)(a) and (b).

(2) Every equipment which is carried as duplicated equipment in accordance with paragraph (1) shall be connected to a separate antenna and available at all times for immediate use and it shall be possible to connect the duplicated equipment to the reserve source of energy.

(3) Every equipment which is installed as duplicated equipment in accordance with paragraph (1) shall have a means provided to initiate transmission of distress alerts from the conning position or immediately adjacent thereto.

**Shore Based maintenance.**

26. In any installation where shore based maintenance is the method of ensuring availability or one of the methods of ensuring availability, there shall be a contract with a maintenance service provider acceptable to the Department and which is maintained in force and evidenced by a copy of the contract kept on board and posted in a conspicuous place adjacent to the radio station. The contract shall provide for arrangements to provide maintenance and repair facilities covering the ship's trading area or anticipated voyage.

**On board maintenance**

27. In any installation where on board maintenance is the method of ensuring availability or one of the methods of ensuring availability there shall be on board at all times :

(a) sufficient technical documentation, tools, test equipment and spare equipment to enable the person designated to maintain the equipment to perform tests and to locate, identify and repair faults in the equipment;

(b) a person designated to maintain the equipment who holds either;

(i) a radio maintenance certificate issued by or on behalf of the United Kingdom Secretary of State; or

(ii) a radio maintenance certificate accepted by the Department as an equivalent to such a certificate.

**Testing of the radio installation**

28. (1) Every radio installation required by these Regulations shall be tested daily to the extent of :

(a) establishing the proper functioning of the DSC facilities, without radiation of signals by use of the means provided on the equipment for this purpose; and

(b) establishing the condition of any batteries forming a part of the installation and if necessary ensuring that they are brought up to a fully charged state.

(2) Every radio installation required by these Regulations shall be tested weekly to the extent of at least :

(a) making a test call using the DSC facilities when within communication range of a coast radio station or a ship station to ensure proper operation of the DSC facilities except that where a ship has been out of range of a radio station fitted with DSC equipment for longer than one week, a test call shall be made at the first suitable opportunity when the ship comes within communication range. An acknowledged routine call may be regarded as a satisfactory DSC test call; and

(b) whenever the reserve source of energy is not a battery and is a device

such as a motor generator, a test of that equipment.

(3) Every radio installation required by these Regulations shall be tested monthly to the extent of at least:-

(a) determining the capability of every satellite EPIRB to operate properly using the means provided on the device and without transmitting a distress alert;

(b) determining the correct operation of every radar transponder;

(c) determining the security and condition of all batteries providing a source of energy to any part of the radio installation, their connections, and the condition of the compartment in which they are stowed.

**Radio personnel**

29. (1) Every ship shall carry a person or persons qualified for distress and safety radio communication purposes as specified in paragraph (3). Such person or persons shall hold the appropriate certificates specified in the Radio Regulations.

(2) In the case of passenger ships, at least one such person shall be assigned by the master to perform only radio communication duties during distress incidents.

(3) Except as provided in paragraph (4), in the case of all other ships one such person who is not the master shall be designated by the master to have primary responsibility for radio communications during distress incidents.

(4) Notwithstanding paragraph (3), in the case of small ships where there is only one deck officer in addition to the master and where the ship is an A1 ship or an A2 ship the responsibility for radio communications during distress incidents may be allocated to the master .

(5) On A1 ships the person qualified as mentioned in paragraph (1) shall hold at least a GMDSS restricted operator's certificate issued in accordance with sub-section D of Section IIIA of Article 55 of the Radio Regulations. On A2 ships, A3 ships and A4 ships the person qualified as mentioned in paragraph (1) shall hold a GMDSS general operator's certificate issued in accordance with C of Section III of Article 55 of the Radio Regulations.

**Radio records**

30. (1) A record (hereinafter referred to as "the Radio Log") shall be kept of communications to the extent of at least:

(a) a summary of communications relating to distress, urgency and safety traffic and the times of such communications;

(b) a record of important incidents connected with the radio service and the time of such incidents;

(c) where appropriate, the position of the ship at least once in every day and the time that the ship was in that position; and

(d) the results of tests carried out in accordance with regulation 28.

(2) The Master shall inspect and sign each day's entries in the Radio Log.

(3) The Radio log shall be available for inspection by ***an inspector, RO or*** Officers authorised by the Department to make such inspection.

***(4) The Radio log must be -***

**(a)** ***opened and closed at the same time as the official log book;***

**(b)** ***kept on board the ship and made available for inspection by an inspector or RO for a period of 3 years from the date of closure; and***

**(c)** ***produced to the Department upon request as soon as is practicable but in any case within 3 months of the date of the request.***

## Part III
## ENFORCEMENT

### Power to detain

31. In any case where a ship to which these Regulations apply, does not comply with the requirements of these Regulations, the ship shall be liable to be detained and section 74 of the Merchant Shipping Registration Act 1991 (which relates to the detention of a ship) shall have effect in relation to the ship, subject to the modification that for the words "this Act" wherever they appear, there were substituted "the Merchant Shipping (Radio Installations) Regulations 1999". Provided that a ship shall not normally be detained in a port where repair facilities are not readily available by reason of malfunction of the equipment for providing general radiocommunications, provided the ship is capable of performing all distress and safety functions.

### Penalties

32. (1) If a person qualified in accordance with regulation 29, contravenes any provision of these Regulations he shall be guilty of an offence and liable on summary conviction to a fine not exceeding ***£2,000***[7]; and if any person, being the operator or master of the ship, permits such a contravention, he shall be guilty of an offence and liable on summary conviction to a fine not exceeding ***£10,000***[8] or, on conviction on information, to imprisonment for a term not exceeding 2 years and a fine.

(2) If these Regulations are contravened in any other respect to any ship, the operator and master of the ship shall each be liable on summary conviction to a fine not exceeding ***£10,000***[8] or, on conviction on information, to imprisonment for a term not exceeding 2 years and a fine.

[7] Increased to a fine not exceeding £2,000 by section 55 of the Interpretation Act 2015 with effect from 1 January 2018

[8] Increased to a fine not exceeding £10,000 by section 55 of the Interpretation Act 2015 with effect from 1 January 2018

(3) Where an offence under any of these Regulations committed by a body corporate is proved to have been committed with the consent or connivance of, or to have been attributable to any neglect on the part of, any director, manager, secretary or other similar officer of the body corporate or a person who was purporting to act in any such capacity, he as well as the body corporate shall be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

(4) Where the affairs of a body corporate are managed by its members, the preceding paragraph shall apply in relation to the acts and defaults of a member in connection with his functions of management as if he were a director of the body corporate.

(5) For the purposes of paragraph (4), "body corporate" includes a limited liability company constituted under the Limited Liability Companies Act 1996[9] and, in relation to such a company, any reference to a director or other officer of a body corporate is a reference to a member and to the company's manager and registered agent.

(6) It shall be a defence for the person charged under these Regulations to show that he took all reasonable precautions to avoid the commission of the offence.

Regulation 1(2)

## THE SCHEDULE

## REVOCATION

| *Reference* | *Title* | *Extent of Revocation* |
|---|---|---|
| GC 235/86 | The Merchant Shipping (Radio Installations) Regulations 1986 | The whole Regulations |
| GC 39/92 | The Merchant Shipping (Radio Installations) Regulations 1992 | The whole Regulations |

Made 29th January, 1999

*David North,*

MINISTER for Trade and Industry.

[9] 1996 c. 19

## EXPLANATORY NOTE

*(This note is not part of the Regulations)*

1. These Regulations give effect to amendments to Chapter IV of the International Convention for the Safety of Life at Sea 1974 which were adopted by states party to that Convention at a Conference on the Global Maritime Distress and Safety Systems (GMDSS) on 11th November 1988 and to subsequent amendments made since that date. GMDSS is the International Maritime Organization's world-wide network of automated emergency communications for vessels at sea.

2. Part I of these Regulations contains definitions, application provisions, and provisions for exemptions, equivalents and performance standards.

3. Part II contains the equipment carriage provisions. The carriage requirements depend on the ship's area of operations. For this purpose the world is divided up under the GMDSS into four sea areas : area A1 which is within range of VHF coastal radio; area A2 which is within range of MF coastal radio; area A3 which is within coverage of geostationary satellites; and area A4 which covers the remainder of the world. The requirements for maintenance of the equipment carried permit some flexibility; maintenance may be achieved by duplication of equipment, by shore-based maintenance or by an at-sea maintenance capability.

4. The 1986 and 1992 Regulations are revoked by the 1998 Regulations with effect from 1st February 1999.

**Amendments:**

This text is marked with amendments ***(in bold italic type)*** made to these Regulations by:

SD260/98 Merchant Shipping (High Speed Craft) Regulations 1998

SD 396/03 MS (Pleasure Vessel) Regulations 2003 which amended the definition of a Pleasure Vessel

SD 269/04 MS (Safety of Navigation - SOLAS Chapter V) Regulations 2004 which made a consequential amendment to regulation 7(f)

SD2014/0238 Merchant Shipping (Manning and STCW) Regulations 2014

SD2018/0088 Merchant Shipping (Survey and Certification) Regulations 2018

SD2018/0324 Merchant Shipping (Amendment) Regulations 2019

Section 55 of the Interpretation Act 2015 which increase the fines with effect from 1 January 2018

The functions in these Regulations have been transferred by SD155/10 to the Department of Economic Development and then to the Department for Enterprise by SD2017/0325 the Transfer of Functions (Economic Development and Education) Order 2017 with effect from 24 November 2017.