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Australian Maritime Safety Authority

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made under the *Navigation Act 2012*

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	Page
Division 1 Preliminary	4
1 Name of Order.....	4
2 Purpose.....	4
3 Power.....	4
4 Definitions.....	5
5 Interpretation.....	7
6 Application.....	7
7 Exemptions.....	7
8 Equivalentents.....	8
Division 2 Navigation safety	8
Subdivision 2.1 Navigation safety measures	8
9 Safe navigation and avoidance of dangerous situations.....	8
10 Persons not to interfere with Master’s decisions.....	8
11 Cooperation with search and rescue services.....	9
12 Ship reporting systems.....	9
13 Use of heading or track control systems.....	9
14 Records of navigational activities.....	9
Subdivision 2.2 Navigation safety equipment	10
15 Bridge design, bridge procedures, design and arrangement of navigational systems and equipment.....	10
16 Maintenance of navigational equipment.....	10
17 Equipment information and instructions to be kept on vessel.....	10
18 Magnetic compass.....	11
19 Electromagnetic compatibility.....	11
20 Radio installations, navigational systems and equipment.....	12
21 Long-range identification and tracking of vessels.....	13
22 International Code of Signals and IAMSAR Manual.....	13
23 Nautical charts and nautical publications.....	13
24 Other equipment.....	14
Division 3 Radio equipment	15
25 Functional requirements.....	15
26 Specific requirements.....	15
27 EPIRBs — requirements for fitting and maintenance etc.....	17
Division 4 Danger, urgency and distress messages	17
Subdivision 4.1 Safety signals and danger messages	17
28 Safety signals and danger messages.....	17
29 Transmission of safety signals and danger messages.....	18
30 Duties of person receiving a safety signal.....	18
31 Priority of safety traffic.....	18
32 Official logbook entries.....	18
Subdivision 4.2 Urgency and distress messages	19
33 Urgency signal.....	19
34 Urgency messages.....	19
35 Authority for transmission of urgency signal.....	19
36 Distress signals.....	20
37 Use of signal of distress.....	20
38 Distress defence.....	20
39 Obligations and procedures.....	20
40 Duties on activation of a distress watch receiver.....	20
41 Duties of a person hearing an urgency or distress signal.....	21
42 Life-saving signals to be used by ships, aircraft or persons in distress.....	21
43 Misuse of distress and safety signals.....	22
Division 5 Other matters	22
44 Testing of equipment — default requirement.....	22
Division 6 Transitional arrangements	23
45 Continuation of exemptions.....	23
46 Approvals.....	23

	Page
Schedule 1 Compass deviation book information.....	24
Schedule 2 IMO resolutions	25
Schedule 3 GMDSS equipment for vessels to which Chapter IV of SOLAS does not apply	30
Schedule 4 Station frequencies for GMDSS distress and safety communications	32

Section 1

Division 1 Preliminary**1 Name of Order**

This Order is *Marine Order 27 (Safety of navigation and radio equipment) 2016*.

2 Purpose

This Order:

- (a) provides for the following:
 - (i) navigation safety measures and equipment;
 - (ii) radio equipment;
 - (iii) danger, urgency and distress signals and messages; and
- (b) gives effect to the following:
 - (i) Chapter IV of SOLAS (Radiocommunications);
 - (ii) paragraph 7 of Regulation 10 and paragraph 7 of Regulation 11 of Chapter V of SOLAS (Safety of navigation);
 - (iii) Regulations 15 to 21, 24, 27, 28 and 29, and 31 to 35 of Chapter V of SOLAS.

3 Power

- (1) The following provisions of the Navigation Act provide for this Order to be made:
 - (a) subsection 187(1) which provides that the regulations may prescribe matters for reports of dangers to navigation;
 - (b) paragraph 309(2)(a) which provides that the regulations may prescribe the entries to be made in an official logbook and when they must be made;
 - (c) paragraph 339(2)(b) which provides that the regulations may provide for machinery and equipment to be carried on board vessels including for sending or receiving distress, urgency and other signals, radio installations, radio navigational aids and communication equipment, and compasses;
 - (d) paragraph 339(2)(c) which provides that the regulations may provide for the operation, maintenance, checking and testing of this machinery and equipment;
 - (e) paragraph 339(2)(g) which provides that the regulations may provide for the equipment to be carried on vessels and measures to be carried out for the saving of life at sea;
 - (f) paragraph 339(2)(l) which provides that the regulations may provide for logbooks;
 - (g) paragraph 339(2)(m) which provides that the regulations may provide for records for compliance with the Act;
 - (h) paragraph 340(1)(a) which provides that the regulations may give effect to SOLAS;
 - (i) subsection 341(1) which provides that the regulations may provide for the imposition of penalties for a contravention of a provision of the regulations.

- (2) Subsection 339(1) of the Navigation Act provides for regulations to be made prescribing matters required or permitted to be prescribed, or that are necessary or convenient to be prescribed, for carrying out or giving effect to the Act.
- (3) Subsection 342(1) of the Navigation Act provides that AMSA may make a Marine Order about matters that can be provided for by regulation.

4 Definitions

- (1) In this Order:

AIS-SART means Automatic Identification System – Search and Rescue Transmitter.

approved means approved by:

- (a) for a regulated Australian vessel — the issuing body; or
- (b) for a foreign vessel — the administration of the country of registry of the vessel; or
- (c) for a training course — AMSA.

ARPANSA means the Australian Radiation Protection and Nuclear Safety Agency.

coast radio station means a radio installation established on land for the exchange of radio communications with vessels.

direct-printing telegraphy means automated telegraphy techniques which comply with the relevant recommendations of the ITU–R.

DSC means digital selective calling, a technique that:

- (a) uses digital codes to enable a radio station to establish contact with, and transfer information to, another station or group of stations; and
- (b) complies with recommendations of the ITU–R.

DSC urgency announcement means a digital selective call, relayed through radio stations, using:

- (a) an urgency call format, in the bands used for terrestrial radiocommunication; or
- (b) an urgency message format.

DSC watchkeeping receiver means a radio installation maintaining a continuous watch on one or more specified DSC frequencies.

EGC means enhanced group calling.

EPIRB means an approved emergency position indicating radio beacon.

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

GMDSS means Global Maritime Distress and Safety System.

IAMSAR Manual means the *International Aeronautical and Maritime Search and Rescue Manual* published jointly by ICAO and the IMO, as amended from time to time.

ICAO means the International Civil Aviation Organization.

INMARSAT means the system of geostationary satellites for world-wide mobile communications services, and which supports the Global Maritime Distress and Safety System and other emergency communications systems.

Section 4

International Code of Signals means the *International Code of Signals* published by the IMO.

maritime safety information (MSI) means navigational and meteorological warnings, meteorological forecasts and other urgent safety related messages broadcast to ships.

NAVAREA X is the sea area with the boundaries mentioned for Navarea X in subsection 2.2.2 of IMO Circular MSC.1/Circ.1403 *Revised NAVTEX Manual*.

NAVTEX means the system for the broadcast and automatic reception of maritime safety information by means of narrow-band direct-printing telegraphy.

qualified compass adjuster means a person who:

- (a) has completed an approved training course; or
- (b) on 30 June 2016 held a compass adjuster licence issued by AMSA under *Marine Order 21 (Safety of navigation and emergency procedures) 2012*; or
- (c) has completed training that is considered by AMSA to be equivalent to an approved training course.

Radio Regulations has the same meaning as in Regulation 2.11 of Chapter IV of SOLAS.

Note The text of the Radio Regulations is available at the International Telecommunication Union website: <http://www.itu.int>.

radio station means a vessel radio station or a coast radio station.

recognised mobile satellite service means any service which operates through a satellite system that is for use in the global maritime distress and safety system (GMDSS) and recognised by the IMO.

sea area A1 means an area within the VHF radiotelephone coverage area of any coast radio station providing a continuous DSC alerting service on VHF frequency 156.525 MHz.

sea area A2 means an area, excluding sea area A1, within the MF radiotelephone coverage area of any coast radio station providing a continuous DSC alerting service on MF frequency 2187.5 kHz.

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.

vessel radio station means a radio installation on board a vessel.

- (2) Any other term that is used in this Order and defined in the Radio Regulations, has the meaning given in those Regulations.

Note 1 Some terms used in this Order are defined in *Marine Order 1 (Administration) 2013*, including:

- IMO
- SOLAS
- STCW Code.

Note 2 Other terms used in this Order are defined in the Navigation Act, including:

- AMSA

- GT
- inspector
- owner
- Prevention of Collisions Convention
- regulated Australian vessel
- STCW Convention.

Note 3 Information on obtaining copies of any IMO Resolution, IMO document or other document that is mentioned in this Order is available from the AMSA website Marine Orders link at <http://www.amsa.gov.au>.

Note 4 For delegation of AMSA's powers under this Order — see the AMSA website at <http://www.amsa.gov.au>.

5 Interpretation

A reference to the Administration in SOLAS, an IMO resolution or a document mentioned in this Order is taken to mean:

- (a) for a regulated Australian vessel — AMSA; or
- (b) for a foreign vessel — the government of the country whose flag the vessel is entitled to fly.

6 Application

- (1) This Order applies to:
 - (a) a regulated Australian vessel; and
 - (b) a foreign vessel.
- (2) However, for provisions giving effect to Chapter IV of SOLAS, this Order applies to a foreign vessel only if Chapter IV of SOLAS applies to the vessel.

7 Exemptions

- (1) The owner of a regulated Australian vessel may apply for an exemption of the vessel from a requirement of this Order in accordance with the application process set out in Division 3 of *Marine Order 1 (Administration) 2013*.
- (2) AMSA may give an exemption only if satisfied that:
 - (a) compliance with the requirement would be unnecessary or unreasonable having regard to the vessel, its equipment and its intended voyage; and
 - (b) giving the exemption would not contravene SOLAS.
- (3) An exemption is subject to any conditions AMSA imposes to ensure the safety of the vessel.
- (4) The owner of the vessel must comply with any conditions mentioned in subsection (3).

Note 1 *Marine Order 1 (Administration) 2013* deals with the following matters about exemptions and equivalents:

- making an application
- seeking further information about an application
- the time allowed for consideration of an application
- imposing conditions on approval of an application
- notification of a decision on an application review of decisions.

Section 8

Note 2 For transitional arrangements for an exemption given from a provision of a previous issue of this Order — see Division 6.

8 Equivalentents

- (1) A person may apply, in accordance with the application process set out in Division 3 of *Marine Order 1 (Administration) 2013*, for approval to use an equivalentent.

Note For definitions of equivalentent and use — see section 6 of *Marine Order 1 (Administration) 2013*.

- (2) AMSA may approve use of an equivalentent only if satisfied that use of the equivalentent would be at least as effective as compliance with the requirement to which the equivalentent is an alternative.

Note For transitional arrangements for an approval to use an equivalentent that was given under a previous issue of this Order — see Division 6.

Division 2 Navigation safety**Subdivision 2.1 Navigation safety measures****9 Safe navigation and avoidance of dangerous situations**

[SOLAS V/34]

The master of a vessel must ensure that voyage planning has been carried out in accordance with Regulation 34 of Chapter V of SOLAS.

Note For guidance on voyage planning see the following:

- (a) IMO Resolution A.893(21) *Guidelines for voyage planning*;
- (b) IMO Resolution A.1024(26) *Guidelines for ships operating in polar waters*;
- (c) IMO Circulars MSC/Circ.1063 *Participation of ships in weather routeing services*;
- (d) IMO Circular MSC/Circ.1293 *Participation in the WMO voluntary observing ships (VOS) scheme*;
- (e) IMO Resolution A.999(25) *Guidelines on voyage planning for passenger ships operating in remote areas*;
- (f) IMO Circular MSC/Circ.1056 *Guidelines for ships operating in Arctic ice-covered waters*.

10 Persons not to interfere with Master's decisions

- (1) A person must not prevent or restrict the master of a vessel from taking or executing any decision that the master says is necessary for safe navigation or protection of the marine environment.

Penalty: 50 penalty units.

- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).

Civil penalty: 50 penalty units.

11 Cooperation with search and rescue services

[SOLAS V/7.3]

For a passenger vessel to which Chapter I of SOLAS applies:

- (a) the owner must ensure that there is on board the vessel a plan, developed in accordance with paragraph 3 of Regulation 7 of Chapter V of SOLAS, for cooperation with search and rescue services in an emergency; and
- (b) the master must conduct periodic exercises in accordance with the plan.

Note for paragraph (a) For preparing plans — see IMO Circular MSC/Circ.1079 *Guidelines for preparing plans for cooperation between search and rescue services and passenger ships (in accordance with Regulation V/7.3 of SOLAS)*.

12 Ship reporting systems

[SOLAS V/11.7]

- (1) The master of a vessel must comply with paragraph 7 of Regulation 11 of Chapter V of SOLAS.
Penalty: 50 penalty units.
- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).
Civil penalty: 50 penalty units.

13 Use of heading or track control systems

[SOLAS V/24]

- (1) The master of a vessel must ensure that manual control of the vessel's steering can be established immediately when heading or track control systems are in use on the vessel.
- (2) The officer of the watch must ensure that a person who has an approved steering certificate is available to immediately take manual control of the vessel's steering if the vessel is operating in an area or in conditions where navigation requires special caution.

Examples

- an area of high traffic density
 - conditions of restricted visibility
- (3) The master of a vessel must ensure that a change from automatic to manual control and from manual to automatic control of a vessel's steering is made:
 - (a) by the officer of the watch; or
 - (b) under the supervision of the officer of the watch.
 - (4) The master of a vessel must ensure that the manual steering of a vessel is tested:
 - (a) after prolonged use of the heading or track control systems; and
 - (b) before entering an area where navigation requires special caution.

14 Records of navigational activities

[SOLAS V/28]

The master of a vessel must ensure that:

- (a) the navigational activities and incidents of importance to safety of navigation on the vessel are recorded; and

Section 15

- (b) the records:
- (i) contain sufficient detail to enable the restoration of a complete record of the voyage; and
 - (ii) are available for inspection on the vessel at all times.

Note For guidance on records — see IMO Resolution A.916(22) *Guidelines for recording of events related to navigation*.

Subdivision 2.2 Navigation safety equipment**15 Bridge design, bridge procedures, design and arrangement of navigational systems and equipment****[SOLAS V/15]**

The owner of a vessel must make decisions about bridge design, bridge procedures and the design and arrangements of navigational equipment in accordance with Regulation 15 of Chapter V of SOLAS.

16 Maintenance of navigational equipment**[SOLAS V/16]**

- (1) The master of a vessel must take all reasonable steps to have navigational equipment maintained in efficient working order.
- (2) The owner of a vessel must ensure that spare parts and tools for repairs to navigational equipment fitted on the vessel are available on the vessel.
Penalty: 50 penalty units.
- (3) An offence against subsection (2) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (2).
Civil penalty: 50 penalty units.
- (5) The spare parts and tools must be those that are recommended by the manufacturer of the navigational equipment.
- (6) However, if the vessel is at a place where repair facilities are not available and a defect in navigational equipment is discovered on the vessel, the master of the vessel may, if agreed by AMSA, proceed to a port where repairs can take place.
- (7) For subsection (6), the master of the vessel must ensure that the inoperative equipment or the unavailability of information is taken into account when planning and making the voyage to the port.

17 Equipment information and instructions to be kept on vessel

- (1) The owner of a vessel must ensure that information and instructions about the use and maintenance of all navigational equipment on the vessel are on the vessel.
Penalty: 50 penalty units.
- (2) The owner of the vessel must ensure that the information and instructions are written in English or, for a foreign vessel, the working language of the vessel.
Penalty: 50 penalty units.
- (3) An offence against subsection (1) or (2) is a strict liability offence

Section 19

- (4) A person is liable to a civil penalty if the person contravenes subsection (1) or (2).

Civil penalty: 50 penalty units.

18 Magnetic compass

- (1) The master of a vessel must ensure that:
- (a) for a vessel more than 100 GT:
 - (i) a compass deviation book is kept on the vessel; and
 - (ii) the information mentioned in Schedule 1 is recorded in the compass deviation book; and
 - (b) if the observations for a magnetic compass on the vessel show a deviation of the compass on any heading of more than 5° — the compass is adjusted to correct the deviation in accordance with subsection (2); and
 - (c) for each magnetic compass fitted on the vessel — the tables or curve of residual deviations from the last adjustment, and details of subsequent changes in deviations, are available for use at all times; and
 - (d) the size and position of magnets and soft iron correctors in a compass fitted on the vessel and the date and nature of any changes made to them or to their position are recorded by the person making the adjustment.

Penalty: 50 penalty units.

- (2) For paragraph (1)(b), the compass must be adjusted by a qualified compass adjuster or the master of the vessel.

Note For circumstances in which it is recommended that a compass be adjusted, see Annex G of ISO 25862:2009 *Ships and marine technology – Marine magnetic compasses, binnacles and azimuth reading devices*.

- (3) An offence against subsection (1) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (1).
- Civil penalty: 50 penalty units.
- (5) If a compass is adjusted, details of the deviations in the approved form must be:
- (a) if the compass is adjusted by a qualified compass adjuster — given to the master by the qualified compass adjuster; or
 - (b) if the compass is adjusted by the master — prepared by the master.
- (6) An inspector may direct the master of a vessel to have a compass of the vessel adjusted if the inspector considers that:
- (a) paragraph (1)(c) or (d) has not been complied with; and
 - (b) the compass is, or may be, unreliable.
- (7) The master of a vessel must comply with the direction as soon as practicable.

19 Electromagnetic compatibility

[SOLAS V/17]

- (1) The owner of a vessel must ensure that the electrical and electronic equipment on or near the bridge of a vessel constructed after 30 June 2002 is tested for electromagnetic compatibility in accordance with IEC 60533:2015 *Electrical*

Section 20

and electronic installations in ships – Electromagnetic compatibility (EMC) – Ships with a metallic hull.

- (2) The owner of a vessel must ensure that electrical and electronic equipment installed after 30 June 2002 does not affect navigational systems and equipment on the vessel.

Penalty: 50 penalty units.

- (3) A person must not operate portable electrical or electronic equipment on a vessel if it may affect navigational systems and equipment on the vessel.

Penalty: 50 penalty units.

- (4) An offence against subsection (2) or (3) is a strict liability offence.

- (5) A person is liable to a civil penalty if the person contravenes subsection (2) or (3).

Civil penalty: 50 penalty units.

20 Radio installations, navigational systems and equipment

[SOLAS IV/7 to 11, V/18, 19 and 20]

- (1) The owner of a vessel must ensure that the systems and equipment mentioned in Regulations 19 and 20 of Chapter V of SOLAS for the vessel are type approved and installed.

- (2) The owner of a vessel must ensure that the systems and equipment mentioned in Regulations 7 to 11 of Chapter IV of SOLAS are installed.

- (3) The owner of a vessel must ensure each of the following complies with each applicable IMO Resolution, as amended from time to time, that is mentioned in Schedule 2:

- (a) systems and equipment;
- (b) back-up arrangements, replacements and additions for systems and equipment;
- (c) radio installations.

Note Information on obtaining copies of the IMO Resolutions mentioned in Schedule 2, and any amendments made to them, is available in the related information on the Marine Orders link on the AMSA website at <http://www.amsa.gov.au>.

- (4) Radio installations installed on a vessel must comply with the ARPANSA Radiation Protection Standard *Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300GHz* (Radiation Protection Series Publication No.3), as in force from time to time.

Note This standard is available from the ARPANSA website at <http://www.arpansa.gov.au>.

- (5) For a vessel carrying an electronic chart display and information system (**ECDIS**) for compliance with paragraph 2.1.4 of Regulation 19 of Chapter V of SOLAS:

- (a) the owner of the vessel must ensure that the system and the back-up arrangements required by paragraphs 2.1.4 and 2.1.5 of Regulation 19 of Chapter V of SOLAS are approved; and
- (b) the master of the vessel and all deck watchkeeping officers must have completed an approved training course in its use in accordance with Part A of Chapter II of the STCW Code.

Section 23

- (6) The owner of a vessel must ensure that:
- (a) any automatic identification system used on the vessel is tested annually by the issuing body or an approved testing or servicing facility in accordance with paragraph 9 of Regulation 18 of Chapter V of SOLAS; and
 - (b) any voyage data recorder system used on the vessel, including all sensors, is tested by an approved testing or servicing facility in accordance with paragraph 8 of Regulation 18 of Chapter V of SOLAS and a certificate of compliance issued stating the date of compliance and the performance standards for the system; and
 - (c) a copy of the certificate of compliance is available for inspection on board the vessel.
- (7) The master of a vessel must ensure that any automatic identification system installed on a vessel is used, and that use of the system is in accordance with the *Revised Guidelines for the onboard operational use of shipborne Automatic Identification Systems (AIS)*, adopted by IMO Resolution A.1106(29), as amended from time to time.

21 Long-range identification and tracking of vessels**[SOLAS V/19-1]**

The owner of a vessel to which Regulation 19-1 of Chapter V of SOLAS applies must ensure that:

- (a) the equipment mentioned in the Regulation is fitted; and
- (b) the following information is transmitted automatically:
 - (i) the identity of the vessel;
 - (ii) the position (latitude and longitude) of the vessel;
 - (iii) the date and time the position information is provided.

22 International Code of Signals and IAMSAR Manual**[SOLAS V/21]**

The owner of a vessel must ensure that the following documents are kept on the vessel and are available for inspection:

- (a) a copy of the latest edition of the International Code of Signals;
- (b) a copy of Volume III (Mobile facilities) of the IAMSAR Manual.

23 Nautical charts and nautical publications**[SOLAS V/27]**

- (1) The owner of a vessel embarking on a voyage must ensure nautical charts and nautical publications on board for the intended voyage are adequate and up to date.
- (2) The owner of a vessel must ensure that any electronic version of a nautical chart or nautical publication mentioned in subsection (1) is:
 - (a) a version officially issued by an administration, authorised hydrographic office or other approved organisation; and

Section 24

- (b) accessible using a computer that is:
 - (i) located on the bridge; and
 - (ii) available at all times to the officer of the watch; and
 - (iii) connected to the vessel's main and emergency power supplies.
- (3) For an electronic nautical publication, the owner of a vessel must ensure that a back up version is available:
 - (a) as an up to date printout; or
 - (b) on at least 1 other computer or in digital format (eg portable mass storage device or compact disc) that can be made available to the officer of the watch within 5 minutes.
- (4) For an electronic nautical chart, the owner of the vessel must ensure that:
 - (a) the chart is displayed on an ECDIS that complies with Regulation 19 of Chapter V of SOLAS; and
 - (b) a back up version is available:
 - (i) on a second ECDIS that complies with Regulation 19 of Chapter V of SOLAS; or
 - (ii) as a folio of adequate and up to date paper charts relevant to the voyage.
- (5) The owner of a vessel must ensure that all software and hardware used for accessing official electronic versions of nautical publications complies with the recommendations of IMO Circular MSC/Circ.891 *Guidelines for the onboard use and application of computers*.
- (6) The master of a vessel must ensure that the information mentioned in subsections (1) and (2) is on board before embarking on a voyage.

24 Other equipment

- (1) The owner of a vessel must ensure that the vessel has on board equipment in good working condition that will, if an electronic system fails, enable:
 - (a) an adequate lookout to be maintained; and
 - (b) safe navigation of the vessel.
- (2) For a vessel less than 500 GT, the master must ensure that the vessel has on board flags N and C of the International Code of Signals.
- (3) For a vessel at least 500 GT, the master must ensure that the vessel has on board a complete set of flags of the International Code of Signals.
- (4) Except in an emergency, the master of a vessel must not use, or permit to be used, any equipment mentioned in subsection (1) that is not in good working condition or that is improperly rigged.

Penalty: 50 penalty units.
- (5) An offence against subsection (4) is a strict liability offence.
- (6) A person is liable to a civil penalty if the person contravenes subsection (4).

Civil penalty: 50 penalty units.

Division 3 Radio equipment

25 Functional requirements

- (1) Every vessel to which Chapter IV of SOLAS applies, while at sea, must be able to meet the functional requirements set out in Regulation 4 of Chapter IV of SOLAS.
- (2) Every vessel to which Chapter IV of SOLAS does not apply, while at sea, must be able to meet the following functional requirements:
 - (a) perform ship-to-shore distress alerting by two independent means;
 - (b) transmit ship-to-ship distress alerting;
 - (c) transmit and receive on-scene communications, including appropriate SAR co-ordinating communications;
 - (d) transmit locating signals, unless AMSA considers that the nature of the vessel's operations makes this requirement unnecessary; and
 - (e) receive maritime safety information.

Note 1 Examples of installations on vessels to which Chapter IV of SOLAS does not apply that AMSA considers meet the functional requirements mentioned in this provision are in Schedule 3.

Note 2 See IMO Circular MSC/Circ.803 *Participation of non-SOLAS ships in the global maritime distress and safety system (GMDSS)*.

- (3) A radio installation on a vessel must be capable of assisting other vessels in distress, including having the ability to receive shore-to-ship and ship-to-ship distress alerting.

26 Specific requirements

- (1) The radio installations, equipment, watchkeeping arrangements, sources of energy, performance standards, maintenance requirements, personnel and record-keeping of a vessel to which Chapter IV of SOLAS applies must comply with:
 - (a) Regulations 6 to 18 of Chapter IV of SOLAS; and
 - (b) the Radio Regulations; and
 - (c) the STCW Convention; and
 - (d) the STCW Code.

Note 1 A list of IMO performance standards for radio equipment is set out in a footnote to Regulation 14 of Chapter IV of SOLAS.

Note 2 If the vessel has, as a source of energy required under paragraph 1 of Regulation 13 of Chapter IV of SOLAS, at least 1 rechargeable accumulator battery and the source of energy meets the requirements of Regulation 13, AMSA will consider exempting the vessel from the requirement mentioned in paragraph 2 of Regulation 13 for a reserve source of energy.
- (2) The radio installations, equipment, watchkeeping arrangements, sources of energy, performance standards, maintenance requirements, personnel and record-keeping of a vessel to which SOLAS does not apply must:
 - (a) enable the functional requirements mentioned in subsection 25(2) to be met; and
 - (b) comply with the relevant provisions of the Radio Regulations, the STCW Convention and the STCW Code.

Section 26

- (3) MF/HF radiotelephone equipment, VHF equipment and satellite communications equipment must:
 - (a) meet the performance standards mentioned in Regulation 14 of Chapter IV of SOLAS that apply to them; and
 - (b) be capable of operating on:
 - (i) the frequencies mentioned in Schedule 4 that apply to them; and
 - (ii) any other frequency that is appropriate to the service in which the vessel is engaged.
- (4) MF/HF radiotelephone equipment and VHF equipment must meet the climatic and durability testing standards mentioned in IEC 60945:2002 *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results* as amended from time to time.
- (5) For VHF equipment, the priority of use and control of the channels required for navigational safety purposes must be immediately available at the place from which the vessel is normally navigated.
- (6) A radio logbook must be in the approved form.
- (7) A vessel normally engaged in harbour duties must:
 - (a) be fitted with a VHF radio installation with DSC capability; and
 - (b) be provided with an approved 406 MHz satellite EPIRB.
- (8) There must be carried on a vessel:
 - (a) the vessel's Cargo Ship Safety Radio Certificate;
 - (b) the vessel's Record of Equipment for Cargo Ship Safety Radio;
 - (c) for a regulated Australian vessel — documentation for any exemption:
 - (i) given by AMSA under section 7; or
 - (ii) continued in operation by section 45;
 - (d) for a foreign vessel — documentation issued by the Administration for the vessel for any exemption for safety radio equipment;
 - (e) a copy of the latest edition of the handbook for GMDSS ship station operators, published by AMSA;
 - (f) a copy of this Order, in electronic or printed form;
 - (g) a copy of the latest edition of the *Manual for use by the Maritime Mobile and Maritime Mobile-Satellite Services*, published by the International Telecommunication Union, in electronic or printed form;
 - (h) a copy of the latest edition of the *Admiralty List of Radio Signals*, published by the Hydrographer of the Navy (UK), in electronic or printed form;
 - (i) a copy of the latest edition of the *List of Ship Stations*, published by the International Telecommunication Union, in electronic or printed form;
 - (j) a copy of the latest edition of the *List of Call Signs and Numerical Identities of Stations used by the Maritime Mobile Satellite Services*, published by the International Telecommunication Union, in electronic or printed form;

Section 28

(k) the vessel's radio logbook.

Note for paragraph (e) The handbook for GMDSS ship station operators is available from the AMSA website at <http://www.amsa.gov.au>.

Note AMSA will consider exempting a vessel to which Chapter IV of SOLAS does not apply from paragraphs (8)(g) to (j).

- (9) Radio equipment must be tested:
- (a) at intervals specified by the manufacturer; and
 - (b) in accordance with the manufacturer's instructions.
- (10) Battery installations that provide emergency power supply to radio equipment must be tested monthly.

27 EPIRBs — requirements for fitting and maintenance etc

- (1) An EPIRB must be fitted, maintained, transported and disposed of in accordance with the manufacturer's instructions.

Penalty 50 penalty units

- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).

Civil penalty: 50 penalty units.

Note 1 Subsection 26(1) requires compliance with Regulations 6 to 18 of Chapter IV of SOLAS. Regulation 7.1.6 of Chapter IV of SOLAS requires each vessel to carry an EPIRB.

Note 2 A man-overboard-beacon (MOB) or a personal locator beacon (PLB) is not a substitute for an EPIRB.

Division 4 Danger, urgency and distress messages**Subdivision 4.1 Safety signals and danger messages**

[SOLAS V/31 & V/32]

28 Safety signals and danger messages

- (1) For subparagraph 187(1)(b)(i) of the Navigation Act:
- (a) the safety signal is the word 'securite' (pronounced 'say-cure-e-tay') spoken 3 times; and
 - (b) the danger message must include the information mentioned in Regulations 31 and 32 of Chapter V of SOLAS.
- Note* For paragraph (a), the sending of a safety signal will normally be preceded by a DSC safety announcement, or an EGC message with safety priority.
- (2) For subparagraph 187(1)(b)(ii) of the Navigation Act, the report to shore must be made to:
- (a) for a vessel in NAVAREA X — the Joint Rescue Coordination Centre; or
 - (b) for a vessel outside NAVAREA X — the Coordinator for the NAVAREA the vessel is in.

Note The telephone number of the Rescue Coordination Centre Australia is 1800 641 792 and the fax number is 1800 622 153.

Section 29

29 Transmission of safety signals and danger messages

- (1) A person may transmit the safety signal only to give notice that the calling radio station has a danger message to transmit about an important navigational or meteorological warning.
Penalty: 50 penalty units.
- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).
Civil penalty: 50 penalty units.
- (4) The master of a vessel must ensure that the safety signal is sent in accordance with Article 33 of the Radio Regulations.
- (5) The master must:
 - (a) send the danger message as soon as he or she has the information mentioned in subsection (1); and
 - (b) end the danger message with the name of the vessel and the call sign of the vessel radio station.
- (6) After sending the danger message, the master must make the observations and reports mentioned in paragraph 3 of Regulation 32 of Chapter V of SOLAS.

30 Duties of person receiving a safety signal

- (1) A person who operates a radio station on a vessel and hears the safety signal must listen on the radio frequency used for the transmission of the danger message until he or she is satisfied that the message is of no concern to the vessel.
Penalty: 50 penalty units.
- (2) A person must not interfere with the transmission of a danger message that follows the transmission of the safety signal.
Penalty: 50 penalty units.
- (3) An offence against subsection (1) or (2) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (1) or (2).
Civil penalty: 50 penalty units.

31 Priority of safety traffic

A danger message preceded by the safety signal has priority over all communications other than distress and urgency communications.

32 Official logbook entries

The master of a vessel must ensure that an entry is made in the official logbook recording:

- (a) any new danger to navigation observed; and
- (b) any danger message received for a new danger to the navigation of the vessel; and
- (c) information received on a new danger to the navigation of the vessel; and

- (d) any danger message and information sent or transmitted about a new danger to navigation and the exact time and position of the vessel when the transmission is made.

Subdivision 4.2 Urgency and distress messages

33 Urgency signal

- (1) The urgency signal is the words ‘pan pan’.
- Note* The sending of an urgency signal is normally preceded by a DSC urgency announcement or an EGC message with safety priority.
- (2) A person may transmit the urgency signal and a following message only:
- (a) when giving notice that the calling radio station has an urgent message to transmit about the safety of a vessel, an aircraft, a vehicle or a person; and
- (b) unless subsection 34(1) applies — on the distress frequency.
- Penalty: 50 penalty units.
- (3) An offence against subsection (2) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (2).
- Civil penalty: 50 penalty units.
- (5) An urgency signal or urgency traffic has priority over all other radio communication except distress traffic.

34 Urgency messages

- (1) If an urgency message that follows the urgency signal is a long message, a medical call or, in an area of heavy radio traffic, a repeated message, the radio frequency used for the message must:
- (a) not be the distress frequency; and
- (b) be stated in the DSC urgency announcement or urgency message.
- (2) A person must not interfere with the transmission of the urgency message that follows the transmission of the DSC urgency announcement or urgency signal.
- Penalty: 50 penalty units.
- (3) When the master of a vessel who sent the urgency message is satisfied that action called for by the urgency message is no longer necessary, the master must ensure that a further message is transmitted cancelling the urgency message.
- Penalty: 50 penalty units.
- (4) An offence against subsection (2) or (3) is a strict liability offence.
- (5) A person is liable to a civil penalty if the person contravenes subsection (2) or (3).
- Civil penalty: 50 penalty units.

35 Authority for transmission of urgency signal

A person on board a vessel may transmit an urgency signal or message only if he or she is authorised by the master of the vessel to do so.

Section 36

36 Distress signals

The signal of distress is the spoken word 'mayday'.

Note The sending of a distress signal will normally be preceded by a DSC alert or an EGC with distress priority. See also the signals mentioned in Annex IV in the Schedule to the Prevention of Collisions Convention.

37 Use of signal of distress

- (1) A person may transmit a signal of distress only if it relates to the transmission of:
 - (a) a distress call and a distress message; or
 - (b) the acknowledgment of a distress message; or
 - (c) other distress traffic mentioned in this Order.

Penalty: 50 penalty units.

- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).
Civil penalty: 50 penalty units.

38 Distress defence

For a person who is operating the radio station of a vessel, it is a defence to a prosecution under this Order that:

- (a) the vessel is in distress; and
- (b) the person cannot comply with this Order; and
- (c) the person uses any means available to attract attention to make known the vessel's position and to obtain help.

39 Obligations and procedures

- (1) The master of a vessel must meet the obligations and follow the procedures mentioned in Regulation 33 of Chapter V of SOLAS.
Penalty: 50 penalty units.
- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).
Civil penalty: 50 penalty units.

40 Duties on activation of a distress watch receiver

- (1) When the distress frequency watch receiver or EGC receiver distress alarm on a vessel is activated, the person in charge of the vessel radio station, if it is safe, must commence watch on the distress frequency or other frequency specified by the urgency or distress message.
Penalty: 50 penalty units.
- (2) The person must, if it is safe to do so, and he or she would not be in breach of section 41, keep watch for a time sufficient to ensure that:
 - (a) the urgency message or distress signal is received; or
 - (b) an urgency or distress message would have been received if one had been transmitted and the vessel had been within range of the transmitting station;
or

Section 42

- (c) the person is satisfied that the activation was due to:
- (i) a fault in the radio installation, or
 - (ii) an electrical storm.
- Penalty: 50 penalty units.
- (3) A person who receives an urgency or distress message, must immediately give the master details of the message if it is safe to do so.
- Penalty: 50 penalty units.
- (4) An offence against subsection (1), (2) or (3) is a strict liability offence.
- (5) A person is liable to a civil penalty if the person contravenes subsection (1), (2) or (3).
- Civil penalty: 50 penalty units.

41 Duties of a person hearing an urgency or distress signal

- (1) A person who hears an urgency or distress signal must, if it is safe to do so, continue to listen on the radio frequency on which it was received and must not resume normal radio service until:
- (a) if no message follows the signal — the end of at least 5 minutes; or
 - (b) if a message follows the signal — the person has told the master of the vessel details of the message and the master has permitted resumption of normal radio service.
- Penalty: 50 penalty units.
- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).
- Civil penalty: 50 penalty units.
- (4) The person in charge of the vessel radio station may resume normal communication on frequencies other than that used for the urgency or distress communication when a message that follows the activation of a DSC or EGC distress alert:
- (a) is not addressed to all radio stations; or
 - (b) is addressed to all vessels in a geographical area that does not include the current position of the vessel.

42 Life-saving signals to be used by ships, aircraft or persons in distress**[SOLAS V/29]**

- (1) The owner of a vessel must ensure that an illustrated table describing the life-saving signals to be used when communicating with life-saving stations, maritime rescue units and aircraft engaged in search and rescue operations is available to the officer of the watch at all times.
- Penalty: 50 penalty units.
- Note* Life-saving signals are described in Volume III (Mobile Facilities) of the IAMSAR Manual and illustrated in the International Code of Signals.
- (2) An offence against subsection (1) is a strict liability offence.

Section 43

- (3) A person is liable to a civil penalty if the person contravenes subsection (1).
Civil penalty: 50 penalty units.

43 Misuse of distress and safety signals

- (1) A person may do any of the following only if permitted by a Marine Order:
- (a) transmit or display a signal of distress;
 - (b) transmit an urgency signal;
 - (c) send out a danger message.
- Penalty: 50 penalty units.
- (2) A person may use a flare, rocket or shell, that could be mistaken for a prescribed signal of distress coming from a vessel, only if:
- (a) the person or another person is in distress; or
 - (b) both:
 - (i) the person has notified the JRCC using the approved form, and at least 24 hours before the proposed time of use of the flare, rocket or shell, of:
 - (A) the intended use of the flare, rocket or shell; and
 - (B) the proposed time for the intended use; and
 - (ii) the person has not received any objection from the RCC to the intended use. .
- Penalty: 50 penalty units.

Note 1 The approved form is available from the AMSA website at <http://www.amsa.gov.au>. Notification to the RCC may be by email: rccaus@amsa.gov.au or fax: 1800 622 153.

Note 2 The person may also need to comply with State or Territory requirements for the use of flares.

- (3) If a distress signal is accidentally transmitted or displayed from a vessel when there is no danger to the vessel, the master of the vessel must immediately tell the marine rescue coordination centre for the search and rescue area:
- (a) about the accidental transmission; and
 - (b) that there is no danger to the vessel.
- Penalty: 50 penalty units.

Note Cancellation of a distress alert sent accidentally must be in accordance with Article 32 of the International Telecommunication Convention Radio Regulations annexed to the most recent International Telecommunication Convention in force.

- (4) An offence against subsection (1), (2) or (3) is a strict liability offence.
- (5) A person is liable to a civil penalty if the person contravenes subsection (1), (2) or (3).
Civil penalty: 50 penalty units.

Division 5 Other matters**44 Testing of equipment — default requirement**

The manufacturer's requirements for inspection, testing, maintenance and replacement of navigation safety or radio equipment mentioned in this Order must be followed unless the Order requires another method for its inspection, testing, maintenance and replacement to be followed.

Division 6 Transitional arrangements

45 Continuation of exemptions

An exemption is taken to be in force under this Order if:

- (a) it was in force on 30 June 2016; and
- (b) either:
 - (i) it was an exemption given or continued under *Marine Order 21 (Safety of navigation and emergency procedures) 2012* from the requirements of section 21 or 22 of that Order; or
 - (ii) it was given or continued under *Marine Order 27 (Radio equipment) 2009*.

46 Approvals

An approval for use of an equivalent is taken to be approved under this Order if:

- (a) it was for an equivalent that was in use on a vessel on 30 June 2016; and
- (b) either:
 - (i) it was given or continued in force under *Marine Order 21 (Safety of navigation and emergency procedures) 2012* for a requirement of section 19 of that Order; or
 - (ii) it was given or continued in force under *Marine Order 27 (Radio equipment) 2009*.

Schedule 1 Compass deviation book information

(subparagraph 18(1)(a)(ii))

Item	Information
1	Date
2	vessel's position: (a) latitude; and (b) longitude
3	time of observation
4	body observed or method of obtaining true bearing or heading
5	direction of the vessel's head by: (a) standard compass; and (b) steering compass
6	direction of the vessel's head by gyro compass
7	direction of the vessel's true head
8	azimuth or bearing or heading by magnetic compass
9	azimuth/bearing or heading by gyro compass
10	true azimuth or bearing or heading
11	magnetic compass error
12	gyro compass error
13	corrected variation
14	magnetic compass deviation

Schedule 2 IMO resolutions

(subsection 20(3))

Note Information on obtaining copies of the IMO Resolutions mentioned in this schedule, and any amendments made to them, is available in the related information on the Marine Orders link on the AMSA website at <http://www.amsa.gov.au>.

IMO Resolution Number	IMO Resolution title
A.694(17)	<i>General requirements for shipborne radio equipment forming part of the global maritime distress and safety systems (GMDSS) and for electronic navigational aids</i>
MSC.434(98)	<i>Performance standards for a ship earth station for use in the GMDSS</i>
A.807(19)	<i>Performance standards for INMARSAT-C ship earth stations capable of transmitting and receiving direct-printing communications</i>
A.808(19)	<i>Performance standards for ship earth stations capable of two-way communication</i>
MSC.306(87)	<i>Revised performance standards for enhanced group call (EGC) equipment</i>
A.382(X), Annex II	<i>Recommendation on performance standards for magnetic compasses</i>
A.424(XI)	<i>Performance standards for gyro-compasses</i>
MSC.86(70), Annex 2	<i>Recommendation on performance standards for marine transmitting magnetic heading devices (TMHDs)</i> <i>Note</i> A TMHD installed after 31 December 1999 and before 1 July 2002 must conform to performance standards not inferior to those set out in MSC.86(70), Annex 2.
MSC.116(73)	<i>Performance standards for transmitting heading devices (THDs).</i> <i>Note</i> A THD installed after 30 June 2002 must conform to performance standards not inferior to those set out in MSC.116(73) Annex.
MSC.64(67), Annex 4	<i>Recommendation on performance standards for radar equipment</i>
MSC.192(79)	<i>Adoption of the revised performance standards for radar equipment</i> <i>Note</i> This resolution applies to equipment installed after 30 June 2008.
A.823(19)	<i>Recommendation on performance standards for automatic radar plotting aids (ARPA's)</i>

IMO Resolution Number	IMO Resolution title
A.817(19)	<i>Performance standards for electronic chart display and information systems (ECDIS)</i> <i>Note</i> This resolution applies to equipment installed after 30 December 1995 and before 1 January 2009.
MSC.232(82)	<i>Adoption of the revised performance standards for electronic chart display and information systems (ECDIS)</i> <i>Note</i> This resolution applies to equipment installed after 30 December 2008.
A.816(19)	<i>Performance standards for shipborne Decca navigator receivers</i>
A.818(19)	<i>Performance standards for shipborne Loran-C and Chayka receivers</i>
A.819(19)	<i>Performance standards for shipborne global positioning system (GPS) receiver equipment</i> <i>Note</i> This resolution applies if GPS receiver equipment was installed before 1 July 2003.
MSC.112(73)	<i>Adoption of the revised performance standards for shipborne global positioning system (GPS) receiver equipment</i> <i>Note</i> This resolution applies if GPS receiver equipment was installed after 30 June 2003.
MSC.53(66)	<i>Performance standards for shipborne GLONASS receiver equipment</i> <i>Note</i> This resolution applies if GLONASS receiver equipment was installed before 1 July 2003.
MSC.113(73)	<i>Adoption of the revised performance standards for shipborne GLONASS receiver equipment</i> <i>Note</i> This resolution applies if GLONASS receiver equipment was installed after 30 June 2003.
MSC.64(67), Annex 2	<i>Recommendation on performance standards for shipborne DGPS and DGLONASS maritime radio beacon receiver equipment</i> <i>Note 1</i> A shipborne DGPS and DGLONASS installed on or after 1 July 2003, must conform to performance standards not inferior to those mentioned in MSC.114(73), Annex. <i>Note 2</i> A shipborne DGPS and DGLONASS installed after 31 December 1998 and before 1 July 2003, must conform to performance standards not inferior to those mentioned in the Annex to MSC.64(67), Annex 2.
MSC.74(69), Annex I	<i>Recommendation on performance standards for shipborne combined GPS/GLONASS receiver equipment</i> <i>Note</i> MSC.74(69), Annex I applies to a GPS/GLONASS receiver installed before 30 June 2003.

IMO Resolution Number	IMO Resolution title
MSC.115(73)	<i>Adoption of the revised performance standards for shipborne combined GPS/GLONASS receiver equipment</i> <i>Note</i> MSC.115(73) applies to a GPS/GLONASS receiver installed after 30 June 2003.
MSC.233(82)	<i>Adoption of the performance standards for shipborne Galileo receiver equipment</i> <i>Note</i> MSC.233(82) applies to a Galileo receiver installed after 31 December 2008.
MSC.379(93)	<i>Performance standards for Shipborne Beidou Satellite Navigation System (BDS) receiver equipment</i>
MSC.401(95)	<i>Performance standards for multi-system shipborne radio navigation receivers</i>
MSC.64(67), Annex 3	<i>Recommendation on performance standards for heading control systems</i> <i>Note</i> A heading control system installed after 31 December 1998 must conform to performance standards not inferior to those mentioned in MSC.64(67), Annex 3.
MSC.74(69), Annex 2	<i>Recommendation on performance standards for track control systems</i> <i>Note</i> A track control system installed after 31 December 1999 must conform to performance standards not inferior to those mentioned in MSC.74(69), Annex 2.
A.526(13)	<i>Performance standards for rate-of-turn indicators</i>
A.224(VII)	<i>Performance standards for echo sounding equipment</i>
A.824(19)	<i>Performance standards for devices to indicate speed and distance</i> <i>Note 1</i> A device to measure and indicate speed and distance installed after 30 June 2002, must conform to performance standards not inferior to those mentioned in MSC.96(72), Annex. <i>Note 2</i> A device to indicate speed and distance installed after 31 December 1996 and before 1 July 2002 must conform at least to the performance standards mentioned in A.824(19). <i>Note 3</i> MSC.334(90) applies to equipment installed after 1 July 2014.
MSC.74(69), Annex 3	<i>Recommendation on performance standards for an universal shipborne automatic identification system (AIS)</i> <i>Note</i> AIS installed after 31 December 1999 must conform to performance standards not inferior to those mentioned in MSC.74(69), Annex 3.
MSC.263(84)	<i>Revised performance standards and functional requirements for the long range identification and tracking of ships (LRIT)</i>

IMO Resolution Number	IMO Resolution title
A.861(20)	<p><i>Performance standards for shipborne voyage data recorders (VDRs)</i></p> <p><i>Note 1</i> A VDR fitted before 1 June 2008, must conform to performance standards not inferior to those mentioned in A.861(20), Annex.</p> <p><i>Note 2</i> A VDR fitted after 31 May 2008, must also conform to the amendments to performance standards not inferior to those mentioned in MSC.214(81), Annex I.</p>
MSC.163(78)	<p><i>Performance standards for shipborne simplified voyage data recorders (S-VDRs)</i></p> <p><i>Note 1</i> A S-VDR fitted before 1 June 2008 must conform to performance standards not inferior to those mentioned in MSC.163(78), Annex.</p> <p><i>Note 2</i> A S-VDR fitted after 31 May 2008, must also conform to the amendments to performance standards not inferior to those mentioned in MSC.214(81), Annex 2.</p>
MSC.363(92)	<i>Performance standards for electronic inclinometers</i>
MSC.333(90)	<p><i>Adoption of revised performance standards for shipborne voyage data recorders (VDRs)</i></p> <p><i>Note</i> MSC.333(90) applies to equipment installed after 1 July 2014.</p>
A.575(14)	<i>Unification of performance standards for navigational equipment</i>
MSC.64(67), Annex I	<p><i>Recommendation on performance standards for integrated bridge systems (IBS)</i></p> <p><i>Note</i> An IBS fitted after 31 December 1998 must conform to performance standards not inferior to those mentioned in MSC.64(67), Annex I.</p>
MSC.86(70), Annex 3	<p><i>Recommendation on performance standards for an integrated navigation system (INS)</i></p> <p><i>Note</i> An INS installed after 31 December 1999 must conform to performance standards not inferior to those mentioned in MSC.86(70), Annex 3.</p>
MSC.252(83)	<p><i>Adoption of the revised performance standards for integrated navigation systems (INS)</i></p> <p><i>Note 1</i> An INS installed after 31 December 2010 must conform to performance standards mentioned in MSC.252(83).</p> <p><i>Note 2</i> Regulation 18 of Chapter V of SOLAS requires type approved navigation systems that conform to appropriate performance standards.</p>
MSC.452(99)	<i>Revised performance standards for integrated navigation systems (INS) (Resolution MSC.252(83))</i>

IMO Resolution Number	IMO Resolution title
MSC.128(75)	<i>Performance standards for a bridge navigational watch alarm system (BNWAS)</i> <i>Note</i> A BNWAS installed after 30 June 2003 must conform to performance standards not inferior to those mentioned in MSC.128(75), Annex.
A.343(IX)	<i>Recommendation on methods of measuring noise levels at listening posts</i>
MSC.86(70), Annex I	<i>Recommendation on performance standards for sound reception systems</i>
MSC.95(72)	<i>Performance standards for daylight signalling lamps</i>

Schedule 3 GMDSS equipment for vessels to which Chapter IV of SOLAS does not apply

(subsection 25(2))

Note This Schedule sets out examples of radio installations for a vessel to which Chapter IV of SOLAS does not apply that AMSA considers meet the functional requirements mentioned in subsection 25(2).

1 Australian coastal voyages (sea area A3):

Example A

- (a) A VHF radio installation with DSC capability; and
- (b) A DSC watchkeeping receiver for VHF channel 70 which may be separate or combined with the VHF radio installation mentioned in paragraph (a); and
- (c) A MF radio installation with DSC capability; and
- (d) A MF DSC watchkeeping receiver capable of maintaining a continuous DSC watch on 2187.5 kHz which may be separate or combined with the MF radio installation above; and
- (e) Ship earth station for a recognised mobile satellite service capable of:
 - (i) transmitting and receiving distress and safety communications using data-communications;
 - (ii) initiating and receiving distress priority calls;
 - (iii) transmitting and receiving general radio communications, using either radiotelephony or data communication;
 - (iv) receiving Maritime Safety Information (MSI) using enhanced group calling; and
- (f) A 406 MHz EPIRB; and
- (g) Hand held VHF radiotelephone apparatus fitted with VHF channels 6, 13, 16 and 67; and
- (h) 9 GHz radar transponder(s) or an AIS-SART, unless AMSA considers this unnecessary given the nature of the vessel's operations.

Note Specifications and performance standards of radio and communication equipment must be in accordance with Chapter IV of SOLAS.

Note for paragraph (e) Data communication includes direct-printing telegraphy.

Example B

- (a) A VHF radio installation with DSC capability; and
- (b) A DSC watchkeeping receiver for VHF channel 70 which may be separate or combined with the VHF radio installation mentioned in paragraph (a); and
- (c) A MF/HF radio installation with DSC capability; and

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- (d) A MF/HF DSC watchkeeping receiver capable of maintaining a continuous DSC watch on 2187.5 kHz, 8414.5 and at least one of the distress and safety frequencies 4207.5, 6312, 12577 or 16804.5 kHz, and allowing, at any time, the selection of any of any of these distress and safety frequencies. This equipment may be combined with or separate from the MF/HF radio installation mentioned in paragraph (c); and
 - (e) Ship earth station for a recognised mobile satellite service capable of receiving Maritime Safety Information (MSI) using enhanced group calling; and
 - (f) A 406 MHz EPIRB; and
 - (g) Hand held VHF radiotelephone apparatus fitted with VHF channels 6, 13, 16 and 67; and
 - (h) 9 GHz radar transponder(s) or an AIS-SART, unless AMSA considers this unnecessary given the nature of the vessel's operations.

Note for paragraphs (g) and (h) in Examples 1 and 2 Radar transponders and hand held VHF radiotelephone units are also required to be carried on a vessel for *Marine Order 25 (Equipment — lifesaving) 2014*. AMSA will take account of the requirements of that Order when considering the number of radar transponders and hand held VHF radiotelephone units required to meet the functional requirements of subsection 25(2).

2 International voyages

- (a) Items listed in Example 1A or 1B; and
- (b) a NAVTEX receiver when operating in a NAVTEX area.

3 Voyages in sea area A4

- (a) Items listed in Example 1B; and
- (b) HF narrow-band direct-printing equipment.

Schedule 4 Station frequencies for GMDSS distress and safety communications

(subsection 26(3))

A — Distress and Safety

Vessel Transmit Frequency	Vessel Receive Frequency	Remarks
A.1 Radiotelephone frequencies		
2182 kHz	2182 kHz	The IMO no longer recommends the monitoring of MF frequency 2182 kHz by international sea going vessels for distress and safety. In Australia, coast radio stations and volunteer marine rescue organisations do not continuously monitor 2182 kHz.
4125 kHz	4125 kHz	
6215 kHz	6215 kHz	
8291 kHz	8291 kHz	
12290 kHz	12290 kHz	
16420 kHz	16420 kHz	
156.800 MHz	156.800 MHz	VHF Marine channel 16
156.375 MHz	156.375 MHz	VHF Marine channel 67 — supplementary distress for Australia only
A.2 Digital Selective Calling (DSC) frequencies		
2187.5 kHz	2187.5 kHz	
4207.5 kHz	4207.5 kHz	
6312.0 kHz	6312.0 kHz	
8414.5 kHz	8414.5 kHz	
12577.0 kHz	12577.0 kHz	
16804.5 kHz	16804.5 kHz	
156.525 MHz	156.525 MHz	VHF marine channel 70
A.3 Narrow-Band Direct-Printing Telegraphy (NBDP) frequencies		
2174.5 kHz	2174.5 kHz	
4177.5 kHz	4177.5 kHz	
6268.0 kHz	6268.0 kHz	

8376.5 kHz	8376.5 kHz
12520.0 kHz	12520.0 kHz
16695.0 kHz	16695.0 kHz

A.4 Air-sea SAR communications Radiotelephone

4125.0 kHz	4125.0 kHz	First preference
3023.0 kHz	3023.0 kHz	Second preference
5680.0 kHz	5680.0 kHz	Third preference
156.300 MHz	156.300 MHz	VHF marine channel 6

A.5 Inter-ship Navigation and Safety Communications

156.650 MHz	156.650 MHz	VHF marine channel 13
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A.6 INMARSAT

1626.5 – 1645.4 MHz	1530 – 1544 MHz
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B — Maritime Safety Information

Vessel Transmit Frequency	Vessel Receive Frequency	Remarks
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B.1 HF Narrow-Band Direct-Printing Telegraphy (NBDP) frequencies (not used in Australia for MSI)

4210.0 kHz
6314.0 kHz
8416.5 kHz
12579.0 kHz
16806.5 kHz

B.2 NAVTEX (not used in Australia)

518.0 kHz
490.0 kHz
4209.5 kHz

B.3 INMARSAT

1626.5 – 1645.5 MHz	1530 – 1544 MHz
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Notes to *Marine Order 27 (Safety of navigation and radio equipment) 2016*

Note 1

Marine Order 27 (Safety of navigation and radio equipment) 2016 (in force under subsection 342(1) of the *Navigation Act 2012*) as shown in this compilation comprises *Marine Order 27 (Safety of navigation and radio equipment) 2016* amended as indicated in the following tables.

Table of Orders

Year and number	Registration date	FRLI number	Commencement date	Application, saving or transitional provisions
<i>Marine Order 27 (Safety of navigation and radio equipment) 2016</i> (MO 2016/9)	24 June 2016	F2016L01077	1 July 2016	
<i>Marine Order 81 (Administration amendment) 2016</i> (MO 2016/18)	12 December 2016	F2016L01915	13 December 2016	
<i>Marine Orders (Navigation Act) Administrative Amendment Order 2017</i> (MO 2017/5)	10 October 2017	F2017L01336	11 October 2017	
<i>Marine Order 27 (Safety of navigation and radio equipment) Amendment Order 2019</i> (MO 2019/7)	14 November 2019	F2019L01464	1 January 2020	

Table of amendments

ad. = added or inserted am. = amended rep. = repealed rs. = repealed and substituted

Provision affected	How affected
1A	rep. <i>Legislation Act 2003</i> , s 48D
1B	rep. <i>Legislation Act 2003</i> , s 48C
4.....	am. MO 2016/18; am MO 2019/7
24.....	am. 2019/7
26.....	am. MO 2016/18; am. MO 2017/5; am. MO 2019/7
28.....	am MO 2019/7
33.....	am MO 2019/7
36.....	am MO 2019/7
40.....	am MO 2019/7
43.....	am MO 2019/7
Schedule 2	am MO 2019/7
Schedule 3.....	am MO 2019/7
Schedule 4.....	am MO 2019/7