STATUTORY INSTRUMENTS

1980 No. 530

MERCHANT SHIPPING

SAFETY

The Merchant Shipping (Navigational Equipment) Regulations 1980

Made - - - -	17*th April* 1980
Laid before Parliament	2*nd May* 1980
Coming into Operation	25*th May* 1980

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1. Certificate of calibration of direction-finder.

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The Secretary of State, after consulting with the persons referred to in section 22(2) of the Merchant Shipping Act 1979(**a**), in exercise of the powers conferred on him by subsection (1), sub-paragraphs (*a*), (*d*), (*e*), (*f*), (*o*) and (*q*) of subsection (3), and subsections (4)(*a*) and (6)(*a*) and (*b*) of section 21 and section 22(1)(*a*) and (*c*) of that Act and of all other powers enabling him in that behalf, hereby makes the following Regulations:—

Citation

1. These Regulations may be cited as the Merchant Shipping (Navigational Equipment) Regulations 1980 and shall come into operation on 25th May 1980.

GENERAL

Interpretation, revocation and application

2.—(1) In these Regulations the following expressions have the following meanings respectively:

"existing installation" means:

(*a*) an installation wholly installed before 25th May 1980; or

(*b*) an installation part of which was installed before 25th May 1980 and the rest of which consists either of parts installed in replacement of identical parts, or parts which comply with the relevant requirements of these Regulations;

"existing ship" means a ship which is not a new ship;

(**a**) 1979 c. 39.

"interference" has the same meaning as in section 19(4) of the Wireless Telegraphy Act 1949(a);

"international voyage" means a voyage from a port in one country to a port in another country;

"maintenance" means any activity intended to keep an installation in satisfactory working condition and includes tests, measurements, replacements, adjustments and repair;

"Merchant Shipping Notice" means a Notice described as such, issued by the Department of Trade, and published by Her Majesty's Stationery Office;

"new installation" means an installation which is not an existing installation;

"new ship" means a ship the keel of which is laid, or which is at a similar stage of construction, on or after 25th May 1980;

"the Organization" means the Inter-Governmental Maritime Consultative Organization;

"Passenger Certificate Class I" means a certificate for ships engaged on voyages (not being short international voyages) any of which are long international voyages;

"Passenger Certificate Class II" means a certificate for ships engaged on voyages (not being long international voyages) any of which are short international voyages;

"Passenger Certificate Class II(A)" means a certificate for ships engaged on voyages of any kind other than on international voyages;

For the purposes of the above three definitions, "long international voyage" means an international voyage which is not a short international voyage within the meaning of the Merchant Shipping (Safety Convention) Act 1949(b);

"passenger ship" means a ship carrying more than 12 passengers;

"pleasure craft" means a vessel primarily used for sport or recreation;

"radar watch" means observing displayed radar information, the frequency of observation depending upon the prevailing conditions;

"safe distance", in relation to a unit of equipment, means the minimum distance, approved by the Secretary of State and specified on that unit, at which the unit should be installed from a magnetic compass, in order to minimise deviation to the compass;

"Safety Convention ship" means a ship registered in a country to which the Safety of Life at Sea Convention of 1948 or of 1960 or of 1974, applies;

"tons" means the gross register tonnage of a ship and the gross tonnage of a ship having alternative gross tonnages shall be taken to be the larger of those tonnages;

"United Kingdom ship" has the same meaning as in section 21(2) of the Merchant Shipping Act 1979;

"unlimited trading area" means the trading area defined in Schedule 2 to the Merchant Shipping (Certification of Deck Officers) Regulations 1977(c).

(a) 1949 c. 54. (b) 1949 c. 43. (c) S.I. 1977/1152.

(2) Any reference in these Regulations to—

(*a*) a performance standard adopted by the Organization (referred to in regulations 10, 12, 18 and 20(1) hereof) or

(*b*) a performance specification (referred to in regulations 10, 12, 14(3) and 20(1) hereof)

shall be

(i) the standards specified in Merchant Shipping Notice No. M 927 as so adopted; or

(ii) the performance specification specified in Merchant Shipping Notice No. M 927

and shall include a reference to any document amending the same which is considered by the Secretary of State to be relevant from time to time and is specified in a Merchant Shipping Notice.

(3) The Merchant Shipping (Radar) Rules 1976(**a**) and the Merchant Shipping (Direction-Finders) Rules 1965(**b**) are hereby revoked to the extent that they apply to sea-going United Kingdom ships, and to other Safety Convention ships while they are within the United Kingdom or the territorial waters thereof.

(4) Subject to regulation 3, these Regulations shall apply in relation to ships (except pleasure craft and fishing vessels) which are:

(*a*) sea-going United Kingdom ships of 500 tons or over; and

(*b*) other sea-going Safety Convention ships of 500 tons or over while they are within the United Kingdom or the territorial waters thereof.

Provision of navigational equipment installations

3.—(1)(*a*) Every new ship of 500 tons or over shall, when engaged on an international voyage, be provided with an echo sounder installation which shall comply with the requirements specified in Part I of these Regulations.

(*b*) Every such ship which is a passenger ship in respect of which there is or should be in force a certificate of Class I, II or II(A), when so provided with an echo sounder installation, shall not be required to be provided with a depth-sounding device, as required in the Merchant Shipping (Passenger Ship Construction) Regulations 1980(**c**).

(2) Every ship of 1600 tons or over shall, when engaged on an international voyage:

(*a*) comply with the requirements specified in Part II of these Regulations and be provided with a direction-finder installation:

Provided that regulation 12 shall not apply to any such ship which is fitted with a direction-finder which is an existing installation and complies with the requirements of the Second and Third Schedules to the Merchant Shipping (Direction-Finders) Rules 1965 which would have been applicable to her if the said Rules had not been revoked; and

(*b*) be provided with a gyro compass installation which shall comply with the requirements specified in Part III of these Regulations:

Provided that the gyro compass installation is not required to be provided before the expiry of one year from 25th May 1980.

(**a**) S.I. 1976/302. (**b**) S.I. 1965/1112. (**c**) S.I. 1980/535.

(3) Every ship of 1600 tons or over, but less than 10,000 tons, shall comply with the requirements specified in Part IV of these Regulations and shall be provided with a radar installation.

(4) Every ship of 10,000 tons or over shall comply with the requirements specified in Part IV of these Regulations and shall be provided with two radar installations:

Provided that only one such radar installation need be provided before the expiry of two years from 25th May 1980.

Serviceability of installations

4.—(1) Each navigational equipment installation required by these Regulations shall be in a satisfactory working condition whenever the ship goes to sea:

Provided that, except in respect of the direction-finder installation required to be provided under Part II of these Regulations, this requirement shall not apply when a ship is going to sea from a place at which prompt maintenance is not available or practicable without delaying the ship.

(2) Each navigational equipment installation required by these Regulations shall be in a satisfactory working condition at all times when the ship is at sea, unless there is a defect in an installation and maintenance is being carried out or is not practicable.

(3) Each navigational equipment installation required by these Regulations shall, where practicable, be mounted in such a manner as to prevent the performance and reliability of the installation being adversely affected by vibration.

(4) Units of each navigational equipment installation required by these Regulations shall, where practicable, be sited in positions which facilitate easy access for operation and maintenance.

Interference with other installations

5.—(1) At no time while the ship is at sea shall any interference or mechanical noise produced by any navigational equipment installation required by these Regulations be such as to prevent the effective reception of radio signals.

(2) At no time while the ship is at sea shall any interference or mechanical noise produced by any equipment in the ship be sufficient to prevent the efficient operation of any navigational equipment installation required by these Regulations.

(3) Units of navigational equipment installations, where practicable, shall not be installed closer to the ship's standard and steering compass than the appropriate safe distance marked on the unit. Where the safe distance is not marked on the unit, units shall not be installed closer to a magnetic compass than the distance specified in Merchant Shipping Notice No. M616 or any document amending the same which is considered by the Secretary of State to be relevant from time to time and is specified in a Merchant Shipping Notice.

Provision of electrical energy

6.—(1) There shall be provided in every ship to which these Regulations apply, at all times while the ship is at sea and at all reasonable times when she is in port, a supply of electrical energy suitable and sufficient for the operation of the navigational equipment installations required by these Regulations, for testing purposes and for the charging of any rechargeable batteries which are a source of electrical energy for the navigational equipment installations.

(2) The supply of electrical energy shall not exceed the limits set out below:

AC supplies: variation from nominal voltage of ± 10%
variation from nominal frequency of ± 6%

DC supplies: variation from nominal voltage:

110/220V supplies, +10%, −20%
24/32V supplies, +30%, −10%

(3) Readily accessible means shall be provided for isolating each navigational equipment installation from its source of electrical energy without causing any interruption to, or adversely affecting, the supply of electrical energy to any other equipment.

(4) Where two radar installations are required to be provided by regulation 3(4):

(*a*) they shall be so installed that failure of either radar installation shall not cause the supply of electrical energy to the other radar installation to be interrupted or adversely affected; and

(*b*) on new ships, each radar installation shall be capable of being operated, one at a time, from the ship's emergency source of electrical energy, if provided.

Charging of batteries

7.—(1) If rechargeable batteries are provided as a source of electrical energy for any part of the navigational equipment installations, adequate means shall be provided on board every ship to which these Regulations apply for the charging of such batteries from the ship's main source of electrical energy.

(2) When any such battery provided for a navigational equipment installation is not in use, it shall be capable of being fully charged within a period of not more than 16 hours by the means of charging required by paragraph (1) of this regulation.

(3) When any such battery is float-charged whilst in use, the voltage used for charging the battery shall be within the limits set out in regulation 6(2) above.

(4) If any navigational installation derives electrical energy for internal circuits from non-rechargeable batteries, failure of such batteries, where practicable, shall not cause malfunction of the installation. Where this is not practicable, the installation shall be provided with means to test the condition of such batteries.

Servicing and operating information

8. Adequate information and instructions as to the use and maintenance of every navigational equipment installation required by these Regulations shall be provided by the owner and shall be available at all times for use when the particular installation is being operated, tested or serviced. In United Kingdom ships such information and instructions shall be in English.

Spares and tools

9. For each navigational equipment installation required by these Regulations there shall be supplied such special tools and equipment as are necessary for shipboard maintenance and such spares as are likely to be required for the duration of the intended voyage.

PART I—ECHO SOUNDER INSTALLATION

Echo sounder performance standards

10. The echo sounder installation required to be provided in ships to which regulation 3(1) applies shall comply with the performance standard adopted by the Organization. In respect of such ships which are United Kingdom ships, the echo sounder installation shall, in addition, comply with the relevant performance specification issued by the Department of Trade.

Siting of echo sounder installation

11.—(1) The transducer unit or units of the echo sounder installation shall be sited so as to avoid, where practicable, the vicinity of all underwater openings and plugs so that satisfactory overall performance is achieved.

(2) The echo sounder graphical display shall, where practicable, be sited on the bridge in a position to facilitate easy access and viewing, and where the effect of any lighting necessary for the equipment does not interfere with the keeping of an effective look-out.

PART II—DIRECTION-FINDER INSTALLATION

Direction-finder performance standards

12. The direction-finder installation required to be provided in ships to which regulation 3(2)(*a*) applies, shall comply with the performance standards adopted by the Organization. In respect of such ships which are United Kingdom ships, the direction-finder installation shall, in addition, comply with the relevant performance specification issued by the Home Office.

Interference with reception

13.—(1) Radio antennae installed on ships to which this Part of these Regulations applies which rise above the base of, and are within 17 metres horizontal distance of, the loop antennae of the direction-finder installation shall be isolated whenever bearings are being obtained by the direction-finder installation:

Provided that such radio antennae which do not cause significant erorrs in the accuracy of the bearings obtained by the direction-finder installation need not be isolated.

(2) Any ship to which this Part of these Regulations applies which is provided with a direction-finder, not being an existing installation, shall also be provided with a communal antennae system for all broadcast receivers in respect of which it is impracticable to erect efficient and properly installed antennae which:

(*a*) are outside a radius of 17 metres from the direction-finder antennae; or

(*b*) do not rise above the base of the direction-finder antennae; or

(*c*) can be lowered quickly and stowed easily when the direction-finder is in use.

Siting of direction-finder installation

14.—(1) The direction-finder shall be so sited that efficient determination of radio bearings by means of the direction-finder will not be affected by extraneous noises.

(2)(*a*) The direction-finder antenna system shall be mounted in such a manner that the efficient determination of radio bearings by means of the direction-finder will be affected as little as possible by the proximity of antennae, derricks, wire halyards and other large metal objects.

(*b*) Adequate precautions shall be taken to protect the cables connecting the direction-finder antenna system with the receiver forming part of the direction-finder installation from the ingress of water and from damage, including any which might be caused by excess heat.

(3) The direction-finder installation shall, where practicable, be mounted so as to prevent the performance and reliability of the installation being adversely affected by vibration and so that the installation will not, whilst in service, normally be subject to greater vibration than that specified in the relevant performance specification for the climatic and durability testing of maritime radio equipment, issued by the Home Office.

Means of communication

15.—(1) In every ship to which this Part of these Regulations applies an efficient two-way means of calling and voice communication shall be provided between the receiver forming part of the direction-finder and the position from which the ship is normally navigated.

(2) In every ship an efficient means of signalling shall be provided for use when calibrating or taking check bearings of the direction-finder installation between the receiver forming part of the direction-finder installation and the place on the ship from which visual bearings are taken.

(3) If the direction-finder installation is not installed in the ship's radio-telegraph operating room, and radio antennae on the ship are required by regulation 13(1) of these Regulations to be isolated, means shall be provided at the direction-finder operating position to indicate when such antennae are isolated.

Calibration

16.—(1) The master of every ship to which this Part of these Regulations applies shall cause the direction-finder installation to be calibrated in accordance with this regulation as soon as practicable after it has been installed in the ship and whenever any change is made in the position of the direction-finder antenna system.

(2)(*a*) The direction-finder installation shall be calibrated by two persons, one being experienced in the taking of radio bearings and the other experienced in the taking of visual bearings. The calibration shall be carried out by taking simultaneous radio and visual bearings of a transmitter, and such bearings shall be taken at intervals of not greater than 5 degrees throughout 360 degrees on a frequency between 285 kHz and 315 kHz.

(*b*) Calibration tables and curves, which enable radio bearings obtained by the direction-finder installation to be adjusted to within two degrees of the correct bearing, shall be prepared on the basis of the bearings taken in accordance with paragraph (2)(*a*) of this regulation.

(*c*) Following satisfactory calibration and the preparation of calibration tables and curves, a Certificate of Calibration of Direction-Finder shall be completed in the form specified in Schedule 1 to these Regulations.

(*d*) On each occasion that an arrangement of cargo carried above deck level varies significantly from an arrangement in respect of which the direction-finder installation has been calibrated, check bearings shall be taken, if practicable, to determine whether any substantial inaccuracy in the direction-finder installation is being caused by the arrangement of cargo. Where substantial errors are found, further check bearings shall be taken to establish a correction curve.

(3) The master of every ship to which this Part of these Regulations applies shall cause the calibration tables and curves prepared in accordance with the foregoing provisions of this regulation to be verified by means of not less than 4 check bearings in each quadrant:

(*a*) at intervals not exceeding 12 months; and

(*b*) whenever any change is made in any structure or fitting on deck or in any rigging or antennae above deck which is likely to affect the accuracy of the direction-finder.

If such verification shall show that the calibration tables or curves are substantially inaccurate, the master of the ship shall cause the direction-finder to be recalibrated as soon as practicable in the manner specified in paragraphs (2) and (3) of this regulation.

(4) In addition, bearings shall be taken in each quadrant, where practicable at intervals not exceeding 12 months, on a frequency at about 500 kHz. These bearings should not be substantially inaccurate after being corrected by use of the calibration curves.

Records of calibration and verification

17. The master of every ship to which this Part of these Regulations applies shall cause the following records to kept in a place accessible to any person operating the direction-finder, and to be available for inspection at any reasonable time by a surveyor of ships:

(*a*) a list or diagram indicating the position, on the most recent occasion on which the direction-finder was calibrated, of the antennae and all moveable structures on board the ship which might affect the accuracy of the direction-finder;

(*b*) the calibration tables and curves which were prepared on the most recent occasion on which the direction-finder was calibrated;

(*c*) a certificate of calibration signed by the persons making the calibration relating to the most recent occasion on which the direction-finder was calibrated; and

(*d*) a record, in the form specified in Schedule 2 to these Regulations, of check-bearings taken for the verification of calibration, the bearings being numbered in the order in which they were taken.

PART III—GYRO COMPASS INSTALLATION

Gyro compass performance standards

18. The gyro compass installation required to be provided in ships to which regulation 3(2)(*b*) applies shall, in the case of new installations, comply with the performance standards adopted by the Organization.

Siting of gyro compass installation

19.—(1) The master compass shall be installed with its fore-and-aft datum line parallel to the ship's fore-and-aft datum line to within ± 0.5°.

(2) The compass card of the master compass, or a repeater of the heading information, shall be sited so that it is clearly readable by the helmsman when steering the ship.

(3) Where provided, repeaters used for taking visual bearings shall be installed with their fore-and-aft datum lines parallel to the ship's fore-and-aft datum line to within ± 0.5°.

(4) The master compass shall be sited so as to avoid, where practicable, excessive errors being caused to the gyro compass installation due to the ship rolling, pitching or yawing.

(5) Where the failure of one repeater could cause an error in any of the other repeaters, readily accessible means shall be provided on new gyro compass installations for isolating each repeater output from the master compass.

PART IV—RADAR INSTALLATION

Radar performance standards

20.—(1) The radar installations required to be provided in ships to which regulation 3(3) and (4) applies, shall comply with the performance standards adopted by the Organization. In respect of such ships which are United Kingdom ships, the radar installations shall, in addition, comply with the relevant performance specifications issued by the Department of Trade.

(2) Interswitching facilities may be provided:

(*a*) where a radar installation provided in ships to which regulation 3(3) applies includes additional radar units and facilities for interswitching, at least one arrangement of units when used together shall comply with all the requirements of this Part of these Regulations;

(*b*) where two radar installations are required to be provided in ships to which regulation 3(4) applies, they shall be so installed that each radar installation can be operated individually and both can be operated simultaneously without being dependent upon one another.

Provision of plotting facilities

21. Every ship to which this Part of these Regulations applies shall be provided with facilities for plotting radar information. Where such facilities are not part of a radar installation they shall be sited on the bridge from which the ship is normally navigated and, where practicable, in close proximity to the radar display.

Radar watch

22.—(1) While a United Kingdom ship to which this Part of these Regulations applies is at sea and a radar watch is being kept, the radar installation shall be under the control of a qualified radar observer, who may be assisted by unqualified personnel.

(2) In all ships to which this Part of these Regulations applies, a record shall be kept in the deck log book of the times at which radar watch is commenced and discontinued.

Serviceability and maintenance of radar installations

23.—(1) The performance of the radar installation shall be checked before the ship proceeds to sea and at least once every four hours whilst the ship is at sea and radar watch is being maintained.

(2) Every United Kingdom ship to which this Part of these Regulations applies going between the United Kingdom and locations in the unlimited trading area or between locations in the unlimited trading area shall, after the expiry of four years from 25th May 1980, be provided with at least one officer or member of the crew adequately qualified to carry out radar maintenance: Provided that:

(*a*) if on an occasion on which a ship to which this regulation applies goes to sea, the officer or member of the crew adequately qualified to carry out radar maintenance is not carried because of illness, incapacity, or other unforeseen circumstance, but all reasonable steps were taken to secure the carriage on that occasion of a duly qualified officer or crew member, the provisions of this regulation which require such a ship on such a voyage to carry an officer or crew member adequately qualified to carry out radar maintenance shall not, subject to compliance with the conditions in sub-paragraph (*b*) below, apply to the ship during a period beginning with the day on which the ship goes to sea and ending either 14 days later or with the day on which the ship sails from its next port of call, whichever is the later;

(*b*) the conditions are that one such period shall not be followed immediately by any further period at sea during which the ship does not carry an officer or crew member adequately qualified to carry out radar maintenance and that the master, when going to sea on such an occasion shall:

(i) notify a proper officer of his intention not to carry a suitably qualified officer or crew member; and

(ii) make an entry of that notification in the ship's official log.

(3) In United Kingdom ships to which this Part of these Regulations applies a record shall be kept on the ship of the approximate number of hours the radar installation is in operation and of the occasions when a radar installation becomes unserviceable and of brief details of all maintenance work carried out on the radar installation.

Qualifications of radar observers and radar maintenance personnel

24.—(1) For the purposes of this Part of these Regulations, a person shall be deemed a "qualified radar observer" if he holds:

(*a*) a valid Radar Observer's Certificate granted by the Secretary of State; or

(*b*) a valid certificate of attendance granted at the conclusion of a radar simulator course which has been approved by the Secretary of State; or

(*c*) a certificate recognised by the Secretary of State as being equivalent to either of the certificates mentioned in (*a*) or (*b*).

(2) For the purposes of this Part of these Regulations, an officer or crew member shall be deemed qualified to carry out radar maintenance if he holds:

(*a*) a Radar Maintenance Certificate granted by the Secretary of State; or

(*b*) a certificate in radar maintenance recognised by the Secretary of State; or

(*c*) a certificate of proficiency to carry out maintenance on specified types of radar installations granted at the conclusion of a radar manufacturer's course which has been approved by the Secretary of State; or

(*d*) a special certificate to carry out maintenance on specified types of radar installations issued by the Secretary of State upon satisfactory written evidence that the applicant's employment, over a period of not less than 10 years between 25 May 1960 and 24 May 1980, has included the maintenance of marine radar installations.

Siting of radar installation

25.—(1) The antenna unit of the radar installation shall be sited so that satisfactory overall performance is achieved in relation to:

(*a*) the avoidance of shadow sectors;

(*b*) the avoidance of false echoes caused by reflections from the ship's structure; and

(*c*) the effect of antenna height on the amplitude and extent of sea-clutter.

(2) The radar display shall be sited on the bridge from which the ship is normally navigated. The siting of one of the displays shall be such that:

(*a*) an observer, when viewing the display, faces forward and is readily able to maintain visual lookout;

(*b*) there is sufficient space for two observers to view the display simultaneously, with any fitted display visor removed if necessary.

(3) The radar installation shall, where practicable, be mounted so as to prevent the performance and reliability of the installation being adversely affected by vibration and so that the installation will not, whilst in service, normally be subject to greater vibration than that specified in the Marine Radar Performance Specification 1968 issued by the Department of Trade.

Alignment of heading marker

26. The radar heading marker (and stern marker if fitted) shall be accurately aligned with the ship's fore-and-aft line as soon as practicable after the radar installation has been installed in the ship. Where inter-switching facilities are provided, the heading marker shall be aligned with all arrangements of units. The marker shall be re-aligned as soon as practicable whenever it is found be substantially inaccurate.

Measurement of shadow sectors

27. The angular width and bearing of any shadow sectors displayed by the radar installation shall be determined and recorded. The record shall be kept up to date following any change likely to affect shadow sectors.

PART V—PENALTIES

Penalties

28.—(1) If a ship to which these Regulations apply proceeds or attempts to proceed, to sea:

(*a*) without carrying such a radar installation as she is required to carry under regulation 3(3) and (4) of these Regulations or without complying with the General Part or Part IV of these Regulations; or

(*b*) without carrying such a direction-finder installation as she is required to carry under regulation 3(2)(*a*) of these Regulations or without complying with the General Part or Part II of these Regulations

the owner or master of the ship shall each be guilty of an offence and liable on summary conviction to a fine not exceeding £1000 or, on conviction on indictment, to imprisonment for a term not exceeding two years and a fine.

(2) If a ship to which these Regulations apply proceeds, or attempts to proceed, to sea without carrying:

(*a*) a qualified radar observer which she is required to carry under regulation 22 of these Regulations; or

(*b*) a person qualified to carry out radar maintenance which she is required to carry under regulation 23(2) of these Regulations

the owner or master of the ship shall each be guilty of an offence and liable on summary conviction to a fine not exceeding £1000.

(3) If a ship to which these Regulations apply proceeds, or attempts to proceed, to sea without carrying:

(*a*) such an echo sounder installation as she is required to carry under regulation 3(1) of these Regulations or without complying with the General Part or Part I of these Regulations; or

(*b*) such a gyro compass installation as she is required to carry under regulation 3(2)(*b*) of these Regulations or without complying with the General Part or Part III of these Regulations

the owner or master of the ship shall each be guilty of an offence and liable on summary conviction to a fine not exceeding £1000.

(4) It shall be a defence in proceedings for an offence under this regulation to prove that all reasonable steps had been taken to ensure that the ship complied with the Regulations.

Norman Tebbit,
Parliamentary Under-Secretary of State,
Department of Trade.

17th April 1980.

SCHEDULE 1

Certificate of Calibration of Direction-Finder

Regulation 16(*c*)

We, the undersigned, hereby certify that we have today—

(*a*) calibrated, in accordance with Part II of the Merchant Shipping (Navigational Equipment) Regulations 1980, the direction-finder installed in the

s.s.
——— .....
m.v.

(*b*) handed to the master of that ship tables of calibration corrections;

(*c*) adjusted the said direction-finder so that the readings taken thereby, when corrected with such tables, differ from the correct bearings by no more than plus or minus two degrees.

We hereby further certify that the master of the said ship has been furnished with a list or diagram indicating the position, at the time of such calibration, of the antennae and of all moveable structures on board the ship which might affect the accuracy of the direction-finder.

.....Radio Observer

.....Visual Observer

.....Date

SCHEDULE 2

RECORD OF CHECK-BEARINGS TAKEN BY MEANS OF THE DIRECTION-FINDER

Regulation 17(*d*)

Signature of Observer or Observers		(16)	
Correction required to make Col. (13) equal Col. (14) (indicating whether — or +)		(15)	
True Bearing by Visual Check or Calculation (whether Visual or Calculation to be indicated; if by Calculation, the method to be stated)		(14)	
True Bearing by Direction-Finder [Col. (8) and Col. (12)]		(13)	
Ship's Head Corrected (True)		(12)	
½ Convergency Applied		(11)	
Total Compass Error		(10)	
Ship's Head by Compass 0/360°		(9)	
Direction-Finder Relative Bearing Correct for QE		(8)	
Direction-Finder Bearing of (Name and frequency)		(7)	
Distance from Transmitter		(6)	
Ship's Approximate Position	Longitude	(5)	
	Latitude	(4)	
Times (GMT and Ship's)		(3)	
Date		(2)	
Serial Number of Bearings		(1)	

EXPLANATORY NOTE

(This Note is not part of the Regulations.)

These Regulations revoke the Merchant Shipping (Direction-Finders) Rules 1965 and the Merchant Shipping (Radar) Rules 1976 to the extent that they apply to United Kingdom ships, and to ships registered in a country to which a Safety of Life at Sea Convention applies while they are within the United Kingdom or the territorial waters thereof. The 1965 Rules will continue to apply to ships of non-Convention countries while they are within United Kingdom ports. These Regulations re-enact the provisions of the 1965 and 1976 Rules. They require specified classes of ships of 500 tons or over to be provided with a radar installation and specified ships when on an international voyage to be provided, additionally, with a direction-finder, an echo sounder and gyro compass installation.

The Regulations implement the provisions of the International Convention for the Safety of Life at Sea 1974 (Cmnd. 7874), relating to the carriage of such navigational equipment.

Merchant Shipping Notices are obtainable from the Department of Trade Marine Library, Sunley House, 90 High Holborn, London WC1 and from any Department of Trade mercantile marine office or marine survey office. The Home Office and the Department of Trade Performance Specifications are obtainable from Her Majesty's Stationery Office.