

1974/186



## THE SHIPPING (RADAR) RULES 1974

DENIS BLUNDELL, Governor-General  
ORDER IN COUNCIL

At the Government House at Wellington this 15th day of July 1974

Present:

HIS EXCELLENCY THE GOVERNOR-GENERAL IN COUNCIL

PURSUANT to the Shipping and Seamen Act 1952, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following rules.

### RULES

**1. Title and commencement**—(1) These rules may be cited as the Shipping (Radar) Rules 1974.

(2) These rules shall come into force on the date of their notification in the *Gazette*.

**2. Interpretation**—In these rules, unless the context otherwise requires,—

“The Act” means the Shipping and Seamen Act 1952:

“Connected” means electrically connected so as to give normal operating efficiency to the circuits or parts concerned:

“Radar installation” includes all units and component parts of a radar; and also includes inter-switching and other auxiliary units in a complete installation:

“Harmful interference” means any emission, radiation, or induction which endangers the functioning of a radio-navigation service or of any other safety service, or seriously degrades, obstructs, or repeatedly interrupts a radio-communication service:

“Radar” means a radio-determination system based on the comparison of reference signals with radio signals either reflected or transmitted from the position to be determined:

“Radar ship” means a ship, being a ship to which these rules apply, which is provided with a radar installation:

“Safe distance” means the minimum distance at which the units of a radar are to be installed from both the steering and standard compasses so that they will not affect the accuracy of such compasses:

“Secretary” means the Secretary for Transport:

“Surveyor” means a Surveyor of Ships appointed or recognised under section 13 of the Act:

“Tons” means gross tons:

Expressions defined in the Act have the meaning so defined.

**3. Application**—These rules shall apply to ships which are—

- (a) New Zealand ships of 300 tons and upwards; and
- (b) Other ships of 1,600 tons or upwards while they are engaged in the home trade:

Provided that these rules shall not apply to—

- (c) Restricted limit ships; or
- (d) Pleasure yachts; or
- (e) Ships not propelled by mechanical means.

## PART I

### GENERAL PROVISIONS

**4. Provision of radar**—Every ship to which these rules apply shall, not later than the 31st day of December 1974, be provided with a radar installation complying with the general requirements of these rules which shall—

- (a) In the case of a radar installation manufactured or assembled in New Zealand, be of a make, type, and performance specification approved by the Secretary; or
- (b) In the case of a radar installation manufactured or assembled outside New Zealand, be of a make, type, and performance specification approved by an authority outside New Zealand having comparable maritime safety functions to the Ministry of Transport in New Zealand.

**5. Harmful interference**—At no time while a radar ship is at sea shall interference produced by any part of the radar installation required by these rules, or by other equipment in the ship, be sufficient to prevent the efficient functioning of the radar.

**6. High-voltage parts**—(1) All parts and wiring of the radar installation specified in these rules in which the direct and alternating voltages (other than radio-frequency voltages) combine at any time to give an instantaneous voltage greater than 50 volts shall be protected from accidental access.

(2) All parts and wiring of the radar installation specified in these rules (other than parts and wiring of a rotating machine) in which the direct and alternating voltages (other than radio-frequency voltages) combine at any time to give an instantaneous voltage greater than 250 volts shall be isolated automatically from all sources of electrical energy when the means of protection are removed.

**7. Supply of electrical energy**—(1) There shall be available in every ship to which these rules apply, at all times while the ship is at anchor and while it is under way, a supply of electrical energy sufficient for the operation of the radar. When the ship is in port and alongside a dock or wharf, that supply shall also be available for testing purposes at all reasonable times.

(2) All reasonable steps shall be taken to see that the ship's power source does not contain voltage spikes or give rise to over-voltage surges.

**8. General requirements**—(1) A radar installation on any ship to which these rules apply shall be installed in accordance with rules 9 and 10 hereof.

(2) Where radar installations with inter-switching arrangements are provided on any ship to which these rules apply, no switching arrangements shall expose the radar installations to damage or give rise to false information.

(3) The non current-carrying metal parts of all units of a radar installation shall be effectively and permanently connected to earth.

(4) Every unit or cabinet containing parts of the radar installation shall have marked upon it the "safe distances" at which the unit or cabinet shall be placed with respect to the standard and steering magnetic compasses of the ship.

(5) The units of a radar installation are to be so sited that noise from the units shall not unduly disturb the ship's personnel.

(6) All units of, or associated with, a radar installation shall be firmly secured to the structure of the ship so as not to be displaced by the motion of the ship.

**9. Installation of radar aerial**—(1) The aerial shall be so placed as to be clear of obstructing superstructures and rigging.

(2) The aerial shall be so placed that the emission of radar waves shall, so far as is practicable, be unobstructed by any part of the ship's structure over the full horizon of 360°.

(3) Where it is not possible to comply fully with the requirements of subclause (2) of this rule because masts and derrick posts partially obscure the horizon from the aerial, causing shadow sectors at the display, such sectors shall be kept to a minimum.

(4) Where shadow sectors do occur, the aerial shall be so sited that the sectors detract least from the navigational value of the radar installation.

(5) The aerial and its motor shall be accessible for maintenance.

(6) The aerial shall not be sited within 6 metres of radio aerials, including the radio direction-finder loops and leads.

**10. Installation of display**—(1) The display shall be situated in the wheelhouse:

Provided that where there is a suitable chartroom adjacent to and with direct access to the wheelhouse, the display may be mounted in that chartroom.

(2) Where practicable, the display unit shall be so sited that the observer faces forward when viewing it.

**11. Radar operators**—On every ship to which these rules apply, the master or a mate shall—

- (a) Hold a certificate of proficiency as radar observer in merchant ships, issued by an approved Commonwealth authority; or
- (b) Hold a certificate of satisfactory attendance at a radar simulator course, issued by an approved Commonwealth authority.

## PART II

### TESTS AND CHECKS

**12. Performance**—(1) Provision shall be made for the radar operator to determine readily a drop in performance level while the set is being used operationally, relative to the calibration level established in accordance with subclause (3) of this rule.

(2) Where the means of determining performance is a performance monitor, it shall be mounted in such a way that any echo it produces on the radar screen appears either in an existing shadow sector or on a bearing of minor importance.

(3) The calibration level of the overall performance of the radar shall be determined by the manufacturer or his agent at the time of installation of a new radar or at the time of fitting a performance monitor to an existing radar.

(4) The necessary calibration information shall be immediately available to the operator in the form of a calibration label fixed on or near the display unit.

**13. Shadow sectors**—(1) The angular width and bearing of any shadow sector shall be determined by the manufacturer or his agent immediately after installing radar equipment in a ship.

(2) If derricks are found to cause shadow sectors, the effect of their being stowed in more than one position shall be recorded.

(3) If change of trim substantially alters the shadow sectors as determined under subclauses (1) and (2) of this rule, the sectors shall be measured and recorded by the ship's master under various conditions of trim as opportunity permits.

(4) When the shadow sectors are determined the particulars shall be recorded on a tally plate fixed near the display unit of each set.

**14. Plotting facilities**—Adequate means of recording and plotting information from the radar screen shall be provided adjacent to or integrated with the display, and shall include a plotting surface or a table, a means of measuring time, and a reference to the direction of the ship's head.

**15. Operation**—The radar shall be operated in accordance with the manufacturer's instructions.

**16. Testing**—(1) The master or a person appointed by the master shall ensure that the radar installation is operating satisfactorily and that the heading marker is accurately aligned with the scanner before use.

(2) The shadow sectors recorded on the tally plate, required by rule 13 (4) of these rules shall be verified—

- (a) By the master at intervals not exceeding 12 months; or
- (b) When any alteration is made to the ship's structure that could possibly alter a shadow sector; or
- (c) When any alteration is made to the position of the radar scanner.

(3) The date of that verification shall be entered in the service record book.

(4) At each annual survey, a Surveyor shall ensure that the radar installation is functioning properly, that the shadow sectors have been verified within the interval required by subclause (2) (a) of this rule, and that the requirements of these rules have been fully complied with.

**17. Malfunction of the radar**—In the event of a malfunction of a radar installation, the master shall make an entry in the official logbook and shall take reasonable steps to ensure that the radar is repaired as soon as it is practicable.

**18. Service record**—(1) In every radar ship a service record of the radar installation is to be maintained, which shall be available to any person operating or maintaining the radar, and shall also be available for inspection at all reasonable times by a Surveyor.

- (2) The service record shall contain the following particulars:
  - (a) Particulars of any repair or adjustment made; and
  - (b) Date of verification of shadow sectors; and
  - (c) The signature of the person undertaking the repair or adjustment or verification and the date on which the repair or adjustment or verification is carried out.

**19. Manuals and maintenance**—(1) Maintenance and operating manuals shall be provided with each radar installation so that such information as is necessary shall be available at all times for use by any person testing the radar and to enable authorised members of the ship's staff to operate and maintain the equipment efficiently.

- (2) Each radar installation shall be supplied with—
  - (a) Sufficient spare components to enable authorised persons to carry out normal repairs and shipboard maintenance at sea; and
  - (b) Such special tools as are required for normal repairs and shipboard maintenance at sea.

## PART III

### EQUIVALENTS AND EXEMPTIONS

**20. Equivalents and exemptions**—(1) Notwithstanding anything in these rules, where it appears to the Secretary that these rules do not make appropriate provision for a radar installation in any ship or class of ship, or that compliance with the provisions of these rules in the case

of any ship or class of ship would do nothing to promote the safety of passengers (if any) or crew, he may, after consultation with such organisations as appear to him to be representative of the owners of the ship or class of ship and the seamen who are employed in the ship or class of ship, prescribe such additional or alternative requirements in respect of the ship or class of ship as seems to him appropriate.

(2) The Secretary may, on such conditions as he thinks fit, exempt any ship from any of the requirements of these rules, if he is satisfied that the requirement is either impracticable or unreasonable in the case of that ship.

P. G. MILLEN,  
Clerk of the Executive Council.

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#### EXPLANATORY NOTE

*This note is not part of the rules, but is intended to indicate their general effect.*

These rules require New Zealand ships which are of 300 tons or upwards and other ships of 1,600 tons and upwards engaged in the home trade to be provided with a radar installation that complies with the requirements of the rules.

The rules do not apply to restricted limit ships, pleasure yachts, and ships not propelled by mechanical means.

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Issued under the authority of the Regulations Act 1936.

Date of notification in *Gazette*: 18 July 1974.

These rules are administered in the Ministry of Transport.