

MARITIME TRANSPORT ACT 2013

(Act No. 20 of 2013)

Maritime (Automatic Identification System for Ships) Regulations 2017

IN exercise of the powers conferred upon me by section 240 (1) (v) and (ab) of the Maritime Transport Act 2013, I hereby make these Regulations –

Short title and commencement

1. These Regulations may be cited as the Maritime (Automatic Identification System for Ships) Regulations 2017 and shall come into force on the date of publication in the *Gazette*.

Interpretation

2. In these Regulations, unless the context otherwise requires —

“Authority” has the same meaning under section 2 of the Act;

“Authorised Officer” has the same meaning under section 2 of the Act;

“Automatic Identification System” or “AIS” means an automatic tracking system used on ships for identifying and locating ships by electronically exchanging data with other nearby ships, land based AIS base stations, and satellites as a primary means for collision avoidance and assist in situational awareness;

“CSTDMA” means carrier-sense time-division multiple-access;

“Chief Executive Officer” means the Chief Executive Officer of the Authority;

“Class A AIS” refers to ship-mounted AIS transceiver (transmit and receive) which operates using SOTDMA;

“Class B AIS” refers to ship-mounted AIS transceiver (transmit and receive) which operates using either CSTDMA or SOTDMA;

“Act” means the Maritime Transport Act 2013;

“Fiji ship” has the same meaning under section 2 of the Ship Registration Act 2013;

“Fiji-owned ship” has the same meaning under section 2 of the Ship Registration Act 2013;

“Fiji waters” has the same meaning under section 2 of the Act;

“GNSS” means the global navigation satellite system;

“innocent passage” has the same meaning as Article 19 of the United Nations Convention on the Law of the Sea 1982;

“Minster” has the same meaning under section 2 of the Act;

“Navigational status” means the ship status which is reported by the ship and is manually set by the crew.

“Officer of the watch” means any officer who takes navigational watch on board the ship;

“passenger ship” means a ship engaged in domestic or international voyages which carries more than twelve passengers;

“per voyage” means ship from one place to another or from one place and returning to the point of origin;

“RG214” is a low loss cable with double braid and non-contaminating jacket with general specifications, varying power capacity and attenuation as applicable;

“Shipborne AIS” is a ship and shore based broadcast system, operating in the VHF maritime band;

“SOTDMA” refers to Self-Organised Time Division Multiple Access which use transmissions that are self-organised into existing free slots;

“SOLAS” means the International Convention for the Safety of Life at Sea, 1974, as amended;

“UTC” means the coordinated universal time;

“VHF” means the Very High Frequency radio broadcasting system to transfer packets of data over the VHF data link and enables AIS equipped ships and shore-based stations to send and receive identification information that can be displayed on electronic chart, computer display or compatible radar.

Purpose

3. These Regulations prescribe the requirements for establishing and maintaining the automatic identification system for ships navigating in Fiji waters.

Application

4. These Regulation applies to-

- (a) Fiji ships and Fiji-owned ships;
- (b) a foreign ship that is:
 - (i) in a Fiji port; or
 - (ii) entering or leaving a Fiji port; or
 - (iii) in Fiji waters other than in the course of innocent passage.

Type and Class of AIS to be installed on ships

5. – (1) Class A-AIS shall be installed and be in continuous operation on the following ships –

- (a) all cargo ships of 300 gross tonnage or more engaged on international voyage;
- (b) all passenger ships irrespective of size engaged on international voyage;
- (c) all passenger ships engaged on domestic voyage of more than 15 meters in register length; and
- (d) all cargo ships of 100 gross tonnage or more engaged on domestic voyage.

(2) Class B-AIS shall be installed and be in continuous operation on the fishing ships more than 15 meters in register length.

Shipborne AIS

6. – (1) Subject to sub regulation (2), AIS installed on ships shall comply with the following requirements –

- (a) continuously and automatically transmit the ships' own information to other ships and shore-based stations when ships are under way or at anchor or berthed;
- (b) continuously and automatically receive information or data of other ships and shore-based stations when ships are under way or at anchor or berthed; and
- (c) display these data or information when ships are under way or at anchor or berthed.

(2) The master of a ship may switch off the AIS onboard the ship only when the master believes that the continual operation of the AIS might compromise the safety or security of the ship.

(3) The master shall, when switching off the AIS onboard the ship, record on the ship's logbook the time, day and reason for doing so.

(4) The master shall switch on the AIS as soon as the source of danger has disappeared.

(5) A person who fails to comply with any provision of this regulation commits an infringement offence under section 262 of the Act and shall be liable to a fine not exceeding \$1,000.00.

Shipborne AIS Information or Data

7. – (1) The AIS information transmitted by ship shall consist of the following –

- (a) Fixed or static information entered into the AIS on installation (which shall only be changed if the ship changes its name or undergoes a major conversion from one ship type to another);
- (b) dynamic information, which, apart from "Navigational status" information, is automatically updated from the ship sensors connected to AIS;
- (c) voyage-related information, which might need to be manually entered and updated during the voyage;
- (d) Short safety related messages which need to be manually entered.

(2) Details of the information referred to sub-regulation (1) are prescribed in Schedule 1.

Manual Input of Shipborne AIS Information or Data

8. – (1) The officer of the watch shall manually input the following data at the start of the voyage and whenever changes occur –

- (a) ship's draught;

- (b) hazardous cargo;
- (c) destination and ETA;
- (d) route plan (way points);
- (e) the correct navigational status; and
- (f) short safety-related messages.

(2) Any person who contravenes any provision of this regulation commits an infringement offence under section 262 of the Act and shall be liable to a fine not exceeding \$500.00.

Checking of Shipborne AIS Information or Data

9. – (1) An officer of the watch shall check the AIS information or data whenever there is reason for it and as a minimum, this shall be done once per voyage or once per month, whichever is shorter.

(2) The officer of the watch shall periodically check the following dynamic information –

- (a) ship's position;
- (b) speed over ground if available; and
- (c) sensor information.

(3) Any person who contravenes any provision of this regulation commits an infringement offence under section 262 of the Act and shall be liable to a fine not exceeding \$500.00.

Components of Shipborne AIS

10. The Shipborne AIS shall comprise of –

- (a) a communication processor, capable of operating over a range of maritime frequencies, with an appropriate channel selecting and switching method, in support of both short and long range application;
- (b) a means of processing data from an electronic position-fixing system;
- (c) a means to automatically input data from other sensors;
- (d) a means to input and retrieve data manually;
- (e) a means of error checking the transmitted and received data;
- (f) built in test equipment (BITE); and
- (g) VHF antenna.

Shipborne AIS Installation

11. – (1) AIS VHF antenna shall –

- (a) be omnidirectional vertical polarization;
- (b) be placed in an elevated position that is as free as possible with a minimum of 2 metres in horizontal direction from constructions made of conductive materials;
- (c) not be installed close to any large vertical obstruction;

- (d) be installed safely away from interfering high-power energy sources like radar and other transmitting radio antennas, preferably at least 3 meters away; and
 - (e) be mounted directly above or below the ship's primary VHF radiotelephone antenna, with no horizontal separation and with a minimum of 2 meters vertical separation. If it is located on the same level as other antennas, the distance apart shall be at least 10 meters.
- (2) The cable shall be kept as short as possible to minimise attenuation of the signal and cables shall be double screened coaxial cables equal or better than RG214.
 - (3) Coaxial cables shall be installed in separate signal cable channels/tubes and at least 10 cm away from power supply cables.
 - (4) Crossing of cables shall be done at right angles (90°) and coaxial cables shall not be exposed to sharp bends, which may lead to change the characteristic impedance of the cable.
 - (5) Coaxial down-leads shall be used for all antennas, and the coaxial screen shall be grounded at one end.
 - (6) Connectors on the coaxial cables shall be waterproof by design to protect against water penetration into the antenna cable.
 - (7) Class A AIS shall be connected to a GNSS antenna.
 - (8) The AIS shall be connected to an emergency power source.
 - (9) After installation, the AIS shall be synchronized properly on UTC and that position information, if provided, shall be correct and valid.
 - (10) Minimum Keyboard and Display shall be available at the position from which the ship is normally operated.
 - (11) A pilot input/output port which is part of an Class A AIS shall be installed on the bridge near the pilot's operating position.
 - (12) If available, the AIS shall have an alarm output (relay) connected to an audible alarm device or the ships alarm system.

Shipborne AIS Documentation

12. – (1) The owner and/or operator of the ship shall ensure that AIS is fitted on board the ship in accordance with the requirements of regulation 19 of Chapter V of SOLAS (as amended) and submit the following drawings to the Chief Executive Officer for the AIS installation onboard their ship -

- (a) Antenna layout;
- (b) AIS arrangement drawing;
- (c) Block diagram (interconnection diagram).

(2) The owner and/or operator of the ship shall ensure that for an initial installation of AIS onboard their ship, a configuration report is produced, kept on board and made readily available for inspection by the Chief Executive Officer or an authorised officer.

(3) Any person who contravenes the provision of this regulation commits an infringement offence under section 262 of the Act and shall be liable to a fine not exceeding \$500.00.

Survey of Shipborne AIS

13. – (1) The owner and/or operator of the Fiji ship to which this regulation applies shall prior to the installation of an AIS onboard their ship, notify the Authority for a survey to be carried out by the Authority's Flag State Surveyors and/or Recognized Organizations authorised by the Authority.

(2) The special survey fees applicable for this survey is as prescribed in the Maritime (Survey Fees) Regulations 2014.

(3) Any person who contravenes the provision of this regulation commits an infringement offence under section 262 of the Act and shall be liable to a fine not exceeding \$300.00.

Portable testing instruments

14. From 01st July 2016, the owner of the ship shall ensure that the ship carried a portable testing instrument or instruments complying with Regulation 7 of Chapter XI-1 of SOLAS.

Damage to Non-shipborne AIS

15. (1) It shall be the responsibility of a master of a ship which has damaged, fouled or destroyed an AIS aid to navigation to report the incident within 24 hours to the Chief Executive Officer.

(2) A master of a ship who fails to comply with any provisions of this regulation commits an infringement offence under section 262 of the Act and shall be liable to a fine not exceeding \$1000 or to a term of imprisonment not exceeding 3 months, or to both.

(3) Where a ship damages, destroys or fouls an AIS aid to navigation, that ship may be detained until the cost of repairing or replacing the aid or of rendering the aid effective has been paid to the Authority.

Made this day of 2017.

P. Bala
Minister for Infrastructure and Transport

SCHEDULE 1
(Regulation 7 (2))

AIS INFORMATION SENT BY SHIPS

Information item	Information generation, type and quality of information
Static	
Ship's MMSI number (Maritime Mobile Service)	Set on installation Note that this might need amending if the ship changes ownership

Identity)	
Ship's call sign and ship's name	Set on installation Note that this might need amending if the ship changes ownership
Ship's IMO number or Fiji ship's official number	Set on installation
Length and beam	Set on installation or if changed
Type of ship	Select from pre-installed list
Location of position-fixing antenna	Set on installation or may be changed for bi-directional ships or those fitted with multiple antennae

Dynamic	
Ship's position	Automatically updated from the position sensor connected to AIS
Position Time stamp in UTC	Automatically updated from ship's main position sensor connected to AIS
Course over ground (COG)	Automatically updated from ship's main position sensor connected to AIS, if that sensor calculates COG If available
Speed over ground (SOG)	Automatically updated from the position sensor connected to AIS If available
Ship's Heading	Automatically updated from the ship's heading sensor connected to AIS
Navigational status	Manually entered by the Officer of the Watch or Master and changed as necessary, for example: <ul style="list-style-type: none"> - underway by engines - at anchor - not under command (NUC) - restricted in ability to manoeuvre (RIATM) - moored - constrained by draught - aground - engaged in fishing - underway by sail
Rate of turn (ROT)	Automatically updated from the ship's ROT sensor or derived from the gyro If available

Voyage-related	
Ship's draught	Manually entered at the start of the voyage using the maximum draft for the voyage and amended as required
Hazardous cargo (type)	Manually entered at the start of the voyage confirming whether or not hazardous cargo is being carried, namely: DG (Dangerous goods)

	HS (Harmful substances) MP (Marine pollutants) Indications of quantities are not required
Destination and ETA	Manually entered at the start of the voyage and kept up to date as necessary
Route plan (waypoints)	Manually entered at the start of the voyage, at the discretion of the master, and updated when required

Short safety-related messages	
	Free format short text messages manually entered and addressed either to a specific addressee or broadcast to all ships and shore based stations