



Office of
Deputy Commissioner
of Maritime Affairs

THE REPUBLIC OF LIBERIA
LIBERIA MARITIME AUTHORITY

Marine Notice

ISP-003
Rev. 02/22

TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF MERCHANT SHIPS AND AUTHORIZED CLASSIFICATION SOCIETIES, LIBERIAN RO's, LIBERIAN AUTHORIZED TESTING APPLICATION SERVICE PROVIDER (TESTING ASP) AND RECOGNIZED ASP, LIBERIAN NAUTICAL INSPECTORS AND AUDITORS

SUBJECT: LONG RANGE IDENTIFICATION AND TRACKING OF SHIPS (LRIT)

Supersedes: Marine Notice ISP-003 dated 04/20

The following changes have been included:

- a. Sections 4.0 and 5.0 amended to require, in addition to new installations, satisfactory conformance testing of existing LRIT equipment upon registration or re-registration of all ships under the Liberian flag from 1 March 2022 and the list of testing ASPs has been updated.
- b. Replaced Inmarsat C mobile earth station with recognized mobile satellite service ship earth station.
- c. Adding a new paragraph 12.4 withdrawing IsatM2M satellite service for LRIT purposes.
- d. Section 14.0 amended to remove references to specific equipment.

PURPOSE:

This Marine Notice provides revised guidance on implementation, maintenance and compliance with the requirements for Liberian flag ships to transmit Long Range Tracking and Identification (LRIT) information.

This Notice provides an overview and clarification of the LRIT requirements in relation to:

- ship terminal LRIT conformance testing; and
- ship survey and certification.

1.0 Background

1.1 In May 2006, the Maritime Safety Committee adopted resolution MSC.202(81) amending Chapter V of the International Convention for the Safety of Life at Sea 1974 (SOLAS) Regulation V/19-1 introducing mandatory position reporting obligations for SOLAS ships

that entered into force on 1 January 2008. Called Long Range Identification and Tracking (LRIT), the system requires ships to automatically, transmit their identity, position and date/time at 6-hour intervals. SOLAS Contracting Governments bear all costs of the system.

- 1.2 LRIT is aimed at addressing many issues in the area of safety, security and environmental aspects.
- 1.3 Long Range Identification and Tracking (LRIT) of ships is a maritime security initiative that allows SOLAS Contracting Governments to request and receive position reports from ships operating under their flag and to request and receive position reports of other flagged ships indicating intentions to enter a port under their jurisdiction and ships operating within 1000 nautical miles of their coast. In addition to enhancing maritime security, the regulations also allow LRIT to be used for search and rescue. LRIT information is automatically transmitted from shipborne equipment to Liberia's National Data Center (NDC) where it is stored until it is requested.
- 1.4 All Liberian registered ships to which regulation V/19-1 of SOLAS applies shall send data to the NDC via the Recognized ASP. The Liberian Administration has appointed Polestar Space Applications Limited to operate the Liberian NDC on its behalf. Owners of Liberian flagged ships incur no costs associated with the transmission and receipt of the position reports required by LRIT.
- 1.5 The LRIT information ships are required to transmit include the ship's identity, location and date and time of the position. There is no interface between LRIT and AIS. One of the more important distinctions between LRIT and AIS is that, whereas AIS is a broadcast system, data derived through LRIT is available only to the recipients who are entitled to receive such information and safeguards concerning the confidentiality of those data have been built into the regulatory provisions. SOLAS Contracting Governments are entitled to receive information about ships navigating within a distance not exceeding 1000 nautical miles off their coast.
- 1.6 [MSC Resolution 263\(84\)](#) was adopted on 16 May 2008, as amended by resolution MSC.330(90), to describe the performance standards and functional requirements of the equipment installed to meet the requirement for the Long-Range Identification and Tracking of ships.
- 1.7 FAL.2/Circular.131 issued on 19 July 2017 and FAL.2/Circ.131/Corr.1 issued 4 June 2018, includes the LRIT Conformance Test report as a document required to be carried on board ships. See also Liberian Marine Notice [ADM-007](#).

2.0 Application

- 2.1 The LRIT equipment is applicable to the following Liberian registered ships engaged on international voyages:
 - Cargo ships, including High Speed craft of 300 gross tonnage and above,
 - Passenger ships, including High Speed passenger craft,
 - Mobile Offshore Drilling Units (MODU) that are propelled by mechanical means,

- Offshore Support Vessels, Special Purpose Ships and Mobile Offshore Units (MOU) of 300 gross tonnage and above that are propelled by mechanical means, and
 - Commercial yachts of 300 gross tonnage and above.
- 2.2 Ships, irrespective of the date of construction, fitted with an automatic identification system (AIS), as defined in SOLAS Chapter V, Regulation 19.2.4, and operated exclusively within sea area A1, as defined in SOLAS Chapter IV, Regulation 2.1.12, are not required to comply with the provisions of SOLAS Chapter V, Regulation 19-1. Therefore, exemption certification from the requirement to comply with SOLAS Chapter V, Regulation 19-1 is not required in this case.

The Liberian Administration will be guided by the principles outlined in MSC.1/Circ. 1295 in determining the application of the LRIT requirements for the following ships/unit:

- .1 Mobile and immobile offshore units, including Floating Productions Storage & Offloading units (FPSO), Floating Storage Units (FSU), Single Buoy Mooring (SBM), units issued with Liberian Mobile Offshore Drilling Unit (MODU) certificate, and vessels issued with Liberian Mobile Offshore Unit (MOU) Certificates,
 - .2 Special Purpose Ships, and
 - .3 Offshore Support Vessels.
- 2.3 These vessels should comply with the LRIT requirements if they are 300 gross tonnage or above, propelled by mechanical means, engaged on international voyages outside GMDSS sea area A1 or not fitted with AIS and engaged in voyages within GMDSS sea area A1.
- 2.4 Mobile and immobile units which are operating solely within the territorial waters of a specific country should liaise with the Government of that country in order to provide information (position and expected time in location) on the vessel.
- 2.5 Mobile and immobile units which are fitted with LRIT equipment should notify the Administration when they are moored on site and the expected period that the unit will be moored as the frequency of LRIT data may be reduced by the Administration. The Administration should then be notified when the unit is to undertake a voyage from the moored location. All notification shall be recorded in the unit's Official Log Book.
- 2.6 For the purpose of the Liberian Administration's requirements for LRIT and notwithstanding the definitions provided in the SOLAS regulations and IMO guidelines, the following terms are deemed to apply:
- Company is the entity responsible for the management of the ship in accordance with the ISM Code. For ships to which the ISM Code is not applicable, the Company is the Managing Owner.
 - Conformance test result is the document that is issued by the Authorized Testing ASP (see paragraph 5.2 below) outlining the results of the conformance test. This document is provided to the Administration in order to obtain a Conformance Test Report (CTR).
 - Conformance Test Report (CTR) is the document issued by the Administration to verify that the LRIT equipment has successfully completed a conformance test.

- Gross tonnage is the tonnage measured in accordance with the International Convention on Tonnage Measurement of Ships 1969.
- International voyage is a voyage that is outside the territorial waters of Liberia and between two or more countries.
- Recognized ASP means an Application Service Provider which has been recognized by the Administration in accordance with the provisions of the IMO revised performance standards. The recognized ASP is assigned to operate the Data Center and to provide a communication protocol interface between the communication Service Provider and the LRIT Data Center.

3.0 Exemptions and Equivalent Arrangements

- 3.1 Ships that are operating exclusively in a GMDSS A1 sea area and are fitted with AIS are not required to install LRIT equipment. However, such ships will require an exemption or equivalent arrangement if they engage in an international voyage outside the GMDSS A1 sea area.
- 3.2 Ships/units specified in paragraphs 2.1 and 3.1 above which are not normally engaged in international voyages but are required to undertake a single international voyage or which are re-positioning from a GMDSS sea area A1 should apply to the Administration for consideration of exemption or equivalence in accordance with the provisions of SOLAS Regulations I/4, IV/3.1, IV/3.2 and V/3.
- 3.3 Any application, which is submitted under paragraph 3.2 above, should include details of the proposed voyage, including dates, length of voyage, port/place of departure and port/location of destination.
- 3.4 The Administration will liaise with the Recognized Organization (RO) that issued the affected safety certificate and if the exemption is granted or equivalent arrangement accepted, the Administration will authorize the RO accordingly and advise of any applicable conditions in order that the affected certificate can be duly annotated.
- 3.5 Ships applying for such exemptions should note that in accordance with the guidelines of [MSC.1/Circ.1295](#), there may be a requirement for the Manager/Owner to submit the voyage plan (and any amendments) or report at specified intervals to not only the Governments where the ship is proceeding but also Governments of the coast of which the ship might be navigating, subject to those countries being entitled to the information in accordance with the requirements of SOLAS Regulation V/19-1.

4.0 Shipborne LRIT Equipment

Owners may utilize any equipment to transmit LRIT information on the provision that the equipment:

- demonstrates compliance with the requirements of SOLAS Regulations V/19-1.6 and V/19-1.7, and the revised performance standards as referenced in IMO Circular MSC.1/Circ. 1307, and
- beginning on 01 March 2022, irrespective of whether it is a new or existing installation, has undergone and passed a satisfactory conformance test upon registration or re-registration of all ships listed in paragraph 2.1 under the Liberian flag. If it is being used for another function, e.g. ship security alert system (SSAS) or GMDSS

transmission, it complies with the relevant performance standards relating to the additional function.

- 4.1 Ships intending to use existing GMDSS equipment for the purpose of transmitting LRIT information and which, for the purpose of complying with the requirements of SOLAS regulation IV/15.6 in relation to availability, are provided with duplicated equipment, are only required to use one of the sets of duplicated equipment fitted on board for transmitting LRIT information.
- 4.2 Notwithstanding 4.1 above, if a ship is fitted with more than one transmitting unit (shipboard equipment) that is intended to be utilized for LRIT purposes and integrated into the Liberian LRIT Data Centre, a satisfactory conformance test must be carried out at the time of all applicable ship's registration or re-registration under the Liberian flag and Conformance Test Report issued for each unit (equipment). However, only one of the transmitting units will be registered in the Data Center at a given time to avoid duplication of position reports.
- 4.3 The Conformance Test Report will be annotated to reflect that the LRIT equipment satisfies the applicable type approval and/or certification in accordance with the applicable requirement of:
 - IEC 60945/IEC 60945 Corr.1,
 - And if applicable, SOLAS Regulation IV/14, i.e. where a terminal is approved for GMDSS functions, And, if applicable, SOLAS Regulation XI-2/6, i.e. where a terminal is approved for SSAS function.

5.0 Requirement for Conformance Testing

- 5.1 A conformance test is required for all new and existing installations of shipborne LRIT equipment upon ship's registration or re-registration under the Liberian flag, in order to ensure that the equipment, as fitted onboard, complies with the provisions of SOLAS Regulation V/19-1.6 and the LRIT revised performance standards and functional requirement. The conformance test submitted for registration or re-registration shall be less than one month old and conducted by the Testing ASP in accordance with paragraph 5.2.
- 5.2 As of 21 April 2022, the conformance test shall be conducted by the Liberian Administration Authorized testing Application Service Provider (herein referred to as "Testing ASP") whose details are outlined below:

Pole Star Space Applications Limited
Email: lrittesting@polestarglobal.com
(T) +44 (0)20 7313 7400
(F) +44 (0)20 7313 7401

Shipborne LRIT equipment tested by previously authorized Testing ASP prior to 21 April 2022 are not required to be retested unless the ship is re-registered.

- 5.3 The conformance test shall be conducted taking into consideration the criteria noted in paragraph 5.1 and in accordance with the provisions of SOLAS Regulation V/19-1.4.1. The conformance test process is as follows:

- .1 Owners of ships subject to SOLAS V/19-1 will need to register the chosen recognized mobile satellite ship earth station for testing with the Testing ASP.
 - .2 Once registration is complete, an activation code (Data Reporting and Polling Closed Network Identity or DNID) and other supplemental commands will be downloaded automatically to the ship's chosen recognized mobile satellite ship earth station. This will activate the transmissions required for the test.
 - .3 Following activation, there will be a period of testing in line with guidelines contained in MSC.1/Circ.1307. This is necessary to ensure the transmitted data is accurate and reliable. This testing will be carried out remotely by the Testing ASP. Upon successful completion, a Conformance Test Report will be issued by the Administration. All ships must hold such a Conformance Test Report to comply with SOLAS V/19-1.
 - .4 Owners of ships with terminals that do not support LRIT will need to either upgrade one of the recognized mobile satellite service ship earth stations onboard or install a 'standalone' LRIT terminal.
- 5.4 If the test has been unsuccessful, the ship should still have documentation attesting to a conformance test being carried out.

6.0 Survey and Certification

- 6.1 The Recognized Organization (RO), taking into consideration the compliance dates in accordance with the provisions of SOLAS Regulation V/19-1.4.1 and the guidance outlined in Sections 8 & 9 of MSC.1/Circ.1307, should ensure that ships have a valid Conformance Test Report prior to issuing the applicable full term Safety Certificate during the applicable surveys.
- 6.2 For all new and existing installations, when a ship is transferring flag and registering with Liberia or vessel's ownership is being transferred with ship remaining registered (re-registered) with Liberia, the shipowner shall have made prior arrangements to soonest possible have the LRIT equipment tested with the Testing ASP. When presented with evidence of a test appointment, the RO may issue to the ship an applicable full term Safety Certificate.
- 6.3 On satisfactory completion of a shipborne terminal conformance test, the Testing ASP conducting the test shall submit the LRIT conformance test results to the Administration in accordance with conditions and format outlined in the Testing ASP agreement.
- 6.4 For cargo ships of gross tonnage of 300 and above but of less than 500, which have not been issued a Cargo Ship Safety Equipment Certificate, compliance with the LRIT requirements should be verified by having on board a valid Conformance Test Report.
- 6.5 On satisfactory completion of a conformance test, the Testing ASP conducting the test will issue a report to the Administration to support and serve as the basis for the Conformance Test Report.
- 6.6 The Administration will issue the Conformance Test Report. There is no additional action required from the shipowner once the test has been successfully completed since the test report data is automatically forwarded to the Administration by the Testing ASP.

6.7 Endorsement and Renewal of the applicable Safety Certificate: in accordance with the provisions of **MSC.1/Circ.1307** with regards to the LRIT equipment, during annual surveys the attending surveyor should endorse the applicable Safety Certificate provided that the Conformance Test Report is still valid. At the time of renewal of the applicable Safety Certificate, the Certificate should be reissued if the ship still has a valid Conformance Test Report. Provided the ship has a valid Conformance Test Report, no additional test or other verification of the LRIT equipment is required for the annual, intermediate, periodical or renewal survey of the applicable Safety Certificate.

7.0 Test Report

7.1 The LRIT conformance testing process concludes with the issuance of a formal Conformance Test Report to the shipowner by the Administration. This Conformance Test Report shall be placed on board.

7.2 The Conformance Test Report must remain with the ship's documents for as long as it is valid and the shipborne terminal is deemed compliant in accordance to paragraph 8 below. The Conformance Test Report does not expire, until such time as there may be reason to require the conformance test to be repeated and the Conformance Test Report reissued as per paragraph 8.

8.0 Conformance Test Reports: Validity and Amendments

8.1 In accordance with the provisions of Sections 7.2, 7.3 and 10 of **MSC.1/Circ.1307**, the shipborne equipment is required to undergo a new conformance test and a new Conformance Test Report is required to be issued where:

- .1 there are changes to the LRIT shipborne equipment;
- .2 the LRIT shipborne equipment becomes unserviceable;
- .3 the Administration has been notified by the Recognized ASP that the shipborne equipment is not operating within the parameters of the Conformance Test Report and/or in accordance with the LRIT performance standards;
- .4 the affected ship has transferred to the Liberian flag or re-registered under the Liberian flag; or
- .5 the ship is intended to operate outside the sea area noted on the Conformance Test Report.

8.2 Notwithstanding paragraph 8.1, the Administration recommends that the Conformance Test Report be re-issued when changes occur affecting the ship details, particularly if there is a change in the ship's name.

8.3 Change of Ship Name: the shipowner may send a request for an amended Conformance Test Report to the Administration at: vesselcertificates@lisr.com. The request should specify the ship's IMO number, previous name and confirm the ship's new name.

8.4 Transfer of Flag: the procedures outlined in Section 9 of this Notice shall be followed.

9.0 Transfer of Flag and Ships Permanently Being Taken out of Service:

9.1 In order for a ship to commence transmitting the required data and to ensure the timely compliance with the provisions of V/19-1, the LRIT equipment must be integrated into the Liberian NDC. When a ship enters or leaves the Flag, as part of the transfer process it is therefore essential that commercial details such as ships name, flag, LRIT equipment identifiers and serial numbers be completed in a timely manner to accomplish or maintain compliance with the requirement to transmit LRIT information at the time that Flag change occurs. Recognizing this need to ensure a timely integration of a ship to the Liberian NDC, Companies intending to transfer a LRIT applicable ship to the Liberian Registry must provide the Administration with the following information during the registration process:

- the ship IMO number,
- current flag,
- the proposed date of transfer, and
- confirmation of scheduled conformance test with a Liberian Testing ASP.

9.2 Owners should be advised that the duration of the conformance testing is approximately 48 hours and is conducted remotely and preferably while the ship is at sea. In order to expedite the process owners may schedule a conformance test, with the Testing ASP, prior to the transfer of flag. The new recognized mobile satellite service ship earth station number issued by the Liberian Administration after transfer of flag, must be provided to the Testing ASP so that a new Conformance Test Report can be issued by the Administration.

9.3 In the event that a ship is to be transferred from the Liberian flag or will be permanently taken out of service, Companies must promptly notify the Administrations LRIT department at: LRIT@liscr.com in order to enable the timely deletion of the LRIT shipborne equipment from the Liberian LRIT NDC.

9.4 As a ship has to be integrated to the Data Centre in order to transmit the required LRIT information, Companies should note that the integration/decommissioning of a LRIT shipborne equipment is critical to ensuring that affected ships are not unduly penalized or detained for failing to transmit LRIT information.

9.5 In the event that the applicable transferring ship is not equipped with LRIT capable equipment and/or has not conducted a conformance test, then shipborne equipment must be selected, *as per paragraph 4*, and a conformance test must be conducted, *as per paragraph 5*. Considering that more time may be required for installation of new equipment, configuration of existing equipment and/or scheduling of a conformance test, owners should contact the Administration to request a temporary dispensation to allow the time necessary to complete these undertakings. The installation and commissioning of the new LRIT equipment is to be completed before a full term Safety Equipment Certificate may be issued.

10.0 Failure of the LRIT equipment, switching off the LRIT equipment, ceasing the distribution of LRIT Information, and reducing the frequency or temporarily stopping the transmission of LRIT information:

10.1 The Administration will advise the relevant parties if it intends to cease the distribution of LRIT information and/or reduce the frequency or temporarily stop transmitting LRIT Information. The Master shall record such notification in the ship's Official Log Book.

10.2 **The Master or Company Security Officer (CSO) shall notify the Administration in writing at: LRIT@liscr.com of the following circumstances that may warrant the LRIT equipment being switched off:**

- ship is undergoing repairs, modifications or conversions in dry-dock,
- ship is laid up for a period exceeding 7 days,
- circumstances where the ship is without electrical power for longer than 12 hours.

In such cases, the notification and subsequent agreement shall be recorded in the ship's Official Log Book and the Administration shall be advised when the LRIT equipment is switched on in order that it can be re-integrated into the Liberian LRIT Data Centre.

10.3 **The Master or CSO shall notify the Administration, Recognized Organization and if applicable, the local port State authorities of any failure of the LRIT equipment.** In such cases, the notification shall be recorded in the ship's Official Log Book and all applicable parties shall be advised when the LRIT equipment is fully operational. When notifying the Administration, the Master or CSO shall request a dispensation from the Administration to allow the ship to operate without a properly working LRIT unit.

11.0 Current status of the implementation of the Liberian LRIT National Data Centre

11.1 The Liberian Administration has established a fully functional National Data Centre which is operated on its behalf by Polestar (www.polestarglobal.com) who is also authorized as the Liberian Recognized Application Service Provider (Recognized ASP).

11.2 All applicable Liberian registered ships will be integrated into the Liberian LRIT Data Centre and subject to a satisfactory conformance test of the shipborne LRIT equipment.

12.0 Configuring Shipborne Equipment

12.1 The following guidance is provided to assist shipowners and masters with determining the suitability of existing equipment for LRIT. This information is not intended to be exhaustive of all possible configurations and may contain errors as it is supplied by manufacturers and other third parties.

12.2 For Inmarsat C shipborne equipment; the make and model of equipment may be determined using the first six digits of the Inmarsat Serial Number (ISN). If the equipment appears to be LRIT capable; the following steps should be taken:

- Contact the manufacturer to confirm that the shipborne equipment has current software/firmware versions; and
- Ensure that Polling & Data Reporting (PDR) functions are enabled; and
- Ensure that Macro Encoded Message 11 (MEM-11) is enabled.

12.3 For Iridium shipborne equipment, models are usually suitable for integrating LRIT functionality without further configuration. In case of new models, please contact the Recognized ASP to determine suitability for LRIT.

12.4 From 31 December 2021, IsatM2M satellite service will be withdrawn and ships with this equipment installed will no longer be compliant with LRIT regulations.

13.0 Recommended LRIT Equipment Maintenance:

The Administration acknowledges that in some instances it can be difficult for the ship/company to ensure compliance with LRIT. Some of the ‘lessons learned’ in Liberian ships include:

- Reset / powering down of equipment will often solve the problem (more than 75%)
- Re-upload of DNID (Communication Protocol)
- Antenna obscured by cranes, superstructures, buildings etc.
- Change of equipment (including ‘cloning’)
- Antenna broken/loose connections/water ingress
- De-activated recognized maritime mobile satellite service ship earth station numbers

It is recommended that the antenna and connections are inspected with adequate intervals to prevent loss of signal due to loose connections and/or water ingress.

The DNID table can be corrupted and even deleted during certain firm-ware updates or general repair to a unit. On Inmarsat-C shipborne equipment, there should be up to four Pole Star DNIDs enabled – one for each operating Ocean Region. It is recommended to check for these DNIDs following any type of maintenance to the equipment.

If, after repair or firm-ware update to the equipment, there are any doubts whether the LRIT equipment is transmitting LRIT data, please contact LRIT@liscr.com for verification.

Before de-activating a recognized maritime mobile satellite service ship earth station number, ensure it is not the ship earth station used for the LRIT terminal. Especially during the Radio Station License renewal, it is important the ship earth station associated with the LRIT terminal is not deactivated.

14.0 Shipborne Equipment

14.1 For information on recognized maritime mobile satellite service ship earth station models contact the Recognized ASP or the equipment manufacturer to determine suitability for LRIT.

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