



# NIUE SHIP REGISTRY

Website: [www.niueship.com](http://www.niueship.com)

## LONG RANGE IDENTIFICATION AND TRACKING OF SHIPS (LRIT) (Circular NMC3.2015 (rev2))

**PURPOSE:** Provide ship owners/managers/operators the relevant information and guidance for compliance with the requirements of LRIT which entered into force on 1 January 2008.

### RELATED DOCUMENTS:

1. IMO Resolution MSC.202(81) - Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended, adopted 19 May 2006
2. IMO Resolution MSC.211(81) - Arrangements for the Timely Establishment of the Long-Range Identification and Tracking System, adopted 19 May 2006
3. IMO Resolution MSC.263(84) - Revised Performance Standards and Functional Requirements for the Long-Range Identification and Tracking of Ships, adopted 16 May 2008
4. Resolution MSC.216(82) - Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended, adopted 08 December 2006
5. IMO Resolution A.694(17) - Recommendations on General Requirements for Shipborne Radio Equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids, adopted 06 November 1991
6. IMO Resolution A.813(19) - General Requirements for Electromagnetic Compatibility of all Electrical and Electronic Ship's Equipment, adopted 23 November 1995
7. MSC.1/Circ.1290 - Unified Interpretation of the Term "First Survey" referred to in SOLAS Regulations, dated 16 December 2008
8. MSC.1/Circ.1295 - Guidance in Relation to Certain Types of Ships which are Required to Transmit LRIT Information on Exemptions and Equivalents and on Certain Operational Matters, dated 8 December 2008
9. MSC.1/Circ.1307 - Guidance on the Survey and Certification of Compliance of Ships with the Requirement to Transmit LRIT Information, dated 09 June 2009
10. MSC.1/Circ.1298 - Guidance on the Implementation of the LRIT System, dated 08 December 2008
11. GMDSS.1/Circ.22 - Master Plan of Shore-Based Facilities for the Global Maritime Distress and Safety System (GMDSS Master Plan), dated 30 July 2018

### DEFINITIONS:

The following abbreviations stand for:

- "AIS" – Automatic Identification System
- "ASP" – Application Service Provider
- "CSO" – Company Security Officer
- "CSP" – Communication Service Provider
- "CSSC" – Cargo Ship Safety Certificate
- "CSSEC" – Cargo Ship Safety Equipment Certificate
- "CSSRC" – Cargo Ship Safety Radio Certificate
- "CTR" – Conformance Test Report
- "DC" – Data Centre
- "DPA" – Designated Person Ashore
- "FPSO" – Floating Production, Storage, and Offloading Unit
- "FSU" – Floating Storage Unit
- "GMDSS" – Global Maritime Distress and Safety System
- "GT" – Gross Tonnage in accordance to ITC 69
- "IMO" – International Maritime Organization
- "IMSO" – International Maritime Satellite Organization
- "ITC 69" – International Convention on the Tonnage Measurement of Ships, 1969
- "LRIT" – Long Range Identification and Tracking of Ships
- "MMSI" – Maritime Mobile Service Identity
- "MODU" – Mobile Offshore Drilling Unit

- "NDC" – National Data Centre
- "OSV" – Offshore Supply Vessel
- "PSC" – Port State Control
- "PSSC" – Passenger Ship Safety Certificate
- "RO" – Recognized Organization as defined by IMO Resolution A.789(19)
- "SAR" – Search and Rescue
- "SOLAS" – International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended
- "SPS" – Special Purpose Ships
- "SPS 2008" – Code of Safety for Special Purpose Ships, 2008, Annex to IMO Resolution MSC.266(84)
- "SSAS" – Ship Security Alert System
- "VMS" – Vessel Monitoring System

The following terms shall mean:

- "Administration" shall mean the Niue Ship Registry;
- "Regulation" – SOLAS V/19-1 as established by IMO Resolution MSC.202(81) unless otherwise specified
- "Ship" – when used throughout this Marine Circular shall include all the ship types mentioned under the section on "APPLICATION" below

## **APPLICATION:**

IMO Resolution MSC.202(81) requires ships to transmit LRIT information, and establishes the rights and obligations of Contracting Governments and of SAR services to receive LRIT information.

LRIT applies to the following vessels engaged in international voyages:

- passenger ships, including high-speed passenger craft, of any GT;
- cargo ships, including high-speed craft, of 300 GT and upwards;
- self-propelled MODUs not on location; and
- in accordance with SOLAS V/1.4, this Regulation shall also apply to commercial yachts of 300 GT and upwards.

Note:

- See Section H, below, for Exceptions.
- A rigidly connected composite unit of a pushing vessel and associated pushed vessel, when designed as a dedicated and integrated tug and barge (ITB) combination, shall be regarded as a single ship for the purpose of this Regulation.

## **CONTENTS:**

### **A. GENERAL REQUIREMENTS**

1. Ships, constructed before 31 December 2008, must comply with the following timelines:
  - 1.1. Ships operating in sea areas A1 + A2 or A1 + A2 + A3 (as defined in SOLAS IV/2.1.12, 2.1.13 and 2.1.14 respectively) by no later than the "first survey" of the Radio installation after 31 December 2008.
  - 1.2. Ships operating exclusively in sea area A4 (as defined in SOLAS IV/2.1.15) by no later than the first Survey of Radio installation after 1 July 2009. However, if the Ship is also operating in A1 + A2 + A3, then section A1.1.1 would apply in those areas.
2. Ships constructed after 31 December 2008 must comply with the Regulation at time of delivery.
3. Ships operating exclusively in sea area A1 (as defined in SOLAS IV/2.1.12) and fitted with an AIS are exempt from LRIT and generally no exemption certification is required. However, for ship owners / operators with PSC concerns, the Administration will consider, upon request, the issuance of a letter describing the ship's operating area.

### **B. SEA AREAS OF OPERATION**

1. Refer to the GMDSS Master Plan Annexes 2, 3 and 4 for detailed descriptions of sea areas.

2. All Ships operating in sea area A3 require compliant shipborne equipment (the "terminal").
3. Ships operating in near-coastal sea area A2 not fitted with Inmarsat-C GMDSS are required to fit a compliant terminal.
4. The following platforms are considered most suited to the transmission of LRIT data, in order of practical suitability:
  - 4.1. Inmarsat "Mini-C"-type Mobile Earth Station (as used for SSAS and / or commercial tracking applications);
  - 4.2. Secondary Inmarsat C Mobile Earth Station (typically the "back-up / redundant" GMDSS largely on stand-by); and
  - 4.3. Primary Inmarsat C Mobile Earth Station.
5. Shipowners/managers and/or operators are to ensure that their shipborne equipment is LRIT compliant and capable of transmitting LRIT information in accordance to the requirements of MSC.263(84) and MSC.1/Circ.1307.
6. Ships operating in polar sea area A4 above 70 degrees latitude require a non-Inmarsat terminal that operates in conjunction with a low-earth orbit CSP system approved by the Administration in conjunction with its appointed ASP. An example of an acceptable system is the Iridium system.

#### **C. DEFINITION OF CONSTRUCTED**

1. SOLAS V/2 states that for the purpose of this chapter, "Constructed" in respect of a ship means a stage of construction where:
  - 1.1. the keel is laid;
  - 1.2. construction identifiable with a specific ship begins; or
  - 1.3. assembly of the ship has commenced comprising at least 50 tonnes or 1% of the estimated mass of all structural material whichever is less.
2. New-buildings being "delivered" on or after 31 December 2008, and quite possibly for some time thereafter, may be considered as not yet falling under the requirements of MSC.1/Circ.1307, paragraph 5.3. Such ships, whether delivered or not on or after 31 December 2008, to be subject to compliance of the Regulation as ships "constructed" before 31 December 2008 unless the above definition of "Constructed" actually applies on or after 31 December 2008.

#### **D. LRIT CONFORMANCE TESTING**

1. LRIT conformance testing of shipborne terminals became mandatory as of 31 December 2008 in accordance with MSC.1/Circ.1307.
2. For ships constructed before 31 December 2008, the shipborne terminal LRIT conformance test shall be:
  - 2.1. conducted as soon as possible but at least three (3) months prior to the date on which a Ship would need to demonstrate compliance with the requirements of the Regulation; and
  - 2.2. satisfactorily completed prior to the **Record of Equipment** being endorsed to document compliance with the requirements relating to the LRIT system.
3. For ships constructed on or after 31 December 2008, the shipborne terminal conformance test shall be:

- 3.1. conducted after the completion of the initial survey of the radio installation in accordance with the provisions of SOLAS I/7(a)(i) or 9(a)(i), as the case may be, provided such survey has indicated that, as far as the radio installation is concerned, the ship meets the related requirements for the issuance of a PSSC, a CSSEC or a CSSC as the case may be; and
- 3.2. satisfactorily completed prior to the issuance of a PSSC, a CSSEC or a CSSC, as the case may be, endorsed to document compliance with the requirements relating to the LRIT system.

#### **E. AUTHORISED LRIT CONFORMANCE TEST ASPs**

1. The following ASPs have been appointed and authorized by this Administration to undertake shipborne terminal testing and subsequent issuance of LRIT CTRs on behalf of Niue:
  - 1.1. MCS (FE) Pte Ltd - [lrit@maritimechain.com](mailto:lrit@maritimechain.com)

#### **F. LRIT CONFORMANCE TEST REPORT (CTR)**

1. The LRIT conformance test has been designed to demonstrate compliance of the shipborne terminal with the functional requirements of SOLAS V/19-1.5 and of section 4 of the Performance Standards. The terminal compliance testing program lasts from 30 to 48 hours from operational activation.
2. On satisfactory completion of a shipborne terminal conformance test, the ASP conducting the test shall issue a LRIT CTR endorsed by the Administration.
3. The original LRIT CTR, or print-out if issued in electronic format only by the ASP, shall be placed on board with copies provided to the ship's DPA and the Administration for record keeping and database entry.
4. The LRIT CTR must remain with the ship's documents for as long as the shipborne terminal is deemed compliant because it does not expire until such time as there may be reason to require the LRIT conformance test to be repeated and the LRIT CTR reissued. Such an occasion may be the result of, but may not be limited to, terminal upgrading or replacing; transfer of a terminal from one ship to another; changes in ship ownership, ship management, port of registry, Data Center and/or ASP.

#### **G. SHIP SAFETY RADIO SURVEY AND SAFETY CERTIFICATION**

1. Safety Radio Survey

LRIT compliance does not affect or limit the issuance or endorsement of full term CSSRC by the RO, provided the ship radio installation is in all other respects deemed to be in compliance with the requirements of SOLAS IV for the vessel.

2. First Survey of the Radio Installation

2.1. SOLAS V/19-1.4.1.2 and 19-1.4.1.3 require compliance not later than the "first survey" of the radio installation after 31 December 2008 for sea areas A1, A2 and A3 and after 1 July 2009 for sea area A4 respectively. There is no clear delineation as to which survey the regulation is referring. However, MSC.1/Circ.1290 provides that when the term "first survey" is referenced by a regulation in SOLAS, it means the first "regularly scheduled" annual, periodical or renewal survey, whichever is due first after the date specified in the relevant regulation, or any other survey that the Administration deems to be reasonable and practicable.

2.2. For a ship under construction, where SOLAS V/2 definition of "*Constructed*" was applied but the ship was later delivered after 31 December 2008, and for ships constructed on or after 31 December 2008, the *initial* Safety Radio Survey is to be considered the "first survey" and such ships shall comply with the requirement to transmit LRIT information before they are put into service.

- 2.3. A change of flag or other occasional Safety Radio Survey which may be called for shall not be considered the "first survey" of the radio installation. Thus, LRIT compliance would only apply at these surveys if they fall within the range of a regularly scheduled annual, periodical or renewal survey and credit for the regularly scheduled survey is sought by the ship owner/operator.
- 2.4. Ship Safety Radio Surveys undertaken from 31 December 2008 onwards will include a terminal compliance check before initial issue, endorsement or renewal of the relevant CSSRC and amendment of the associated **Record of Equipment**.
- 2.5. Prior to the issue, endorsement or renewal of a PSSC, a CSSEC or a CSSC following an initial, annual, periodical or renewal survey, as the case may be, or the amendment of the associated **Record of Equipment**, the Administration or RO acting on behalf of the Administration shall:
  - 2.5.1. examine the LRIT CTR and ascertain whether it is valid;
  - 2.5.2. obtain information confirming that the shipborne terminal is transmitting LRIT information to the ASP and that the LRIT information transmitted by the ship will be provided through the ASP to the Niue NDC;
  - 2.5.3. verify compliance of the ship with any requirements of the Regulation and of section 4 of the Performance Standards which are not reported as having been examined during the LRIT conformance test;
  - 2.5.4. consider any shipborne terminal which forms part of a radio installation which is already certified or is to be certified as meeting the requirements of SOLAS IV and qualifying for the issue or endorsement of a PSSC, a CSSEC or a CSSC following an initial, annual, periodical or renewal survey, as the case may be, as meeting requirements of section 4 of the Performance Standards as far as the salient aspects of IMO Resolutions A.694 (17) and A.813 (19); and
  - 2.5.5. ascertain that the survey of the radio installation has been satisfactorily completed.

### 3. SOLAS Safety Equipment Certification

Amended by Resolution MSC.216(82) which sets out in its Annex 1, the insertion in the Record of Equipment, an entry to indicate compliance with LRIT systems and to provide for the endorsement for LRIT compliance in accordance with the Regulation.

### 4. Record of Equipment

- 4.1. The Record of Equipment means the PSSC (Form P), the CSSEC (Form E), the CSSC (Form C) and the Record of Equipment for High-Speed Craft Safety Certificate issued under the provisions of the International Code of Safety for High-Speed Craft or the International Code of Safety for High-Speed Craft, 2000.
- 4.2. Any amendment of the CSSRC or Record of Equipment for the CSSRC (Form R), or any amendment of the CSSC (Form C) or of the Record of Equipment for the CSSC (section 5 of Form C), other than that specified in Section 3 above in relation to LRIT systems, will not be accepted as attesting to the compliance of the ship concerned with the requirement to transmit LRIT information.

### 5. Difficulties in Conducting LRIT Conformance Testing

- 5.1. Those who have engaged in conformance testing have advised that they have encountered difficulties when attempting to conduct conformance testing in certain parts of the world or in certain situations, for example, when a ship is in shipyard during construction or undergoing repairs or modifications. Legitimate circumstances have also precluded the timely delivery, installation and testing of shipborne equipment intended to be used to comply with the requirement to provide LRIT information prior to the occasion of the "first survey."

5.2. ROs are advised that in circumstances mentioned in section G5.5.1 above, the inability to complete the conformance testing and delivery of a LRIT CTR in time for the "first survey" should NOT be considered as making the ship unseaworthy or as a reason for delaying the ship in port until the conformance testing is satisfactorily completed and the CTR is delivered, provided suitable arrangements are made to the satisfaction of the Administration as soon as is practically possible.

## 6. Offshore, Special Units, Small Cargo Ships and Commercial Yachts

6.1. As the MODU Safety Certificate and the MODU Safety Certificate 1989, are not accompanied by a Record of Equipment, such self-propelled MODUs when not on location will be considered as meeting the requirements when:

6.1.1. the provisions of sections O and Q below are met;

6.1.2. there is on board a valid MODU Safety Certificate 1979, or a valid MODU Safety Certificate 1989; and

6.1.3. there is on board a valid LRIT CTR issued in accordance with the provisions of MSC.1/Circ.1307.

6.2. In cases where the Record of Equipment associated with the safety certificates issued to FPSOs, FSUs, OSVs, SPSs or A.494(XII)-ships, fishing vessels or yachts does not include a provision for documenting compliance with the requirement to transmit LRIT information, these ship types shall carry on board a valid LRIT CTR issued in accordance with the provisions of MSC.1/Circ.1307.

6.3. Cargo ships whose GT is 300 and above but of less than 500 are not required to hold a valid CSSEC and thus there is no associated Record of Equipment (Form E) which could be endorsed so as to attest their compliance with the requirement to transmit LRIT information. The compliance of the aforesaid cargo ships with the requirement to transmit LRIT information should therefore be documented:

6.3.1. in case they are issued with a CSSC, by completing the relevant entry in section 5 of the Record of Equipment (Form C); or

6.3.2. by a valid LRIT CTR issued in accordance with MSC.1/Circ.1307.

## H. EXCEPTIONS (MSC.1/Circ.1295)

### 1. FPSO and FSU

1.1. FPSOs and FSUs *not propelled by mechanical means* are not required to transmit LRIT information when on location or in transit under tow on an international voyage.

1.2. FPSOs and FSUs propelled by mechanical means of 300 GT and above fitted with AIS and operating exclusively within sea area A1, are not required to transmit LRIT information when in transit and engaged on international voyages.

1.3. FPSOs and FSUs propelled by mechanical means and constructed before 31 December 2008, in case they are not required to comply with the provisions of SOLAS IV, are required to transmit LRIT information in accordance with the provisions of SOLAS V/19-1 as from 31 December 2009, if not excepted otherwise under MSC.1/Circ.1295.

### 2. OSV

2.1. OSV means a vessel which is primarily engaged in the transport of stores, materials and equipment to offshore installations and which is designed with accommodation and bridge erections in the forward part of the vessel and an exposed cargo deck in the after part for

the handling of cargo at sea in accordance with the Guidelines for the design and construction of offshore supply vessels, 2006, adopted by resolution MSC.235(82).

- 2.2. OSVs of 300 GT and above when engaged on international voyages fitted with AIS and operating exclusively within sea area A1 are not required to transmit LRIT information.
- 2.3. OSVs constructed before 31 December 2008, in case they are not required to comply with the provisions of SOLAS IV, are required to transmit LRIT information in accordance with the provisions of SOLAS V/19-1 as from 31 December 2009, if not excepted otherwise under MSC.1/Circ.1295.

### 3. SPS

- 3.1. SPS means a mechanically self-propelled ship which by reason of its function carries on board more than 12 special personnel as defined in paragraph 1.3.11 of the SPS 2008 Code, adopted by resolution MSC.266(84).
- 3.2. SPSs of 300 GT and above when engaged on international voyages fitted with AIS and operating exclusively within sea area A1, are not be required to transmit LRIT information.
- 3.3. SPSs of 300 GT and above but less than 500 GT, in case they are not required to comply with the provisions of SOLAS IV, are required to transmit LRIT information in accordance with the provisions of SOLAS V/19-1 as from 31 December 2009, if not excepted otherwise under MSC.1/Circ.1295.

### 4. Resolution A.494(XII) Ships

- 4.1. An A.494(XII) ship means a ship the keel of which was laid before 18 July 1994 and which in accordance with the provisions of operative paragraph 3 of resolution A.494(XII), "Revised interim scheme for tonnage measurement for certain ships," was allowed to use the gross tonnage determined in accordance with national tonnage rules in determining whether it is required to comply with the provisions of SOLAS IV.
- 4.2. A.494(XII) ships when engaged on international voyages fitted with AIS and operating exclusively within sea area A1, are not be required to transmit LRIT information.
- 4.3. A.494(XII) ships of gross tonnage 300 and above but less than 500, in case they are not required to comply with the provisions of SOLAS IV, are required to transmit LRIT information in accordance with the provisions of SOLAS V/19-1 as from 31 December 2009, if not excepted otherwise under MSC.1/Circ.1295.

### 5. Commercial Fishing Vessels

- 5.1. Commercial fishing vessel means a decked vessel for the time being used or intended to be used commercially for catching fish or other living resources of the sea, and is described in the register and on the Certificate of Registry as a commercial fishing vessel.
- 5.2. In accordance to SOLAS V/1.4, commercial fishing vessels are not required to comply to LRIT due to the presence of VMS by environmental and fishery regulatory organizations.

### 6. Contracting Government Jurisdictions

FPSOs and FSUs, irrespective of whether they are propelled by mechanical means or not, OSVs, SPSs, A.494(XII) ships, commercial fishing vessels and commercial yachts operating within areas under the jurisdiction of a Contracting Government or of a State which is not a Contracting Government must transmit LRIT information if the Contracting Government or the State in whose jurisdiction they operate requires so.

## **I. EXEMPTIONS / EQUIVALENTS**

The provisions of this section apply to all ships, including FPSOs, FSUs, OSVs, SPSs, A.494(XII) ships and yachts, that are required to transmit LRIT information. Any reference to a ship below should be considered as including all the aforesaid.

### **1. General**

- 1.1. Although the provisions of SOLAS V/19-1 do not include any expressed provisions which allow the Administration to grant exemptions from, or equivalents to, the requirement to transmit LRIT information, when such exemptions or equivalents are warranted, the Administration may consider invoking, in lieu, the provisions of SOLAS V/3.2 when considering or granting any exemptions or equivalents to the provisions of SOLAS V/19-1.
- 1.2. The Administration may consider granting to individual ships exemptions or equivalents of a partial or conditional nature, when any such ship is engaged on a voyage where the maximum distance of the ship from the shore, the length and nature of the voyage, the absence of general navigational hazards, and other conditions affecting safety are such as to render the full application of SOLAS V unreasonable or unnecessary, taking into account the effect such exemptions and equivalents may have upon the safety of all other ships.
- 1.3. In such cases, the Administration shall be adhering to the provisions of SOLAS V/3.3 which requires the submission to the IMO a report summarizing all new exemptions and equivalents granted under SOLAS V/3.2 giving the reasons for granting such exemptions and equivalents.
- 1.4. The Administration, when invoking the provisions of SOLAS V/3.2, shall be taking, in addition to what is expressly stipulated in the aforesaid regulation, the effect such exemptions or equivalents may have on measures established by the IMO with a view to enhancing maritime security and may consult with the Contracting Government(s) within whose jurisdiction the port(s) or place(s) to which the ship is proceeding to is/are located and with the Contracting Government(s) of the coast of which the ship might be navigating.
- 1.5. Notwithstanding any additional conditions which the Administration may stipulate when granting exemptions or equivalents from the requirement to transmit LRIT information, the ship concerned shall be required, in lieu of transmitting LRIT information, to either:
  - 1.5.1. provide a copy of the voyage or passage plan (refer to resolution A.893(21) on Guidelines for voyage planning) for the specific voyage to the Contracting Government within whose jurisdiction the port or place to which the ship is proceeding is located and to the Contracting Governments of the coast(s) of which the ship might be navigating and any changes thereto; or
  - 1.5.2. report its positions at regular intervals, to be determined by the Administration taking into account the specific voyage or passage plan, to the aforesaid Contracting Governments, if provided with the means for doing so.

### **2. Specific Cases for Exemption**

- 2.1. Ships which are not normally engaged on international voyages but which, in exceptional circumstances, are required to undertake a single international voyage may be exempted from the requirement to transmit LRIT information, pursuant to the provisions of SOLAS I/4(a), exemptions from the requirements of SOLAS IV/7 to 11 (Radio Equipment Requirements General and for sea areas A1, A2, A3, A4 and combinations thereof) for a single voyage.
- 2.2. Ships fitted with AIS and operating exclusively within sea area A1, may, for the purpose of employment in another sea area, undertake a single voyage outside sea area A1 during the course of which it may be exempted by the Administration from the requirement to transmit LRIT information.
- 2.3. Ships which may be granted, pursuant to the provisions of SOLAS IV/3.1 and 3.2.2, exemptions from the requirements of SOLAS IV/7 to 11 for a single voyage and not fitted



with radio-communication or other shipborne equipment which may be used to transmit LRIT information, may be exempted from the requirement to transmit LRIT information during the course of such single voyages.

- 2.4. A Ship experiencing terminal transmission failure should immediately notify the Administration and include their status in the advance NOA (Notice of Arrival) to port States. Reports of its position at regular intervals, to be determined by the Administration and the port State, should be made to the aforesaid port State authority, if provided with the means for doing so.

## **J. OPERATIONAL PROCEDURES REQUIRING AUTHORISATION FROM THE ADMINISTRATION**

1. Masters of Niue flagged ships shall request, without undue delay, authorization from the Administration to reduce or terminate the transmission of LRIT information before doing so. The Administration shall issue instructions to the master as to whether he/she is granted authorization and, if so, under what circumstances and how they are to reduce, pursuant to the provisions of paragraph 4.4.1 of the Revised Performance Standards, the frequency of transmission of LRIT information or to temporarily stop the transmission of such information.
2. Masters shall make an entry in the record of navigational activities and incidents maintained in accordance with SOLAS V/28 indicating the dates and times between which:
  - 2.1. the shipborne equipment is authorized to be switched off or the distribution of LRIT information ceased, where international agreements, rules or standards provide for the protection of navigational information (SOLAS V/19-1.7.1); and
  - 2.2. the frequency of transmission of LRIT information is authorized to be reduced or temporarily stopped, for example, when a ship is, undergoing repairs, modifications or conversions in drydock, standing by in port for extended periods awaiting berth or charter orders or is going into a hot lay-up or cold lay-up for a long period (refer to paragraph 4.4.1 of the Revised Performance Standards).
3. In addition, the master of a ship undergoing repairs, modifications or conversions in drydock, standing by in port for extended periods awaiting berth or charter orders or is going into a hot lay-up or cold lay-up for an extended period of time, taking into account the instructions of the Administration, shall inform the authorities of the Contracting Government within whose territory or jurisdiction the ship is located of the need to reduce the frequency of or temporarily stop the transmission of LRIT information. Permission from the local authority to do so shall be obtained in advance as may be required before doing so.

## **K. LRIT ARCHITECTURE**

1. The SOLAS amendment provides for Contracting Governments to be entitled to receive identification, position, and time reports from:
  - 1.1. Ships registered to that member flag State wherever the ship is located.
  - 1.2. Ships that have declared their intention to enter a port in a member State's territory.
  - 1.3. Ships passing within 1000 nautical miles of the coastline of a member State's territory.
  - 1.4. Ships in an area where a Search and Rescue (SAR) operation is underway.
2. The LRIT system consists of the shipborne LRIT information transmitting terminal, CSPs, ASPs, LRIT DCs, including any related VMSs, an International LRIT Data Exchange (IDE) and an IMO LRIT Data Distribution Plan (DDP).
3. LRIT information is to be provided to Contracting Governments and SAR Services (the term "*search and rescue service*" is defined in SOLAS V/2.5 - see amendments to SOLAS V adopted on 20 May 2004, under cover of resolution MSC.153(78), which entered into force on 1 July 2006) entitled to receive the information, upon request, through a system of National (NDC), Regional (RDC), Co-operative (CDC) Data Centres and an International LRIT Data Centre (IDC), using where

necessary, the LRIT International Data Exchange (IDE) all controlled by the Data Distribution Plan (DDP).

4. Subject to the provisions of Section A above on dates of compliance, ships must automatically transmit the following LRIT information:
  - 4.1. Identity of the ship (IMO Number and Vessel Name);
  - 4.2. Position of the ship (latitude and longitude); and
  - 4.3. The date and time of the position report.
5. Systems and terminals used to meet the requirements of SOLAS V/19-1 must conform to performance standards and functional requirements not inferior to those adopted by the IMO in Resolution MSC.263(84), the "Performance Standards and Functional Requirements for the LRIT System" as amended from time-to-time.

## **L. FLAG STATE IMPLEMENTATION**

### **1. Resolutions and SOLAS Amendments**

During the IMO's Maritime Safety Committee (MSC) meeting in May 2006, SOLAS Convention amendments were adopted that require LRIT compliance. The SOLAS V/19-1 amendments are in Resolution MSC.202(81) of that report. The MSC also adopted a related Resolution MSC.211(81), "Arrangements for the Timely Establishment of the Long-Range Identification and Tracking System."

### **2. Administration Responsibilities**

It is the responsibility of the Administration to implement and enforce LRIT. The Administration must, at all times:

- 2.1. recognize the importance of LRIT;
- 2.2. recognize and respect the commercial confidentiality and sensitivity of any LRIT information they may receive;
- 2.3. protect the information they may receive from unauthorized access or disclosure; and
- 2.4. use the information they may receive in a manner consistent with international law.

### **3. LRIT Data Centre**

- 3.1. Niue flagged ships shall transmit LRIT information to the Niue NDC.
- 3.2. The Niue DDC is fully integrated into the international LRIT production environment and is capable of being used to assist in testing other DCs for entry into the production environment.

### **4. Transmission Charges**

The LRIT information (i.e. the 4 mandatory polling request per day) will be paid by the Administration with no billing to the ship owner / operator / manager, unless notified otherwise in the future.

### **5. LRIT Co-ordinator**

The IMSO has been appointed by MSC 85 as the LRIT Co-ordinator to review and audit the LRIT system to verify its compliance with the provisions of SOLAS V/19-1 and Performance Standards on behalf of the IMO and all Contracting Governments.

## **M. OBLIGATIONS OF ASP / Niue NDC ADMINISTRATOR**

1. The Administration has made arrangements to implement the Niue NDC through a Contract of Agreement with MCS (FE) Pte Ltd (MCS) as ASP and Niue NDC Administrator. The Agreements authorize MCS to establish a secure DC and assume the obligations of an ASP as required under the provisions of the Performance Standards established in conjunction with SOLAS V/19-1.
2. The specific ASP functions detailed in Resolution MSC.263(84), paragraph 5.3, are to provide:
  - 2.1. a communication protocol interface between the Niue NDC and the CSPs to enable the following minimum functionality:
    - 2.1.1. remote integration of the shipborne terminal into the Niue NDC;
    - 2.1.2. automatic configuration of transmission of LRIT information;
    - 2.1.3. automatic modification of the interval of transmission of LRIT information;
    - 2.1.4. automatic suspension of transmission of LRIT information;
    - 2.1.5. on demand transmission of LRIT information; and
    - 2.1.6. automatic recovery and management of transmission of LRIT information.
  - 2.2. an integrated transaction management system for the monitoring of LRIT information throughput and routing, as well as to ensure that LRIT information is collected, stored and routed in a reliable and secure manner according to the Performance Standards and Functional Requirements.
3. to conduct conformance testing based upon confirmation that all communication links from the terminal to satellite to CSP to ASP are direct and secure with no pseudo CSP/third party ASP involvement.

## **N. TYPE APPROVED SHIPBORNE TERMINAL**

1. SOLAS V/19-1.6 specifies that the shipborne terminal elected to be used to transmit LRIT information shall be of a type approved by the Administration or a RO on its behalf .
2. Compliance with SOLAS V/19-1.6 may be demonstrated by the terminal being:
  - 2.1. of a type approved by the Administration in accordance with the provisions of SOLAS V/19.1 and section 4 of the Revised Performance Standards; or
  - 2.2. of a type approved by the Administration as meeting the requirements of SOLAS IV/14, and satisfactorily completing an LRIT conformance test in accordance with the procedures and provisions set out in Appendix 1 of MSC.1/Circ.1307; or
  - 2.3. of a type certified by the Administration as meeting the requirements of IEC 60945 (2002-08) and IEC 60945 Corr.1 (2008-04) on Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results, and satisfactorily completing an LRIT conformance test in accordance with the procedures and provisions set out in Appendix 1 of MSC.1/Circ.1307; or
  - 2.4. of a type certified by the Administration as meeting the requirements of the provisions of SOLAS XI-2/6; and one (1) of the following, whichever appropriately applies:
    - 2.4.1. resolution MSC.136(76) on Performance Standards for a ship security alert system; or
    - 2.4.2. resolution MSC.147(77) on Adoption of the Revised Performance Standards for a ship security alert system,
3. Existing shipborne terminals should not have to undergo a separate process of regulatory type approval using International Electrotechnical (IEC) standards, etc. such as that required for GMDSS terminals. Compliance with the requirements of SOLAS V/19-1.6 in relation to the type approval of shipboard terminal may be demonstrated by conducting an LRIT conformance test in accordance with the provisions and procedures set out in Appendix 1 of MSC.1/Circ.1307 and

by demonstrating performance of the shipborne terminal which meets the acceptance criteria within the range of the tolerances set out in that Appendix 1.

## O. SHIPBORNE TERMINAL REQUIREMENTS

1. The shipborne terminal shall provide the functionality specified in **Table 1** below.

Parameter	Data to be transmitted from the shipborne terminal
Shipborne Terminal Identifier	The identifier used by the shipborne terminal.
Positional Data	<p>The GNSS position (latitude and longitude) of the ship (based on the WGS84 datum).</p> <p><b>Position:</b> The terminal should be capable of transmitting the GNSS position (latitude and longitude) of the ship (based on WGS84 datum) as prescribed by SOLAS V/19-1, without human interaction on board the ship.</p> <p><b>On-demand<sup>(1)</sup> position reports:</b> The terminal should be capable of responding to a request to transmit LRIT information on demand without human interaction onboard the ship, irrespective of where the ship is located.</p> <p><b>Pre-scheduled<sup>(2)</sup> position reports:</b> The terminal should be capable of being remotely configured to transmit LRIT information at intervals ranging from a minimum of 15 minutes to periods of 6 hours to the LRIT Data Centre, irrespective of where the ship is located and without human interaction on board the ship.</p>
Time Stamp 1	<b>The date and time<sup>(3)</sup> associated with the GNSS position:</b> The terminal should be capable of transmitting the time associated with the GNSS position with each transmission of LRIT information.

### Notes to Table 1:

(1) On-demand position reports means transmission of LRIT information as a result of either receipt of polling command or of remote configuration of the terminal so as to transmit at interval other than the preset ones.

(2) Pre-scheduled position reports means transmission of LRIT information at the preset transmission intervals.

(3) All times should be indicated as UTC.

2. In addition to the general requirements contained in Assembly resolution A.694(17) on "Recommendations on General Requirements for Shipborne Radio Equipment forming part of the GMDSS and for Electronic Navigational Aids", and the provisions specified in Table 1 above, the shipborne terminal should comply with the following minimum requirements:
  - 2.1. be capable of being controlled and programmed by the Administration's ASP / Niue NDC Administrator;
  - 2.2. be capable of transmitting LRIT information following receipt of polling commands;
  - 2.3. interface directly to the shipborne Global Navigation Satellite System (GNSS) equipment, or have internal positioning capability;
  - 2.4. be supplied with energy from the main and emergency source of electrical power<sup>(4)</sup>; and
  - 2.5. be tested for electromagnetic compatibility taking into account the recommendations<sup>(5)</sup> developed by the IMO.

**Notes:**

- (4) This provision should not apply to ships using for the transmission of LRIT information any of the radio communication equipment provided for compliance with the provisions of SOLAS IV. In such cases, the shipborne equipment should be provided with sources of energy as specified in SOLAS IV/13.
  - (5) Refer to the Assembly resolution A.813(19) on general requirements for electromagnetic compatibility of all electrical and electronic ship's equipment.
3. The shipborne terminal shall transmit the LRIT information using a CSP satellite communication system directly serving the ASP whereby all communication links from the terminal – satellite – CSP –ASP are direct and secure with no third party ASP involvement and provides coverage in all areas where the ship operates. The CSPs recognized by the Administration and used by the ASP are Stratos (for Inmarsat C) and Skywave (for Inmarsat D+).
  4. The shipborne terminal shall be set to automatically transmit the ship's LRIT information at 6-hour intervals to the Niue NDC, unless an authorized LRIT Data User requesting the provision of LRIT information specifies a more frequent transmission interval.

**P. SHIP SECURITY ALERT SYSTEMS (SSASs)**

1. The Administration agrees with the industry view that SSASs, with their primary purpose being that of SOLAS XI-2/6 Security, should not, as far as possible, be used for other regulatory purposes, i.e. SOLAS V Safety. The rationale for this view is due to the nature of SSAS operation. The most effective and reliable SSASs are designed as a "closed system" that provide a totally secure system with its programming and data use exclusively under the control of the associated equipment supplier and the CSO. In contrast, because the LRIT terminal must be remotely controlled and programmed by the Administration's ASP, the system must be an "open system."
2. For all the above reasons the Administration does not recommend the use of any Inmarsat D+ based SSAS equipment for LRIT compliance that is not agreed in advance to be compatible with the Niue NDC by the Administration's ASP. However, an integrated Inmarsat Mini-C SSAS, whilst not the optimum design for an SSAS due to its "open system" design, is acceptable for LRIT use for this very reason.

**Q. DUPLICATE EQUIPMENT**

Ships engaged on international voyages in sea areas A1, A2 and A3 or A1, A2, A3 and A4, which are using, for the purpose of transmitting LRIT information, the radiocommunication equipment fitted on board for the purpose of complying with the requirements of Chapter IV and which, for the purpose of complying with the requirements of SOLAS IV/15.6 in relation to availability, are provided with duplicated equipment, shall use only one of the terminals as the primary terminal for LRIT. A duplicate terminal "may" be tested for compliance and used by the shipowner as a ready backup should the primary terminal develop problems.

**R. OBLIGATIONS OF SHIP OWNER**

1. It is the responsibility of the shipowner to ensure provision of a compliant terminal which shall be of a type approved by the Administration and conform to the Performance Standards and Functional Requirements adopted by the IMO as defined in Resolution MSC.210(81).
2. Existing Inmarsat-C GMDSS terminals will in most cases be type approved. However, the shipowner should be aware that there is a 20-25% probability that existing Inmarsat-C GMDSS terminals will not conform to the Performance Standards and Functional Requirements for a range of operational, physical and technical reasons, including:
  - 2.1. uncontrolled in-port log-off and/or power-down procedures;
  - 2.2. poor antenna mounting location;
  - 2.3. satellite line-of-sight blockage by the ship's superstructure;
  - 2.4. interference from the ship's radar;
  - 2.5. external wide-area radio interference in certain locations; and
  - 2.6. most crucially the inability to meet these requirements due to out-of-date software and/or unsupported hardware.

3. Terminal performance shall be as reliable as possible because of the serious consequences of non-compliance. The most reliable and appropriate measures to take to ensure full terminal compliance are to:
  - 3.1. verify with the ASP the compliance capabilities of the make and model of the shipborne terminal elected to be used for LRIT information transmission;
  - 3.2. use a terminal that is designed to **“always be on”** and not capable of being reconfigured or disabled on board the vessel;
  - 3.3. prevent, to the extent possible, interference by competing functions such as email, messaging or Enhanced Group Calling (EGC), communications; and/or
  - 3.4. use an integrated Inmarsat Mini-C transceiver as the optimum terminal solution.

## **S. CHANGE OF FLAG**

1. Compliance is required at the time of change of flag.
2. Validity of LRIT CTR
  - 2.1. When a ship is transferring flag to Niue which has a LRIT CTR, the CTR shall be considered as remaining valid if the ASP which conducted the last conformance test is one recognized by this Administration. However, the LRIT CTR must be re-issued by the ASP concerned on behalf of the Administration indicating the new particulars of the ship but without requiring re-testing or altering the date of completion of the original conformance test.
  - 2.2. In cases where the LRIT CTR is deemed to be no longer valid due to non-recognition by this Administration of the original issuing ASP or the incompatibility of the shipborne terminal with the Niue NDC as determined by the Niue NDC Administrator, equipment adjustments, if necessary, and a new LRIT conformance test must be conducted. This new LRIT conformance test must be conducted by the recognized ASP and accompanied by the issuance of a new LRIT CTR, prior to a RO issuing the applicable Full Term Safety Certificate. In such instances, the Administration shall assess each situation on a case-by-case basis to provide Attestation / Dispensation letter where deemed appropriate.
3. De-commissioning/Re-commissioning Satellite Provider Services

When a ship enters or leaves the Flag, as part of the transfer process there is always a de-commissioning and re-commissioning of satellite provider services for GMDSS and other communications arrangements. Upon completion, this is an indicator to the Administration that Flag change is technically accomplished. Furthermore, it must be expected that ship's name, Flag designation, Primary and Secondary LRIT system identifiers/serial numbers and LRIT active/inactive status has been changed with a change of ownership and management. It is essential that these commercial details 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.

Please do not hesitate to contact the Registry at [technical@niueship.com](mailto:technical@niueship.com) or call: +65 6226-2001 for further assistance.