LRIT INMARSAT C EQUIPMENT CONFORMANCE TESTING

The introduction of the Long Range Identification and Tracking (LRIT) amendment to SOLAS V/19 requires all operators of ships engaged on international voyages, including passenger ships, cargo ships of 300 gross tonnage and above, and Mobile Offshore Drilling Units (MODUs) to provide tested and certified shipborne equipment for the transmission of LRIT information. For full details see www.lrit.com.

Four simple steps to testing

1. Buy test credits from us which activates your online LRIT test account. Please email lrittesting@polestarglobal.com or phone (refer to the last page for telephone numbers).
2. Upload your entire fleet and transceiver details into the account using a preconfigured spreadsheet.
3. Decide which terminals you wish to test and start the tests at a time of your choosing.
4. Results are automatically emailed to you within 48 hours, with clear and helpful advice about what to do if your terminal failed the test. All successful test results are forwarded, free of charge, to your flag.

What do I have to do?

Compliance to LRIT is important. Some Governments have indicated that they may not grant entry to their territorial waters, or to their ports, for ships that do not comply with LRIT.

You should arrange to test your equipment as soon as possible. LRIT Conformance Test Reports (CTRs) are required for radio surveys and inspection from 31 December 2008.

Ship operators are required to provide shipborne equipment which complies with the LRIT regulation, pass a conformance test and obtain a CTR. All shipborne LRIT equipment must be tested and certified by an Authorised Testing ASP appointed by your Flag. Authorised Testing ASPs will also, on behalf of most Flags, be able to issue CTRs for transceivers that pass the test.

Where to Buy:

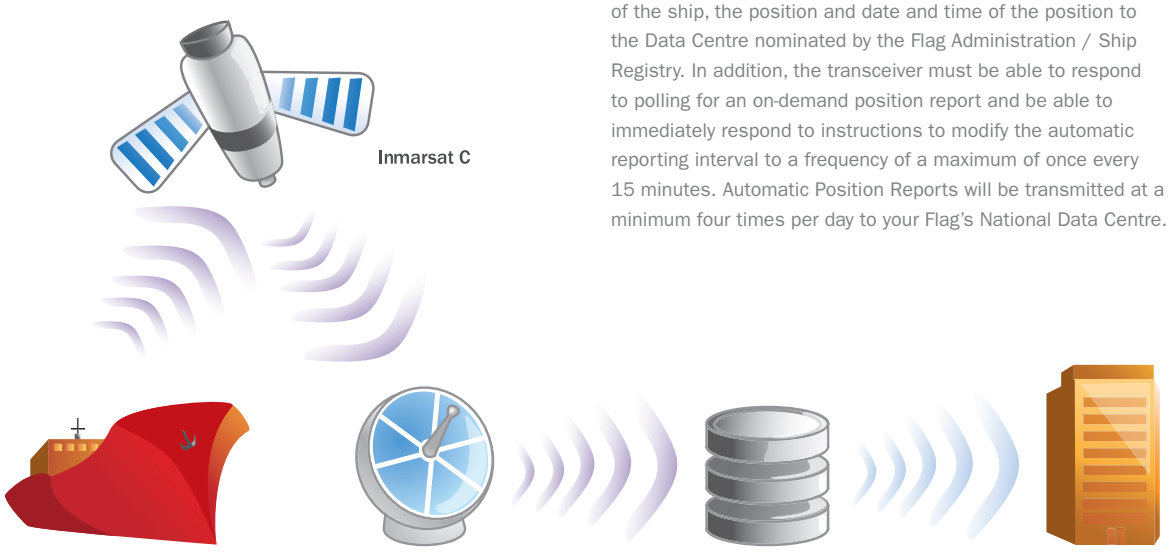
Mackay Communications, Inc.
3691 Trust Drive
Raleigh, NC 27616 USA
Tel: 1-919-850-3100
Email: satserv@mackaycomm.com
www.mackaysatellite.com

Mackay Marine
Division of Mackay Communications
Tel: 281-479-1515
MarineSales@mackaycomm.com
Government buyers or contractors, contact:
government@mackaycomm.com or 904-880-4633

Mackay COMMUNICATIONS
www.mackaysatellite.com

LRIT system architecture

The ship operator's obligation under the LRIT regulation is to ensure provision of compliant equipment to transmit the identity of the ship, the position and date and time of the position to the Data Centre nominated by the Flag Administration / Ship Registry. In addition, the transceiver must be able to respond to polling for an on-demand position report and be able to immediately respond to instructions to modify the automatic reporting interval to a frequency of a maximum of once every 15 minutes. Automatic Position Reports will be transmitted at a minimum four times per day to your Flag's National Data Centre.



Why test with Pole Star?

We understand the LRIT system and what is required. We attend and contribute to the relevant IMO COMSAR, NAV, MSC, Engineering and Working Group meetings. We work with all the major satellite equipment manufacturers, communications service providers, land earth station operators, Inmarsat and other satellite communication network providers to ensure that the LRIT system works end-to-end. Pole Star is an LRIT Data Centre Administrator and an Authorised Testing ASP for over 90 Flags. See www.lrit.com for the latest information.

Pole Star's system manages all aspects of the test, including: terminal commissioning, satellite communications network management, post-test de-commissioning, production of a detailed test result and provision of a conformance test certificate if required. Testing of shipborne Inmarsat C equipment began in July 2008 and we have conducted over 40,000 tests since then.

Our technical capability is backed up by a professional, multi-lingual customer support team with offices in both Hong Kong and the United Kingdom.
Ship operators who test their LRIT transceivers with Pole Star will also be offered a free trial of our commercial Fleet Management product.

Why test now?

The vessel shows its compliance to the regulation by having on board a valid CTR, issued on behalf of their flag, in accordance with the provisions of MSC.1/ Circ.1307 on Guidance on the survey and certification of compliance of ships with the requirement to transmit LRIT information.

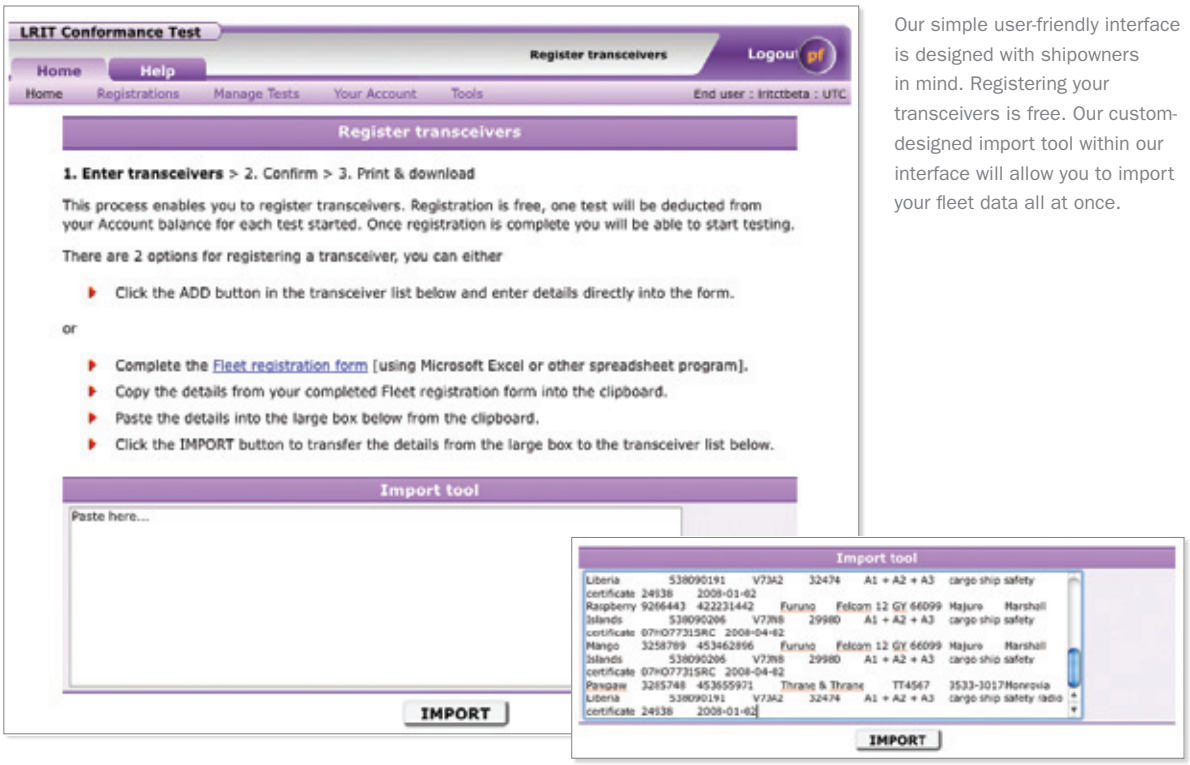
A vessel must show compliance by the date of its first survey after 31 December 2008 or at change of flag (considered the first survey after 31 December 2008).

Although a number of Flag States are still to implement their operational LRIT Data Centre as required by Regulation V/19-1, in order to prevent Port State Controls from penalizing ships of these flags, the IMOs Maritime Safety Committee approved transitional arrangements for the compliance of vessels.

This means that as long as the vessel has complied with its LRIT obligation (provided a tested and certified transceiver in advance of the radio survey date) within the deadline, it cannot be sanctioned for matters outside its control. With this in mind, ship operators are advised to test their transceivers in good time.

How to test

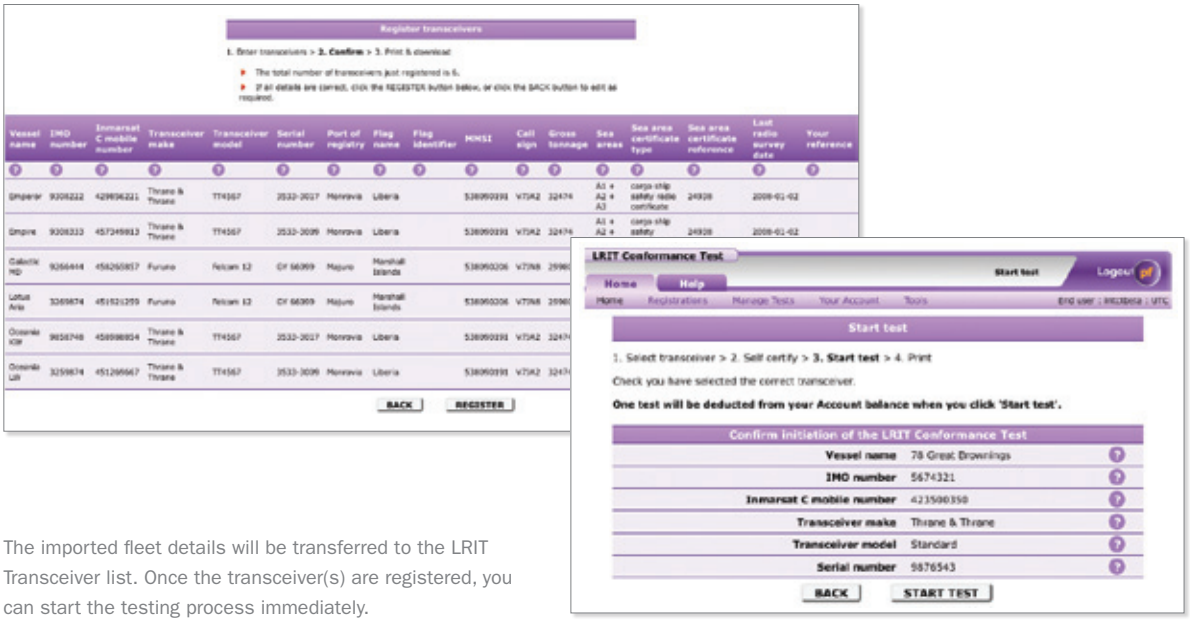
We provide a web based system where ship operators have their own account. From your account you can initiate tests at any time and review the progress and status of your tests. The system provides error messages and suggests corrective action on failed equipment.



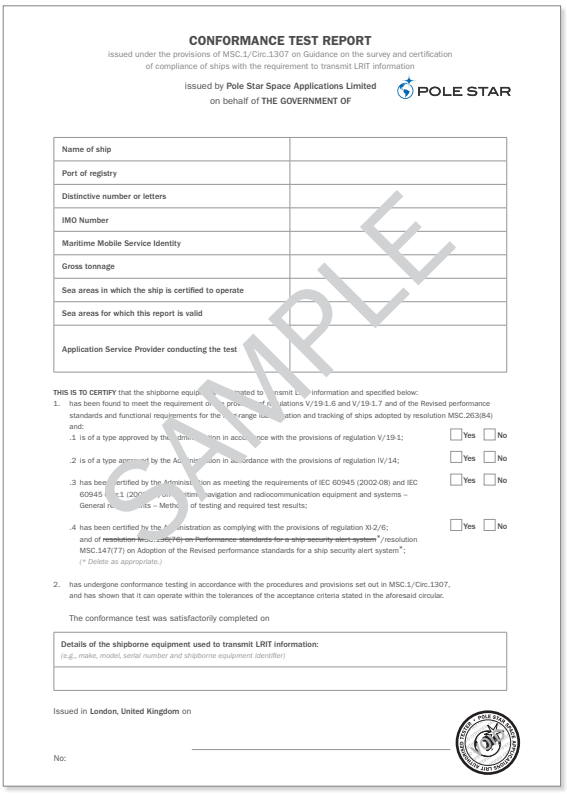
Our simple user-friendly interface is designed with shipowners in mind. Registering your transceivers is free. Our custom-designed import tool within our interface will allow you to import your fleet data all at once.

Our simple user-friendly interface gives you a secure testing account. With this, you can initiate your tests at any time, allowing you to fit your testing around your operational schedule.

Once you've gathered your fleet information, our intuitive application allows you to upload your entire fleet with one click. With your testing account, you can overview the progress and status of testing of your fleet. Your results are emailed to you within 48 hours.



The imported fleet details will be transferred to the LRIT Transceiver list. Once the transceiver(s) are registered, you can start the testing process immediately.



CONFORMANCE TEST REPORT

issued under the provisions of MSC.1/Circ.1307 on Guidance on the survey and certification of compliance of ships with the requirement to transmit LRIT information

issued by **Pole Star Space Applications Limited**
on behalf of **THE GOVERNMENT OF**

POLE STAR

Name of ship	
Port of registry	
Distinctive number or letters	
IMO Number	
Maritime Mobile Service Identity	
Gross tonnage	
Sea areas in which the ship is certified to operate	
Sea areas for which this report is valid	
Application Service Provider conducting the test	

THIS IS TO CERTIFY that the shipborne equipment intended to transmit LRIT information and specified below:

1. has been found to meet the requirement of the provisions of regulations V/19-1.6 and V/19-1.7 and of the Revised performance standards and functional requirements for the long-range identification and tracking of ships adopted by resolution MSC.263(84) and:
   - .1 is of a type approved by the Administration in accordance with the provisions of regulation V/19-1; ☐ Yes ☐ No
   - .2 is of a type approved by the Administration in accordance with the provisions of regulation IV/14; ☐ Yes ☐ No
   - .3 has been 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; ☐ Yes ☐ No
   - .4 has been certified by the Administration as complying with the provisions of regulation XI-2/6; and of ~~resolution MSC.147(77) on Performance standards for a ship security alert system~~*/resolution MSC.147(77) on Adoption of the Revised performance standards for a ship security alert system*; ☐ Yes ☐ No

   (Delete as appropriate.)*
2. has undergone conformance testing in accordance with the procedures and provisions set out in MSC.1/Circ.1307, and has shown that it can operate within the tolerances of the acceptance criteria stated in the aforesaid circular.

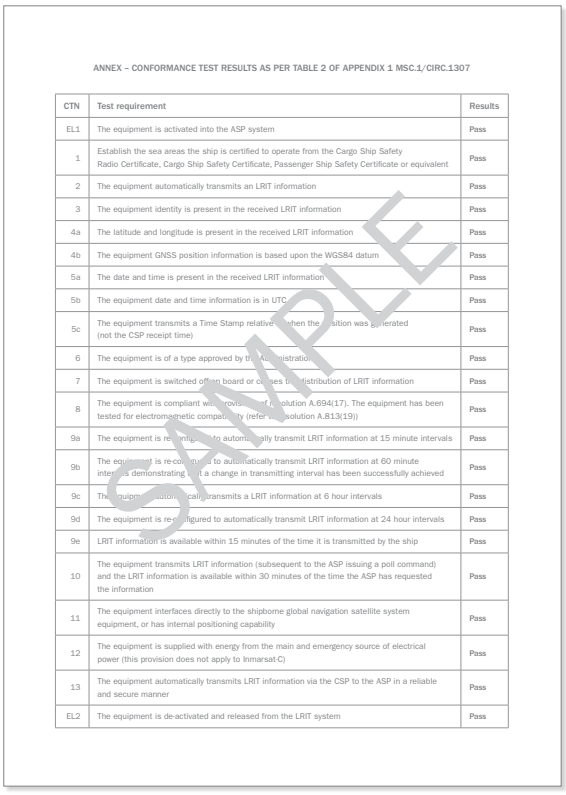
The conformance test was satisfactorily completed on

Details of the shipborne equipment used to transmit LRIT information: *(e.g., make, model, serial number and shipborne equipment identifier)*

Issued in **London, United Kingdom** on

No:

SAMPLE



ANNEX – CONFORMANCE TEST RESULTS AS PER TABLE 2 OF APPENDIX 1 MSC.1/CIRC.1307

CTN	Test requirement	Results
EL1	The equipment is activated into the ASP system	Pass
1	Establish the sea areas the ship is certified to operate from the Cargo Ship Safety Radio Certificate, Cargo Ship Safety Certificate, Passenger Ship Safety Certificate or equivalent	Pass
2	The equipment automatically transmits an LRIT information	Pass
3	The equipment identity is present in the received LRIT information	Pass
4a	The latitude and longitude is present in the received LRIT information	Pass
4b	The equipment GNSS position information is based upon the WGS84 datum	Pass
5a	The date and time is present in the received LRIT information	Pass
5b	The equipment date and time information is in UTC	Pass
5c	The equipment transmits a Time Stamp relative to when the position was generated (not the CSP receipt time)	Pass
6	The equipment is of a type approved by the Administration	Pass
7	The equipment is switched on board or otherwise for distribution of LRIT information	Pass
8	The equipment is compliant with the provisions of resolution A.694(17). The equipment has been tested for electromagnetic compatibility (refer to resolution A.813(19))	Pass
9a	The equipment is configured to automatically transmit LRIT information at 15 minute intervals	Pass
9b	The equipment is re-configured to automatically transmit LRIT information at 60 minute intervals demonstrating that a change in transmitting interval has been successfully achieved	Pass
9c	The equipment is configured to automatically transmits a LRIT information at 6 hour intervals	Pass
9d	The equipment is re-configured to automatically transmit LRIT information at 24 hour intervals	Pass
9e	LRIT information is available within 15 minutes of the time it is transmitted by the ship	Pass
10	The equipment transmits LRIT information (subsequent to the ASP issuing a poll command) and the LRIT information is available within 30 minutes of the time the ASP has requested the information	Pass
11	The equipment interfaces directly to the shipborne global navigation satellite system equipment, or has internal positioning capability	Pass
12	The equipment is supplied with energy from the main and emergency source of electrical power (this provision does not apply to Inmarsat-C)	Pass
13	The equipment automatically transmits LRIT information via the CSP to the ASP in a reliable and secure manner	Pass
EL2	The equipment is de-activated and released from the LRIT system	Pass

SAMPLE

How do I get a certificate?

Pole Star can issue LRIT CTRs on behalf of most flags. Your LRIT CTRs will be dispatched as a scan by email, and as a hard copy by courier within 3 days of receipt of payment. You can refer to www.lrit.com/testing_asp.html to find the latest list of flags we certify for.

If your Flag is issuing CTRs directly, Pole Star will forward all successful test results directly to your Flag.

What should I do if my equipment fails the test?

If your shipborne equipment is non-conformant, Pole Star offers a dedicated LRIT equipment package that includes an LRIT conformance test. The SkyWave DMR-800LRIT transceiver is delivered directly to your ship pre-configured and ready for immediate test, providing a cost effective LRIT compliance option where existing equipment is not suitable or where a stand-alone LRIT solution is required.

Information on survey and certification

It is important to note that an existing ship safety radio certificate does not confer LRIT compliance on the ship. MSC.1/Circ.1307 regarding Guidance on the survey and certification of compliance of ships with requirement to transmit LRIT information states that compliance of the shipborne equipment with the regulation should be demonstrated by the equipment being:

1. of a type approved by the Administration in accordance with the provisions of regulation V/19-1 and section 4 of the revised performance standards; or
2. certified by the Administration as meeting the requirements of regulation IV/14 and satisfactorily completing a conformance test; or
3. certified by the Administration as meeting the requirements of IEC 60945 (2002-08) and IEC 60945 Corr.1 (2008-04) on Maritime navigation and radiocommunications equipment and systems – General Requirements – Methods of testing and required test results and satisfactorily completing a conformance test.

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