

**CIRCULAR NO. 69*****PORTUGUESE MARITIME ADMINISTRATION***

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**SUBJECT** | LRIT - Remedy for GPS Rollover on 02.01.2022

**To** | Shipowners, Companies, Operators, Recognized Organizations, Shore Based Maintenance Entities, Surveyors, Masters and Skippers of Portuguese flagged vessels

**DISCLAIMER** | This document is for information only and is not intended to interpret or replace the legal referenced documents published by official sources

**REFERENCES** | SOLAS Convention V/19-1, long range identification and tracking of ships - LRIT; EMSA Information - (MSS-65540) Important information Furuno equipments : GPS Rollover 2022

**OBJECTIVE**

The aim of this circular is alerting all the addressed to the changes GPS equipment may have that may generate errors in its position, which will have influence on LRIT reporting.

**1. INTRODUCTION IMPACT ON VESSELS OPERATIONS**

The Global Positioning System, GPS, is a satellite navigation system which allows the identification of the geographic positioning of objects. Since its implementation in the early 1980s, date and time of the GPS system have been defined by a standardised counting format. This counting format has a finite period which is reset every 1024 weeks or 19.7 years. The first event (or epoch) where the finite period ended was in 1999 and it was widely known as the "year 2000 bug" or "Y2k".

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### 2. IMPACT ON VESSELS OPERATIONS

LRIT mandatory reporting, as defined by SOLAS V/19-1 is conditioned by the correct functioning of GPS. Similarly, the operation and recording of certain equipment depends also on the correct and accurate date/time group information transmitted by the GPS receiver. As an example, the following systems require this information:

- ECDIS (Electronic Chart Display and Information System);
- GMDSS;
- VDR (Voyage Data Recorder);
- ODME (Oil Discharge Monitoring System).

### 3. ACTION / MEASURES TO BE TAKEN

**3.1** The appropriate measures should be taken for the proper functioning of each equipment type / model, even though there may be different solutions for the different equipment type / models.

If in some equipment type / models a small intervention will be enough to correct the inconsistency of GPS, in other cases a software update will be required or even the replacement of the equipment itself.

The equipment manufacturer or the shore-based maintenance should always be asked for a solution to the problem.

**3.2** For vessels with FURUNO equipment, models FELCOM15/16, FELCOM18 and FELCOM19, the manufacturer has made available the following information that can be downloaded at [https://www.furuno.gr/uploads/1/6/1/7/16171974/gps\\_rollover\\_on\\_january\\_2\\_2022.pdf](https://www.furuno.gr/uploads/1/6/1/7/16171974/gps_rollover_on_january_2_2022.pdf), and which we reproduce together with this circular:

*Take a remedy for the GPS Rollover that will occur on January 2, 2022. When the rollover occurs, the date will be shown and output as May 19, 2002. Note: When the rollover occurs, positions may not be calculated.*



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*In such case, activate the COLD START function.*

*For the products of the models and GPS program numbers shown below, the following remedy must be taken.*

Model	Built-in GPS core
FELCOM15/16 FELCOM18/19	GN-8097B/C/D: 4850296***

*[Remedy]*

*For the following models, update the program.*

Model	Program version
FELCOM15/16	V.03.11 / V.05.05
FELCOM18/19	V.01.20

*For other models, retrofit is recommended.*

*[Temporary remedy]*

*Activate the COLD START function in accordance with the procedure in the appendix, and then restart the system.*

*(Positions can be calculated after the COLD START function; however, the date will not be restored.)*

Lisbon, 07.01.2022

The General Director of Natural Resources, Safety and Maritime Services

### More information

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