

NOTICE: GPS Date Rollover Can Affect IMO Required Equipment

Mackay Marine has identified equipment in your fleet that potentially may be impacted by the upcoming GPS Rollover.

What are GPS (Time / Date) Rollovers

Since the implementation of GPS Satellites in the early 1980s; GPS time / date has been defined by a standardized format of counting. This counting format has a finite period and resets every 1024 weeks, or 19.7 years. The first event (or Epoch) where the finite period ended was back in 1999 and was widely known as Y2k.


Most modern IMO equipment has been designed to account for this reset of date / time. However, some older legacy IMO GPS, AIS, and Sat C equipment have GPS receiver chips that will not take into account the reset of the date and thus will cause the display to show the incorrect date as well as transmit the incorrect date to connected equipment.



Impact on Vessel Operations

Certain IMO mandated equipment are crucially reliant on having the correct date transmitted by the connected GPS:

- ECDIS relies on the date for critical IMO approved weekly chart updates; an incorrect date may invalidate all licensed ENC Charts.
- GMDSS systems need the correct date in the event of the need to transmit a distress message.
- The VDR requires the correct date; an incorrect date will impact the reliability and authenticity of incident recordings by authorities.
- ODME equipment on Tankers rely on the GPS for correct date information in order to keep appropriate and accurate discharge logs.
- Other varieties of ships equipment are dependent upon the time & date typically derived from the GPS.

Models Impacted by GPS Rollover Cycles 2024 & 2025				
	Sept. 8, 2024	MODELS Affected	Resolution	
	JUE-500 Inmarsat Fleet Broadband FB500	ALL	Upgrade Software to SYS 11.61	
	JLR-7500 GPS Navigator	ALL	Update Settings*	
	JLR-7600 GPS Navigator	ALL	Update Settings*	
	JLR-4331W GPS Receiver	After S/N KE51719	Update Settings*	
	JLR-4340 GPS Receiver	ALL	Update Settings*	
	JLR-20 GPS Compass	ALL	Update Settings*	
	JLR-30 GPS Compass	ALL	Update Settings*	
		Aug. 3, 2025	MODELS Affected	Resolution
	JHS-182 AIS	JHS-182 AIS Display After S/N BB51401	Upgrade Software or Replace with JHS-183	
		NTE-182 AIS Transponder After S/N BB71401	Upgrade Software or Replace with JHS-183	
	JHS-183 AIS	NCM-983 AIS Controller Up to S/N BB04206	Upgrade Software	
		NTE-183 AIS Transponder Up to S/N BE04000	Upgrade Software	
	JLR-7800 GPS Navigator	ALL	Update Settings*	
JLR-7900 GPS Navigator	ALL	Update Settings*		
JLR-4341 GPS Receiver	ALL	Update Settings*		
JLR-21 GPS Compass	ALL	Update Settings*		
JLR-31 GPS Compass	ALL	Update Settings*		

* Update Settings (Longitude, Latitude, Antenna Height, UTC & Local Time).

**Certain GPS, AIS, Sat-Compass & SatC systems will be impacted.
Action must be taken for equipment to continue proper operation.**



Each model of equipment affected requires a different remedy to correct the problem.

- Certain models of equipment will require a software upgrade, others will need replacement.
- Certain manufacturers will not evaluate equipment deemed obsolete, the rollover affect will be unknown in this instance.
- In certain cases, the equipment can be reprogrammed by the user with the correct date; however, manufacturers recommend continuous monitoring of the date as power outages and fluctuations can reset the date.

Many of the equipment remedy requirements are "serial number specific".

Please provide the following equipment information on your GPS / AIS / Sat C systems.

This will enable Mackay to assist in providing the correct solution for your affected equipment.

Return completed pdf to your Mackay Salesperson or Regional OTC: otc.asia@mackaycomm.com, otc.europe@mackaycomm.com, houston.inventory@mackaycomm.com (Americas)

GPS #1

MAKER / MODEL: _____

S/N: _____

GPS #2

MAKER / MODEL: _____

S/N: _____

GPS #3

MAKER / MODEL: _____

S/N: _____

GPS #4

MAKER / MODEL: _____

S/N: _____

SAT C #1

MAKER / MODEL: _____

S/N: _____

SAT C #2

MAKER / MODEL: _____

S/N: _____

OTHER

MAKER / MODEL: _____

S/N: _____

AIS MAKER / MODEL: _____

S/N of Processor: _____

Model of Transponder: _____

S/N of Transponder: _____

**To better assist, please provide primary contact information
for service /sales related matters for your company.**

DATE: _____

Contact Name: _____

VESSEL NAME: _____

E-mail: _____

IMO # _____

Phone #: _____



Thank you for choosing Mackay!
24/7 service@mackaymarine.com