



## **1 R4 AIS SERVICE BULLETIN – GPS WEEK ROLLOVER**

### **1.1 Planning information**

#### **1.1.1 Applicability**

This service bulletin is only applicable to R4 AIS Transponders within the serial number range 0 – 24000. R4 Transponders in this range contain the Superstar II GPS receiver from Novatel.

The Transponder hardware is labelled with serial number in above range and product hardware number 7000 100-550, and exists in several software configurations, i.e.:

- R4 Class A AIS
- R4 Inland AIS
- R4 Combined AIS / NAV
- R4 Silent AIS
- R4 Secure AIS (WAIS)
- R4 Coast Guard AIS (End Of Life)

#### **1.1.2 Reason**

The SuperStar II GPS receiver used in above mentioned transponders have been found to potentially experience a GPS week rollover related issue in August 16 2015. The Transponders will only be affected by this issue if the power has been completely removed for a longer period, estimated to 5 - 7 days, after which the SuperStar GPS short term backup memory will be drained.

General information regarding GPS week rollovers can be found on the US Coast Guard Navigation Center website: <http://www.navcen.uscg.gov/?pageName=gpsweek>

#### **1.1.3 Description**

The above described issue may cause the R4 AIS Transponders internal GPS system date to become 1024 weeks behind the actual date. This will prevent the R4 Transponder from operating in “UTC direct” mode (synchronizing time from GPS), causing it to use the “UTC indirect” fall-back mode (synchronizing time from VHF data link).

The R4 AIS Transponders AIS data reception is unaffected by the above issue, and the internal GPS will still work as a position source in applicable situations.

However, please note that it is a mandatory requirement for Class A AIS Transponder systems to operate in “UTC direct” mode, and local administrations may choose to enforce that requirement and possibly detain a vessel.

#### **1.1.4 Availability**

The software update packages will be available via download from the [www.saab.com](http://www.saab.com), or via request to customer support, free of charge. See below:



The following software update packages will be available:

- R4 Class A AIS – Ver. 5.3.1 *Downloadable from saab.com*
- R4 Inland AIS – Ver. 1.12 *Downloadable from saab.com*
- R4 Combined AIS / NAV – Ver. 5.3.1 *Downloadable from saab.com*
- R4 Silent AIS – Ver. 2.5.4 *Contact customer support*
- R4 Secure AIS (WAIS)
  - R4S – Ver. 2.5.4 *Contact customer support*
  - R4SL – Ver. 2.5.4 *Contact customer support*
  - R4SN – Ver. 2.5.4 *Contact customer support*
  - R4SN US – Ver. 2.5.4 *Contact customer support*
  - R4SW – Ver. 2.5.4 *Contact customer support*
  - R4SWL – Ver. 2.5.4 *Contact customer support*
  - R4SWN – Ver. 2.5.4 *Contact customer support*

## 1.2 Accomplishment instructions

### 1.2.1 Required conditions

Make sure to have a PC with an RS422 interface and appropriate update cables. Manufacturing instructions for the cables are included in the software update package.

The below update accessories should also be available via the regular sales channels:

- 7000 000-181 – USB to RS-422 Adapter
- 7000 100-179 – R4 Transponder Update Cable
- 7000 100-181 – R4 Display Update Cable

### 1.2.2 Acquire the software update package

The software update package can be downloaded from [www.saab.com](http://www.saab.com)

Use the website search function and search for R4 AIS. On the R4 support page, scroll down to the applicable R4 AIS transponder type. Download the corresponding software update package.

The software update package for the R4 secure AIS transponder range must be requested via the customer support: [support@transpondertech.se](mailto:support@transpondertech.se)

### 1.2.3 Update the R4 transponder system

Upgrade the transponder to the latest applicable version. Make sure to also update the display to the latest version to ensure full compatibility with the updated transponder software. Refer to the corresponding update instruction.