Upgrading the Satlink 3 GOES Transmitter Firmware to v8.28

Procedure Number: 6.3.2.1.15
Created Date: January 13, 2020
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Approved By: MSCS (Measurement System Configuration Subcommittee)

Purpose -

This addendum to Engineering Bulletin 20-001 provides an outline of the basic procedure for upgrading a Satlink 3 GOES transmitter to firmware v8.28 (rev 3097) using Sutron LinkComm software.

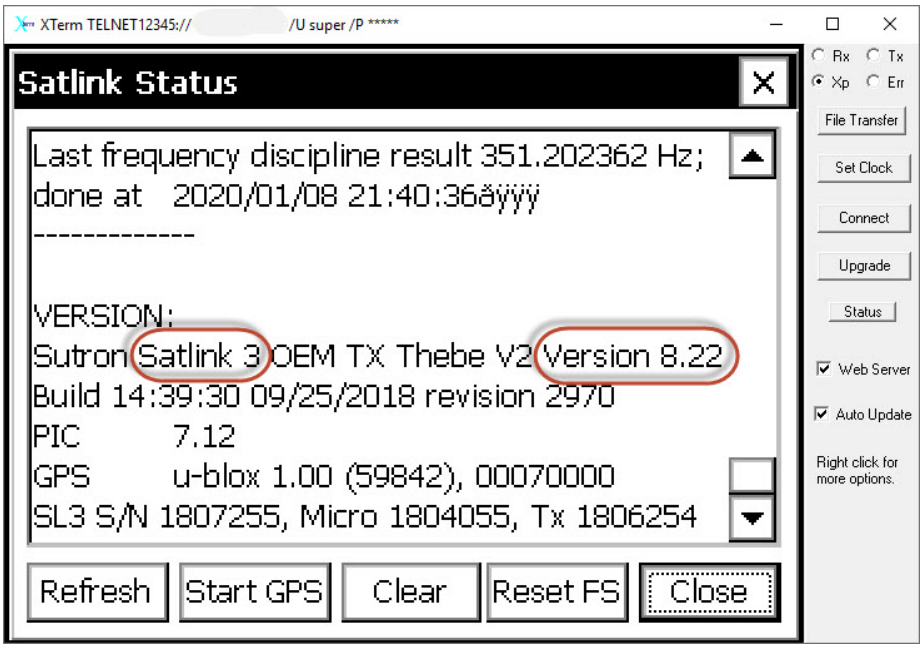
Items Needed to Complete this Procedure –

a) Laptop computer with LinkComm software v3.5.15 installed (in FOD Apps folder)

b) USB-to-micro USB cable or DB-9 serial cable and USB-to-serial adapter

Procedure –

1) If needed, check the existing version of Satlink 3 firmware via the Xpert interface. The firmware version is listed near the bottom of the Satlink Status screen.



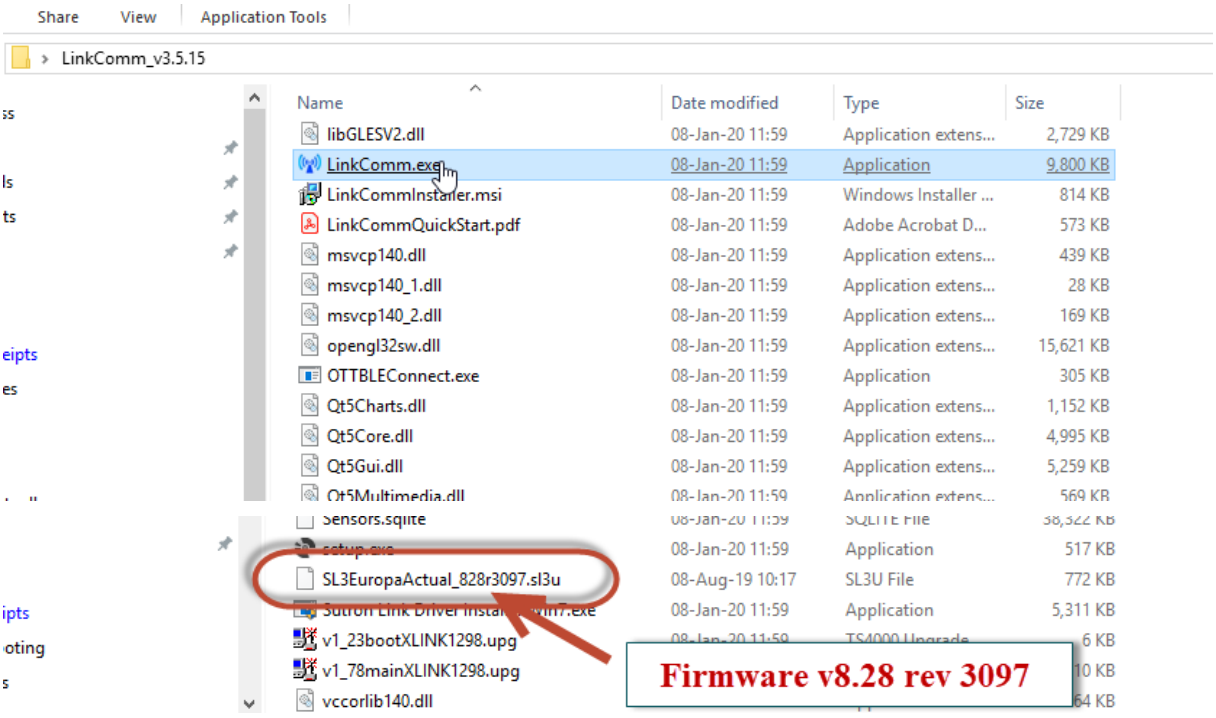
If the firmware version is below v8.28 then upgrade the unit as described in the following steps.

2) Stop logging in the Xpert and connect to the Satlink 3 using either the USB or RS-232 serial port on the side of the unit.

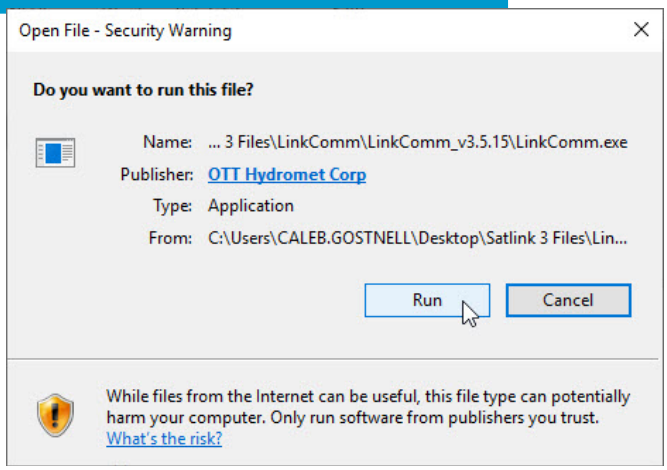
*Note that if connecting with USB you do not need external power to interface with the unit but if connecting via serial cable you will need to have the unit powered via the 12VDC input. Also, the USB interface is much faster and typically completes the upgrade transfer in less than a minute while the transfer takes closer to 10 minutes via serial connection.

3) Open the LinkComm software v3.5.15 either via shortcut or by opening the LinkComm.exe file in the LinkComm folder.

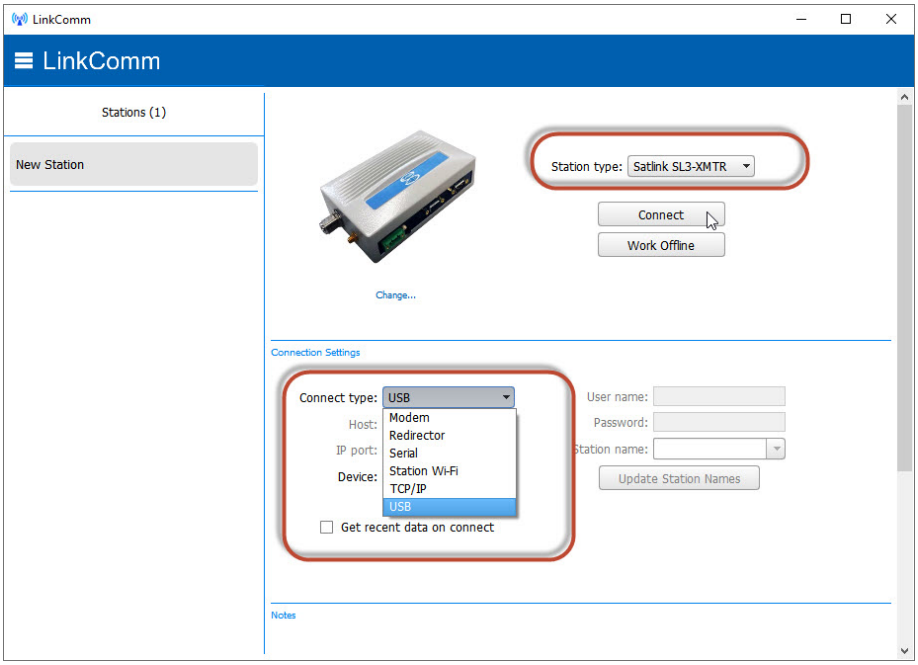
*Note that the software doesn't actually need to be installed on your computer you can just place the folder with the files somewhere accessible and run the .exe without a full install. Either way, please ensure that the upgrade file titled SL3EuropaActual_828r3097.sl3u (circled in red below) is located in the same folder as the LinkComm.exe file to enable the system to automatically detect it for installation.



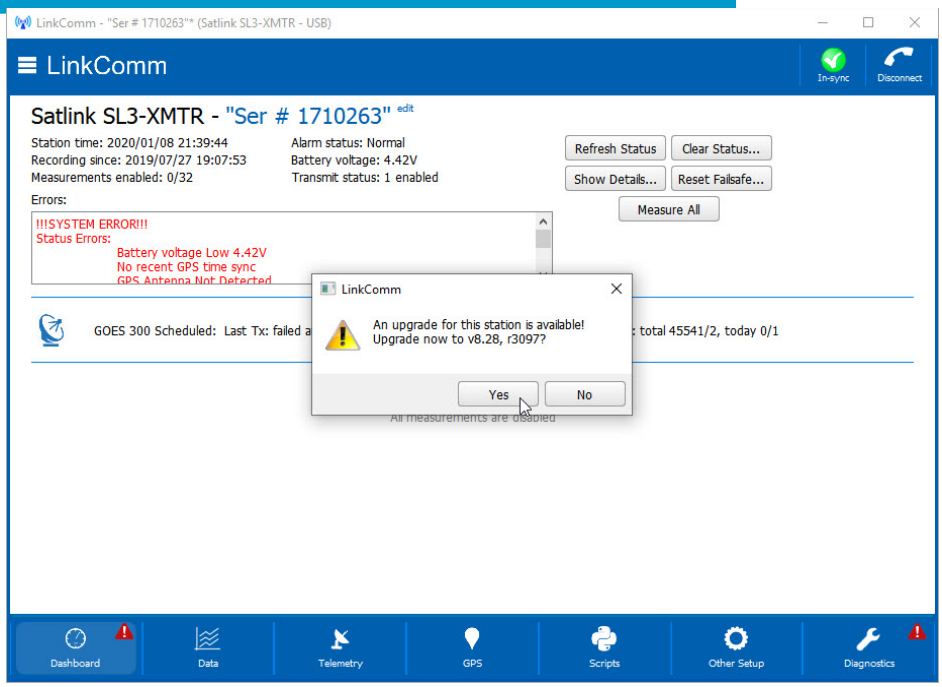
4) If asked, click run to open the software



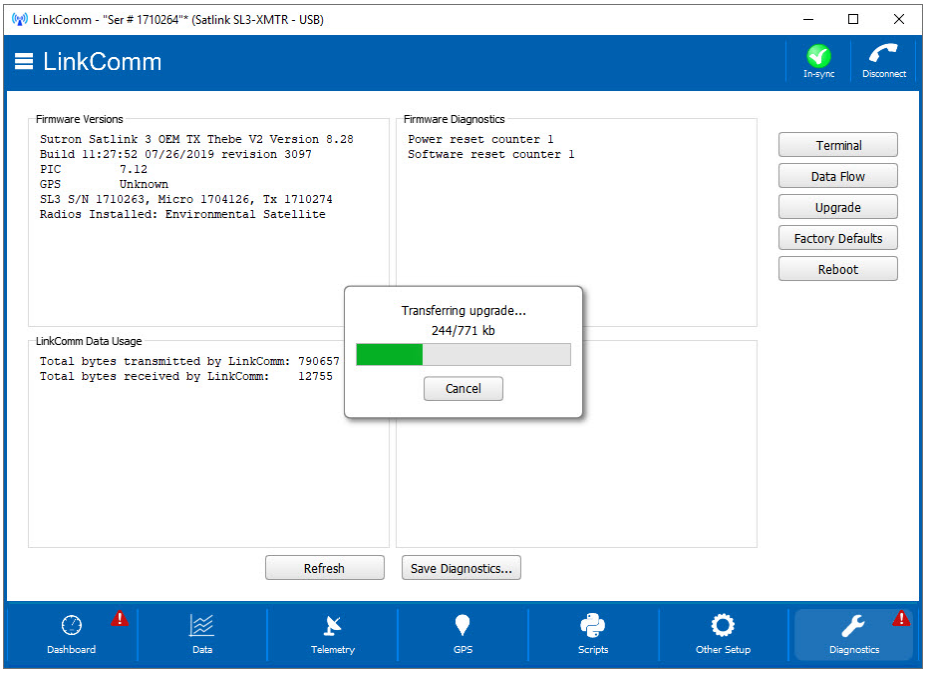
5) Select station type of SL3-XMTR and Connect type of either USB or Serial (depending on how you are connected), and then click the Connect button. If using Serial you will also need to identify the comm port to use (check Device Manager if unsure which comm port is assigned to your serial dongle).



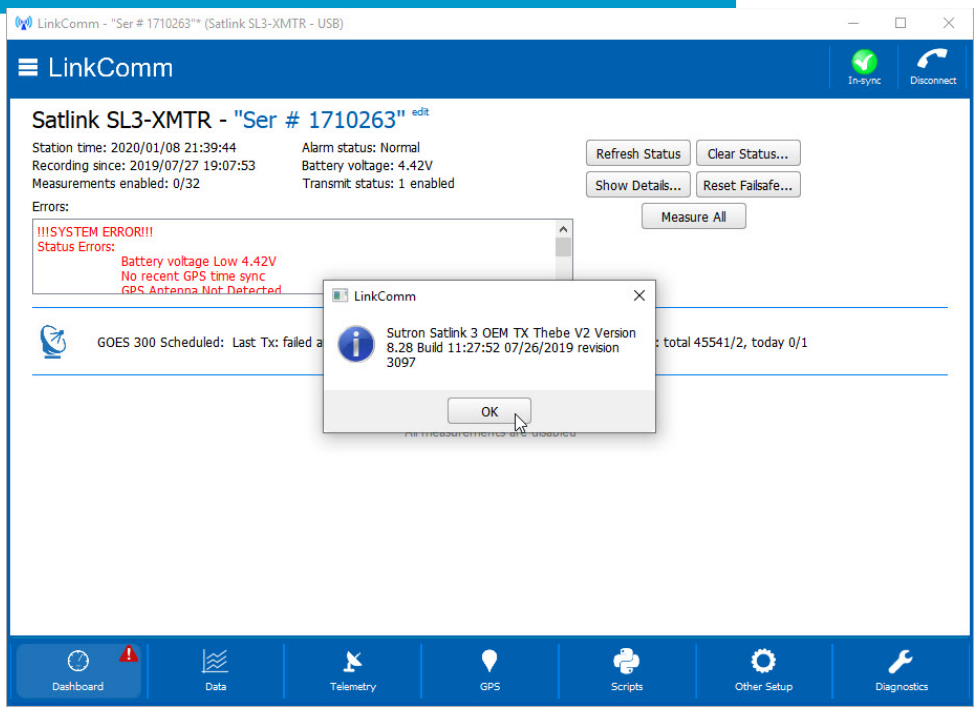
6) If the unit needs an upgrade you will be prompted to install it. If prompted, click yes.



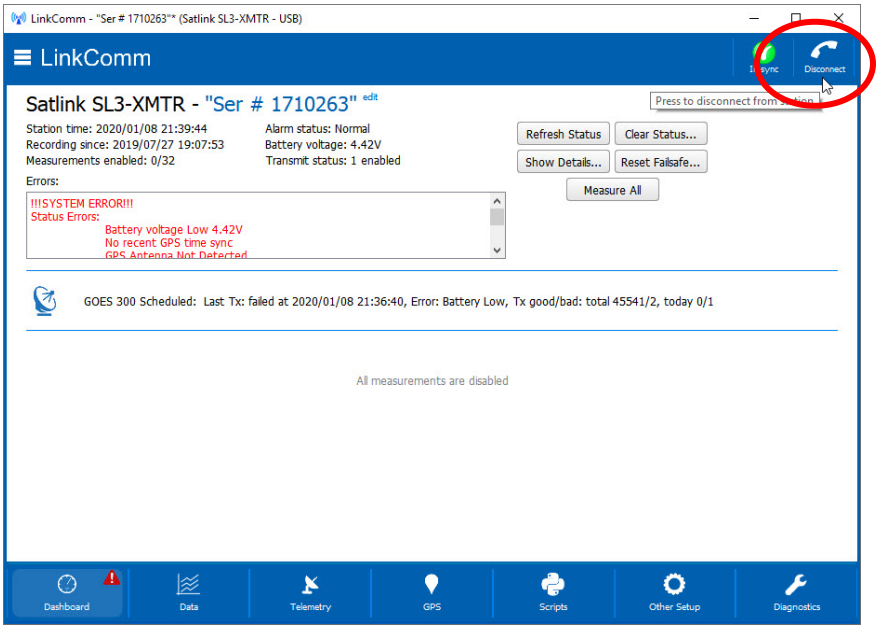
7) The upgrade file will take ~ 1 minute to transfer over USB and ~ 10 minutes to transfer via serial cable. The unit will reboot as part of the upgrade process.



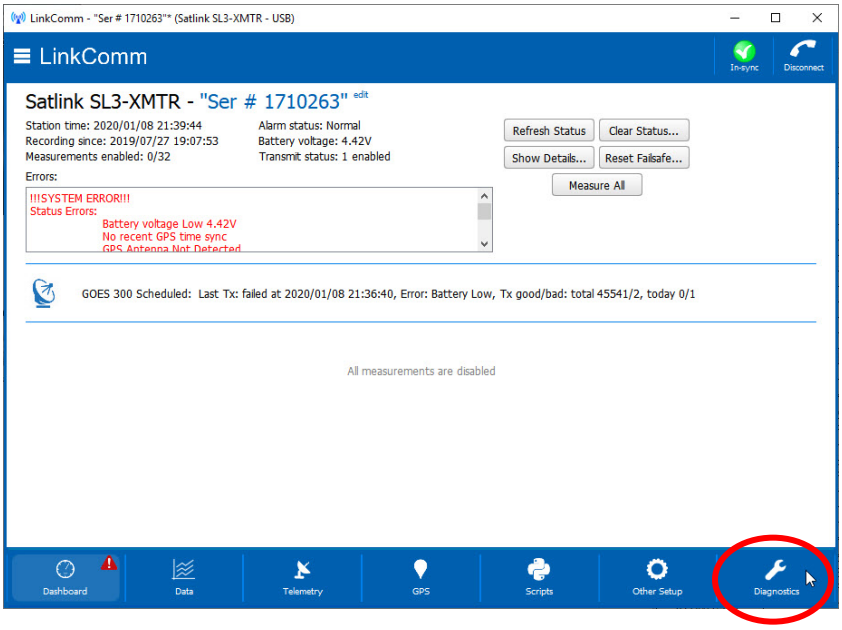
8) After the upgrade is complete the unit will show info on the new firmware version. Click OK.



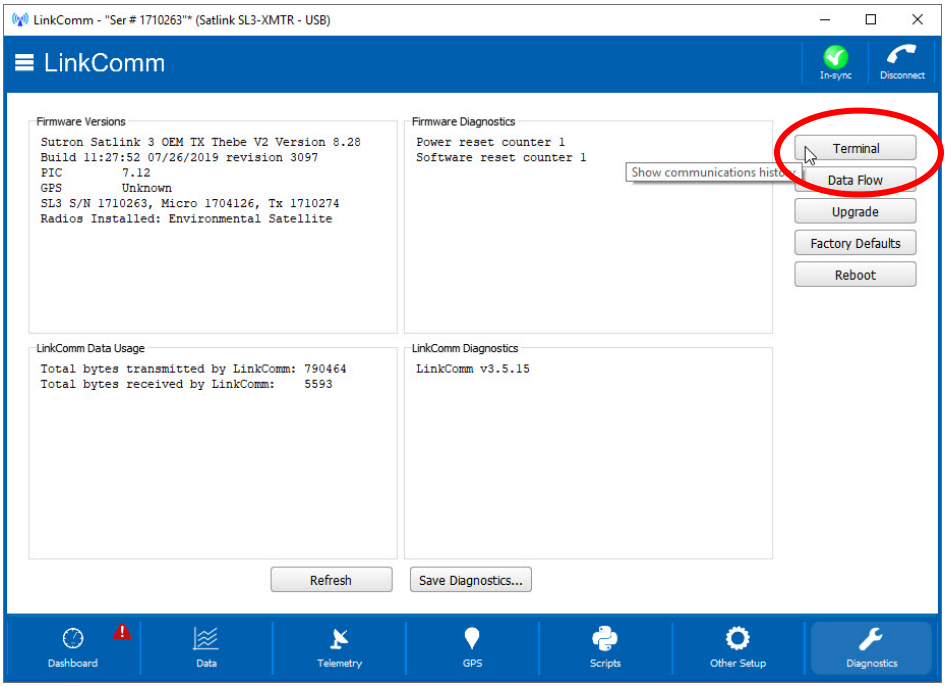
9) This completes the upgrade process. If you would like to check or adjust any settings in the Satlink prior to disconnecting please proceed to step 10 (typically only done by the Instrument Labs). If you do not need to check or adjust any settings in the Satlink click the Disconnect button at the upper right corner of the GUI, disconnect from the unit, reconnect the Satlink to the DCP if using the serial port for communications, and restart logging in the Xpert.



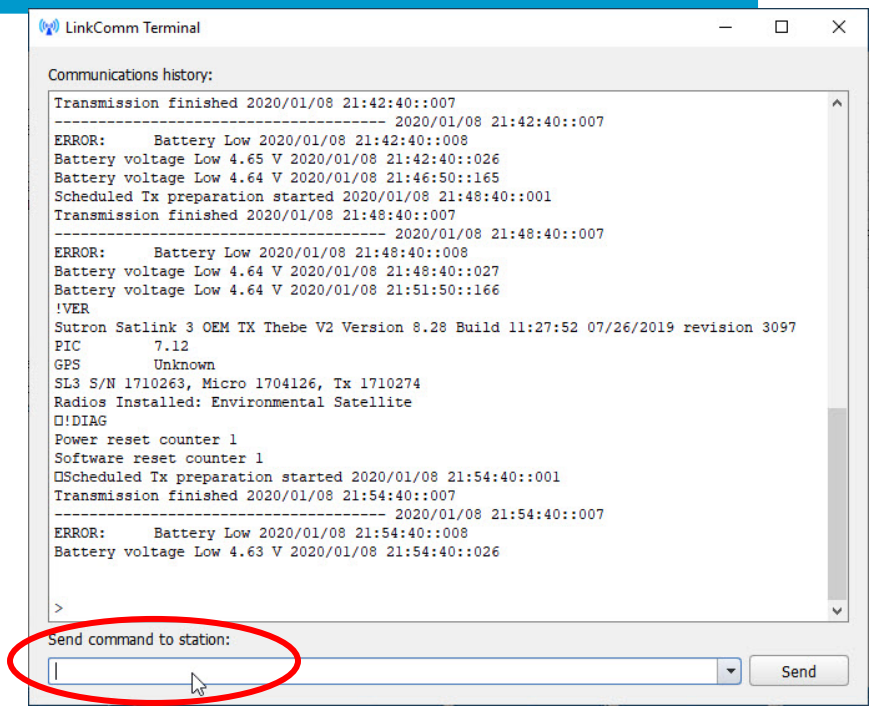
10) If you would like to adjust any other settings in the unit prior to disconnecting, click the Diagnostics button at the lower right of the GUI (typically only CIL/SIL).



11) On the Diagnostics page click on the Terminal button towards the upper right corner



12) From here you can send various commands to the unit as described in the Satlink 3 Operations and Maintenance manual. Simply type in the command and hit enter. Commonly used commands are given on the following page



13) Several commonly used commands sent via the terminal interface are below:

   a) station name = Ser # xxx where the xxx is the serial number of the Satlink. This sets the station name shown in the Xpert interface to be the serial number.

   b) cutoff tx low = 12.0 – This will cause the system to stop transmitting if the battery voltage drops below 12.0VDC when under load to conserve power.

   c) Cutoff system low = 11.5 – This will cause the Satlink to go into power saving mode if the battery voltage drops below 11.5VDC when under load to conserve power.

   d) gps antenna detect = off – This will cause the Satlink to ignore any faults identified in the GPS circuit and continue to obtain a GPS time sync as normal. This is useful if the system is giving an erroneous GPS circuit fault as is sometimes seen with the Antcom GPS antennas.

14) Once done, click the Disconnect button at the upper right corner of the GUI, disconnect from the unit, reconnect the Satlink to the DCP if using the serial port for communications, and restart logging in the Xpert.

15) If you have questions or encounter any trouble please contact either CIL@noaa.gov or SIL@noaa.gov for assistance.