9   Replace antenna segment 6 on top of segment 4 into the top of Antenna/RF backpack.

10 Attach the top of Antenna/RF backpack to the bottom of Antenna/RF backpack.
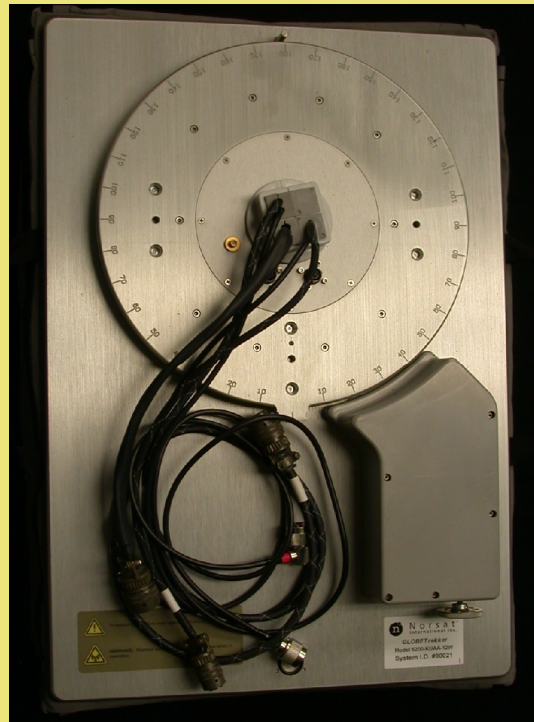
11 Fasten using quick release straps.

Repackaging the GLOBETrekker Baseband Backpack Bottom

1   Replace the baseband unit into the bottom of Baseband backpack.

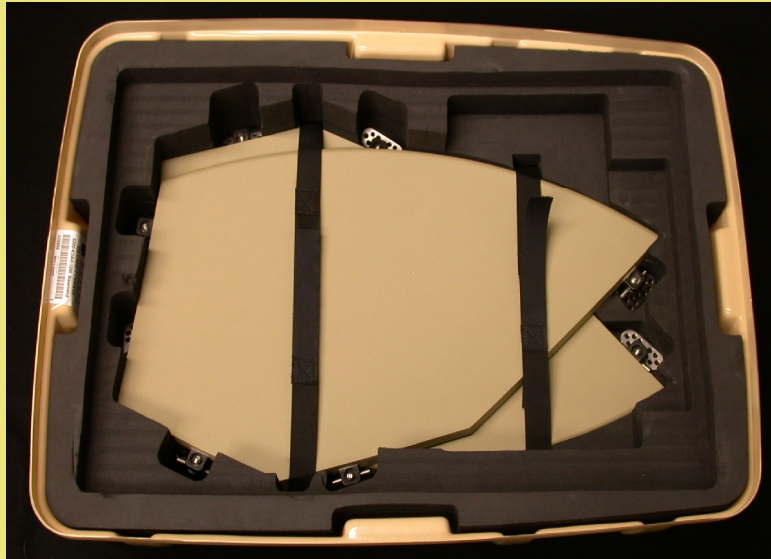2   Coil the wires neatly on top of the baseband unit and then place them back in the bag.

3   Replace antenna segment 3 (back side facing down) into the top of Baseband backpack.

4   Replace antenna segment 2 (back side facing down) on top of segment 3 in the top of the Baseband backpack.

5   Attach the top and bottom of Baseband backpack. Fasten using quick release straps

You have successfully completed the disassembly of the GLOBETrekker.

13 Alarms and Troubleshooting Tips

Topics Covered:

Norsat GLOBETrekker

13   Alarms and Troubleshooting Tips

The GLOBETrekker is a sophisticated communications device. It has been designed to be easy to use even by non-technical users.

Most problems or questions can be answered using the Troubleshooting tips. Should any problems or questions arise use the following Troubleshooting Tips **BEFORE** calling Customer Service.

Troubleshooting

Symptom	Possible Cause	Corrective Action
Power Up		
Baseband chassis fans are not spinning.	No DC power is getting to the baseband from the power supply.	Confirm the 24V DC power cable between the baseband and the power supply is connected.
		Check that the DC fuse is not blown. (Back panel of the baseband. Unscrew protective cover and check fuse.)
Power supply fan not spinning.	No AC power is getting to the power supply unit.	Confirm that AC power cable is connected to AC source.
Windows reports new Serial Mouse installed.	Windows error.	This is a benign error in Windows. Cancel the "auto-hardware detection" and proceed as normal.
Application Startup		
Internal modem does not power up.	Environmental conditions are preventing the modem from being powered up.	The power to the internal modem is controlled by LinkControl. If LinkControl does not sense appropriate environmental conditions (i.e. too cold or too humid), it will not apply power to the modem. Allow the internal fans and heaters to run for a while, to improve internal environmental condition.
iDirect does not acquire into network or Operator cannot lock onto your iDirect modem.	Improper modem configuration.	Contact your iDirect hub operator and verify settings.

Symptom	Possible Cause	Corrective Action
LinkControl Errors		
SSPA low temperature alarm / fan alarm.	SSPA not connected.	Make sure the SSPA is plugged in.
Polarization does not move.	Polarization motor cable not connected.	Make sure Polarization control cable is plugged in.
Receive Signal Strength Indicator is very low and doesn't change (below 030). Or, no reading on spectrum analyzer.	LNB cable problem.	Ensure LNB cable is plugged in and is not damaged.
LNB current alarm.	LNB cable problem.	Ensure LNB cable is plugged in and is not damaged.
Turn on power and the internal computer does not boot (no BIOS boot screen).	Power up error.	Turn off power and turn back on quickly.
Windows user is logged out and you cannot log back in (requires a password at the login screen, and you have no keyboard).	Previous user logged off.	If your Windows user is logged out (either you chose Start->Log Off or another person used Remote Desktop to connect to your system and logged you off) you need a USB keyboard to enter the password (default: "norsat") and log back in. If you don't have a USB keyboard attached to the system, you will need to power cycle the system (turn the power off, wait ten seconds, and turn the power back on). To prevent this from happening, never choose Start->Log Off. Always shut down completely (Start->Shut down). When logged in via Remote Desktop use Windows Security in the start menu and then click the shut down button.

13 Alarms and Troubleshooting Tips

Symptom	Possible Cause	Corrective Action
LinkControl Errors		
Windows freezes or hits a blue screen error message.	Windows error	Wait one minute for Windows to unfreeze. Then power cycle the system.
Spectrum Analyzer is slow to update and "jumpy".	Auto scale taking up resources.	If you see this, try turning the auto-leveling off. The auto-leveling switches are two check boxes next to the Reference Level and dB per Division numeric fields. They take CPU cycles, and if the leveling is correct, you don't need auto-leveling on.
Cannot set DVB receiver or Spectrum Analyzer to listed carrier.	Wrong LNB type.	Ensure the correct LNB is selected for the carrier you want to select.
The application reports a "Timed Out. Could Not Read GPS" message.	GPS is not connected.	Confirm the GPS is connected (on the azimuth plate).
	GPS signal interference.	Make sure you are in clear sky, not next to a wall.
	Poor GPS location.	Make sure you are not in an area where GPS is degraded or turned off by the government.
Inclinometer could not be found	Inclinometer not connected.	Check that the cable is plugged in (side of the antenna back plate).
Compass could not be found	Compass not connected.	Check that the cable is plugged in (on the azimuth plate).

Symptom	Possible Cause	Corrective Action
Antenna Alignment		
Carrier list in Spectrum Analyzer, DVB Receiver, or Antenna Peaking controls is empty, even though you know you have carriers entered for this satellite.	Wrong polarization.	Check the other polarization, to make sure the carriers you are expecting to see aren't all on the other pole. Do this by finding the radio buttons that show Tx Horizontal and Tx Vertical, and clicking the one that is not currently selected. This will show the carriers for the other pole.
	Wrong LNB.	Check to make sure you have the correct LNB selected in your current profile. If you have the wrong LNB selected or installed for the satellite you're looking for, you won't be able to see those carriers.
Unable to get DVB lock or locate signals on the Spectrum Analyzer.	Wrong LNB is connected.	Verify the correct LNB is connected for the receive frequency range desired (A, B, or C type).
	Incorrect or missing carrier information in the database.	Verify carrier frequencies that can be used to align the antenna (i.e. satellite beacon frequencies, DVB carriers). Ensure that for DVB carriers that the correct symbol rate is also entered.
	Antenna pointing error. (Administration mode)	Verify the antenna is level and the elevation and polarization are set correctly. Be aware the compass may be corrupted by local interference and may not be displaying the correct azimuth reading.

13 Alarms and Troubleshooting Tips

| Symptom	Possible Cause	Corrective Action
Antenna Alignment		
Antenna only moves in one direction or does not move in the desired direction (either for azimuth, elevation or polarization).	Antenna position is out of the software limits.	The antenna has software limits that prevent it from moving "out-of-bounds" for any of the three parameters. If the antenna is currently out-of-bounds, any movement command sent to the antenna will cause the antenna to move in the direction that will take it back in-bounds. Therefore, if you try to move the antenna further out-of-bounds, it will go in the opposite direction.
No carrier detected – no signal seen.	Wrong LNB	Ensure you have the correct LNB installed for the satellite you're trying to see.
Azimuth plate slipping or not moving properly.	Drive cable has become loose.	Remove the ten 7/64" Allen head screws from the azimuth plate. Using a 3/8" wrench tighten cable nuts until wire is taught.

13 Alarms and Troubleshooting Tips

Symptom	Possible Cause	Corrective Action
Transmission		
System loses AC power when the transmitter is turned on.	Supply power source is under rated.	Verify your AC power source can deliver a sustained output of at least 500W.
The satellite operator does not see your transmitted CW signal.	Antenna peaking and pointing. (Administration mode).	Verify the antenna is pointed on the correct satellite and that it is pointing has been fine tuned by going through the peaking procedure.
	Configuration or cabling could be incorrect.	Verify that the correct transmit frequency is selected and that all cables are connected.
Transmitter turns off immediately when you turn it on.	SSPA not functioning correctly.	This is likely due to alarm conditions that exist as soon as you turn on the transmitter. Check that the SSPA is plugged in, that the fan is operating, and that the reported SSPA temperature is accurate. Check History on the Status screen and see if an error was recorded.
Transmitter will not power up.	Water in connection.	Check that the SSPA connection is dry.
Remote Desktop Application		
GLOBETrekker does not recognize presence of a laptop.	Remote Desktop Application is not properly configured on laptop.	1. Make sure you can ping the single board computer - **192.168.77.3** 2. If laptop LAN connection says cable is not connected, but it is - go to **Start**->**Control Panel**->**Network Connections** on your laptop, right-click your LAN connection and choose **Disable**, wait until it disabled and right-click again and choose **Enable**.

13 | Alarms and Troubleshooting Tips

The GLOBETrekker is a sophisticated satellite system with powerful alarm reporting capabilities. The user will need to log in as an Administrator to access the alarm panel.

The alarm panel is to be found under the **Status Screen**.

Figure 41   Status Screen
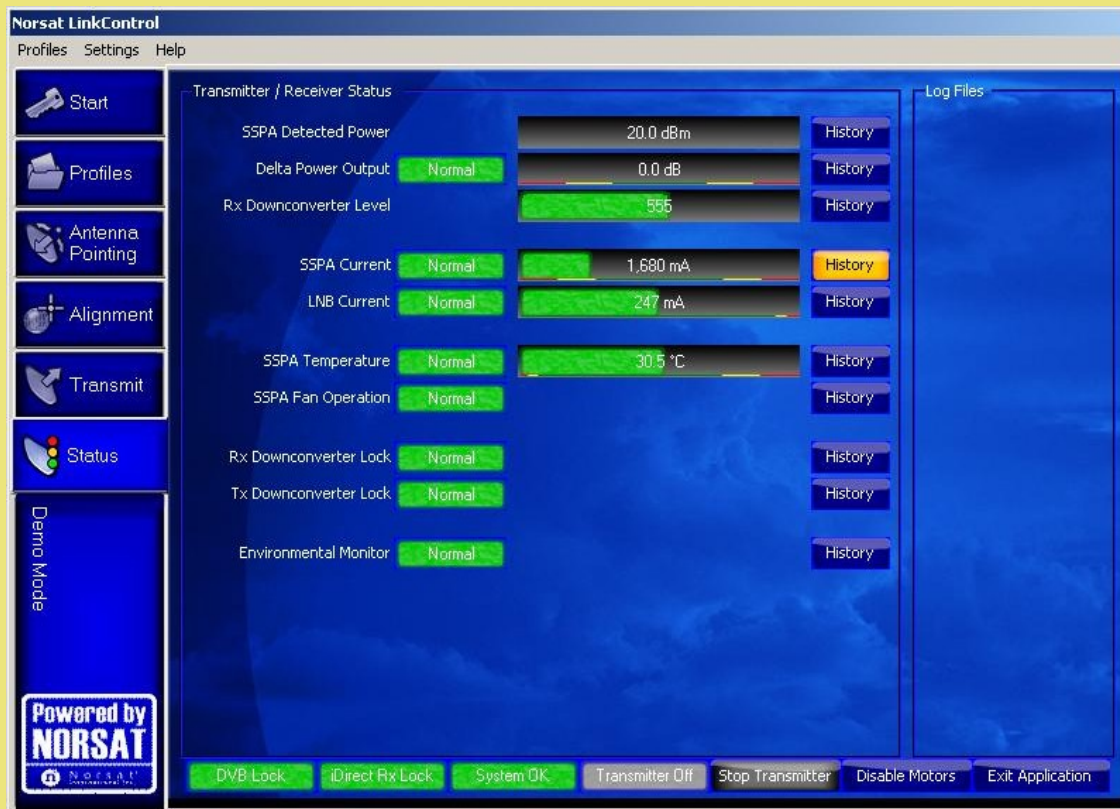
13 Alarms and Troubleshooting Tips

Status Indicators

The **Status Screen** provides details about the health of the GLOBETrekker system. To view the **Status Screen**, click **Status**. The **Status Screen** opens as shown in Figure 43.

Status indicators shown on the Status Screen in Figure 43 perform the following functions:

- Indicators update the Tx/Rx in real time.
- Each status indicator provides a history of associated alarm conditions.

To access the history of an indicator, perform the following steps:

1 Click on the **History** button next to the indicator.

2 Click **Refresh** to update with the most recent events.

3 Click **Close**.

The three types of status indicators are:

- Information only: no alarm conditions results from these indicators.

- Binary alarm: the condition is either normal or in alarm.

- Variable range alarms: these values give normal indications, warnings, or alarm indications.

13 Alarms and Troubleshooting Tips

Table 6 lists the type and meaning of each status indicator on the **Status Screen**.

Table 6	Status Screen Indicators	
Status Indicator	**Type of Status Indicator**	**Description**
SSPA Detected Power	information only	the measured output power of the amplifier
Delta Power Output	variable range alarms	difference in the requested power versus the measured output power
Rx Downconverter Level	information only	Rx signal strength indicator
SSPA Current	variable range alarms	DC current the SSPA consumes
LNB Current	variable range alarms	DC current the LNB consumes
Ku–L DNC Current	variable range alarms	DC current the Ku to L–band downconverter consumes
SSPA Temperature	variable range alarms	internal temperature of the amplifier
SSPA Fan Operation	binary alarm	indicates whether the fans in the amplifier are turning
Paradise DC current	variable range alarms	DC current the modem consumes
Rx Downconverter Lock	binary alarm	The Local Oscillator PLL lock status for the downconverter in the Rx path must be locked to use the Rx spectrum analyzer.
Tx Downconverter Lock	binary alarm	The Local Oscillator PLL lock status for the downconverter in the Tx path must be locked to use the TX spectrum analyzer