



*Satellite Tracking and Monitoring Solutions*



## Blue Gauge Guide

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## Contents

<b>1. Introduction</b>	<b>3</b>
<b>2. Operation</b>	<b>3</b>
2.1 Connecting the Gauge	3
2.2 Reading the Gauge	3
2.2.1 GSM	3
2.2.2 SAT	3
2.2.3 GPS	3
2.2.4 CAN	4
2.2.5 MAIN/BACK	4
<b>3. Troubleshooting</b>	<b>4</b>
3.1 Antenna connection	4
3.2 Antenna placement	4
3.3 NO CAN	4
3.4 Power	4
3.5 No Connection	4

# 1. Introduction

The 2-inch blue gauge is used for testing signal on the three main antenna systems, as well as testing for a valid data connection to the engines. It is plugged into the 4-pin connector on the Monitoring Tracking Module (MTM). This can be useful in troubleshooting issues with **gplink** not receiving good data from the vessel.

# 2. Operation

The blue gauge is normally kept unplugged while the vessel is underway. The following will describe how to plug in and read the diagnostic information.

## 2.1 Connecting the Gauge

Plug the gauge into the 4-pin plug coming from the MTM power harness. On installations that utilize more than one MTM, the 4-pin plug will be plugged into a jumper harness between the primary and secondary MTMs. Unplug the jumper harness from the primary MTM (identified by the antenna cables plugged into the top of the unit and marked with a GWD serial number) and plug the gauge in. Once the primary has been verified, plug the gauge into the 4-pin plug on the secondary box to test power and engine data connection to the secondary. Make sure to leave the gauge plugged in for up to 20 min if readings don't come in right away as sometimes the MTMs take extra time to initialize and get connection from the modems. When finished remember to reconnect the jumper harness and confirm that it is fully engaged into the latch on both ends.

## 2.2 Reading the Gauge

When first plugged into a powered MTM the screen may show "WAIT" while it establishes a connection. It will then switch to the main display and display either "COM" if there is signal or "NO COM" if it is unable to establish an uplink or GPS fix. Once on the main screen press "S" key on the right of the gauge and it will switch to displaying numerical readouts of the signal strength of the different antennas as well as system voltage. Pressing the "Mode" key will cycle through the different readings in order.



### 2.2.1 GSM

This is the strength of the connection to terrestrial cell networks. The signal is displayed on a scale of 0-5 with 0 being no connection and 5 being the strongest.



### 2.2.2 SAT

This is the strength of the connection to the Iridium satellite network. The signal is displayed on a scale of 0-5 with 0 being no connection and 5 being the strongest.



### 2.2.3 GPS

This is the measurement of the estimated accuracy of the current GPS fix. This information is displayed in Positional Dilution of Precision (PDOP) shown to two decimal places. The lower the number, the greater the accuracy. A reading of 0500 or lower is required for proper location tracking. A reading of 9999 indicates no GPS fix.



### 2.2.4 CAN

This indicates with a yes or no if the MTM is receiving engine data. The ignitions must be on to test for a valid connection.

### 2.2.5 MAIN/BACK

Both of these are measurements of the input voltage to the MTM, and is displayed in DC voltage shown to two decimal places (12.45V will show as 1245). This should be the same as the main battery voltage.



## 3. Troubleshooting

Here are some things to check if the blue gauge indicates an issue.

### 3.1 Antenna connection

Check that all antenna cables are solidly connected to the correct ports. The SMA ports on the top of the MTM are labeled J1, J2 and J3. Connect the GPS cable (colored blue or labeled GPS) to J1. Connect the GSM cable (yellow or labeled phone) to J2. Connect the satellite cable (white or labeled SAT) to J3. On installations without a Iridium satellite connection the J3 port will be capped.

### 3.2 Antenna placement

Make sure all antennas are installed upright with as few obstructions as possible. Things that can cause interference include metal objects, wiring, and other electronics. The GPS and SAT antennas require an unobstructed view of the sky. The GSM must be above the waterline, and have as close to an unobstructed view of the horizon as possible. Generally the higher in the vessel the antennas can be mounted the better. Keep in mind that although fiberglass and plastics are not normally an obstruction, other hull materials like steel or carbon fiber are and may require externally mounted dome antennas.

### 3.3 NO CAN

If the gauge displays NO CAN, check that the ignitions are on and that the engine datalink is properly installed and all the plugs are fully engaged.



### 3.4 Power

If the blue gauge doesn't power when plugged in, double check the power inputs to the system. If all the power connections test as good then contact **gplink** at +1.252.504.5113.

### 3.5 No connection

If the gauge never advances from the WAIT screen, double check that the 4-pin connector is plugged in and latched into place and that none of the pins are loose. Reboot the whole gplink system by disconnecting the power for 30 seconds and then reconnecting. If the gauge still doesn't advance from the WAIT contact **gplink** at +1.252.504.5113.