



TROUBLESHOOTING & MAINTENANCE TIPS

GPS & PLOTTER

The GPS receiver has become the primary source of position information for the mariner. The unit receives signals from a constellation of satellites maintained by the US Air Force. A receiver is able to determine position, time, and velocity. Most civilian grade GPS receivers have an accuracy of between 3 and 10 feet. Due to the critical nature of these units it is recommended that vessels traveling offshore, beyond the sight of land, be equipped with two receivers in order to have a back up.

Routine Checks:

As with your other electronics, regularly inspect the GPS control unit (display) for moisture, corrosion, and proper cable/connector seating. Check the antenna for physical damage such as cracks that may allow water intrusion. The antenna should have a clear view of the sky. Always turn your equipment off prior to starting your engines or changing generators to avoid exposing your electronics to voltage surges.

Loss of Position Data:

Check the DC input voltage. Most GPS problems can be traced to issues with the antenna, its cable, or the connector. There are few, if any, settings or adjustments that will prevent a GPS receiver from operating. The majority of GPS receivers have a monitor, or test, mode to show how many satellites are being received as well as their relative signal strength. It's normal to pick up between 8 and 12 satellites at a time. However, most units will function fully with as few as 3 satellites.

Interference Problems:

GPS receivers are susceptible to interference from external sources that can cause total or intermittent loss of operation. If you experience reception problems with your GPS it's a good idea to turn off as many electronic devices, electrical appliances, and lighting as possible. Conventional TV antennas with amplifiers have been known to interfere with GPS units. You may find that your unit malfunctions when you are at a certain location but works fine in other places. This may be caused by interference from various sources such as microwave transmitters and electrical transformers.

Plotters:

It is seldom that the plot or map function of a GPS/Plotter unit malfunctions without there being issues with the GPS receiver portion itself. If this happens you should check for proper insertion and connection of any external chart you may be using. Refer to your operators manual for assistance in setup and operation of the plotter functions.