GP150 Dual – Functionality and Required Components

GP150 and GP150D GPS's are capable of operating as a pair in order to provide enhanced functionality and redundancy. The two GP150's communicate with each other via serial connection, and share waypoint, route and other information.

"Dual" functionality also provides the owner with an intelligent data interface (IF-2500 required) which will monitor the GPS output. If it senses an alarm condition or degradation of GPS reliability from the primary GPS, the IF2500 will automatically begin sending data outputs to external equipment from the working GP-150 until the failure is corrected.

The following components are required to create a "dual" GP150 configuration:

- 2 each GP-150's (or GP-150D's.) The dealer / customer must request that they be sent through service and updated with the latest DUAL software
- 1 Each IF2500 IEC Interface / smart switch
- 1 Each 000-154-053 Grey Cross Connect cable, 5M
- (Local supply) Twisted shielded pair cable for connections from IF2500 to NMEA / IEC61162 devices

Each new GP-150/D comes with a black 6 pin cable, which can be used to connect each GP-150 to the IF-2500. The installer will need to provide / supply twisted, shielded pair cable (NMEA cable) to connect the IF2500 to all of the IEC / NMEA listeners. 6 isolated NMEA0183 RS-422 outputs are available from the IF2500.

The following data is shared and synchronized between two GP150's installed in the "dual" mode: Route data, waypoint data, alarm settings, alarm buzzer, destination data, disabled satellite data, error messages and MOB/Event mark data.

The following describes the behavior of the IF2500 when used with the GP150 Dual

- When both navigators are outputting data correctly, data received from the GPS with the higher priority (jumper selectable) is output.
- If the GGA sentence being received from the primary GPS indicates failure or degradation, the IF2500 switches to the backup GP150 and position data from that GPS is repeated.
- Arrival alarm signal or cross track error alarm is converted to a contact signal and output when received at the port having the higher priority.
- When no data is received from one or both navigators, an alarm (contact signal) is output. This is normally used as a GPS FAIL alarm.
- This functionality is automatic.

GP150

000-154-053

GP150

IF2500

INTERFACE UNIT
MODEL
SER.NO.
DATE
COMPASS SAFE DISTANCE
STD ___ m   STEER ___ m
FURUNO ELECTRIC CO., LTD.
NISHINOMIYA CITY, MADE IN JAPAN

IEC61162 Outputs to Equipment - Cable is
supplied locally (twisted shielded pairs)