Normal Operation

The NAVLINK takes its power from the NMEA2000 bus and consumes a maximum of 200mA which gives it an NMEA2000 Load Equivalency Number (LEN) of 4.

As soon as the NMEA2000 bus is powered up the NAVLINK will turn on and start transmitting its wireless SSID.

Every time NMEA2000 data is received by the NAVLINK, the yellow data LED will flash. In some systems with lots of NMEA2000 data, it is not unusual for the yellow LED to be constantly flickering.

Should you have a problem connecting wirelessly to NAVLINK, press and hold the Reset button for 1-2 seconds and try connecting again. In busy marinas where there is significant wireless activity, it may not be possible for a reliable TCP or UDP connection to be made to NAVLINK, but once underway (at sea) a strong and reliable connection will be achieved.

If you are using the NAVLINK for connection to an NMEA2000 network with an AIS, then you may need to update the firmware to make this work. If you have an iPhone of iPad, visit the app store and download our complimentary copy of the iAIS app. This simple but powerful app will give you an AIS radar type display of all the AIS target around you. It includes a built-in user guide describing how to setup and use it with the NAVLINK.

Installation & Quick Start Guide

NAVLINK Wireless NMEA2000 Server

1. Introduction

Congratulations on the purchase of your NAVLINK Receiver. It is recommended that your product is installed by a professional installer.

Before operating the unit you should familiarise yourself with this Quick Start Guide and any manuals applicable for the equipment/software that you are going to connect to the NAVLINK.

2. Before you start

You will need the following items and tools to complete the installation:

- The NAVLINK Receiver (supplied)
- The 3dB Wi-Fi Antenna (supplied)
- Access to the NMEA2000 network and a spare T-Piece (female) where the unit is to be installed.
- M3 or M4 screws or other fixings appropriate to the mounting location (not supplied).

To receive/display wireless data from the NAVLINK you will need:

- Suitable Navigation software running on a PC, iPhone/iPad, Mac or other wireless device.
- NMEA2000 device or devices connected to the network and powered up.

3. Installation

Before starting installation select a suitable location for the NAVLINK device. The unit is not water proof and should be installed below deck in a dry location. When locating the unit you should consider:

- Routing of NMEA2000 cable to the network.
- Provision of sufficient space above and below the unit for cable connections and Wi-Fi Antenna.
- Maintaining the compass safe distance of 0.5m.
- Best location for Wifi reception i.e. not inside a metal enclosure

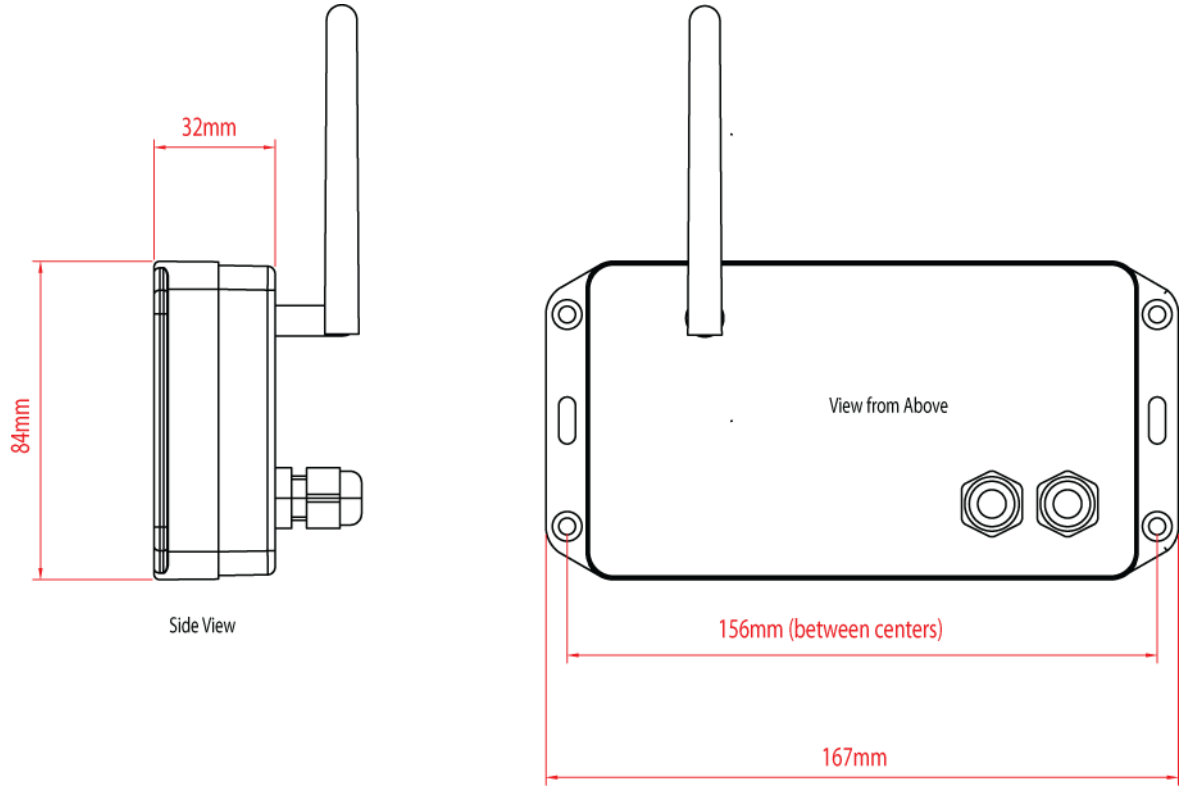
Installation Step 1 - Cabling

- Power down the NMEA2000 network
- Screw the NavLink's integral NMEA2000 cable in to a spare NMEA2000 T-Piece on the network

Installation Step 2 – Mounting the NAVLINK

- Use suitable fixings (not supplied) to fix the NAVLINK to a flat surface – using the dimensions and details shown in the drawing below. Note that the unit may be installed in any orientation.

Fixing location drawing



- Once the unit is secured, connect the 3dB Wi-Fi antenna by gently screwing it in to the threaded SMA connector on the top of the unit. Ensure the connection is fully made but do not over-tighten.

Installation Step 3 – Powering the NAVLINK

- Apply power to the NMEA2000 network and the NAVLINK will power up.

- You should see the three LEDs start to illuminate or flash. The following table shows what each LED indicates;

Condition	Red LED	Yellow LED	Green LED
ON (Solid)			TCP Link Established
Fast Blink	No Wireless Connections	Data	No Data Link
Slow Blink	Wireless Connection Established	Data	UDP Link Established
OFF		No Data	No Power

Installation Step 4 – Wireless Interfacing

- The NAVLINK receiver has an integrated 802.11b+g wireless adaptor which creates a wireless hotspot on-board your boat. The SSID (name) of the wireless hotspot that NAVLINK creates will be “DY-NavLink-xxxx” where xxxx is a four digit code unique to your NAVLINK.
- To connect to NAVLINK, simply scan for wireless hotspots on your wireless device. The exact procedure will vary from device to device so consult the user manual for your device to understand how to connect to a wireless hotspot.
- The NAVLINK uses TCP or UDP protocol to transmit serial NMEA data and it is important that the program or application on the wireless device supports data reception via TCP or UDP in order to work correctly. Your choice of which protocol to use will probably be dictated by what protocols your navigation app can receive.
- TCP is a single device to device protocol and only one mobile device may communicate with the NAVLINK via TCP at a time. You will be able to connect multiple wireless devices to the NAVLINK but only one of the devices will be able to receive TCP data.
- UDP is a single device to multiple device protocol and allows multiple mobile devices to all receive the same data. If your navigation app supports both TCP and UDP, then UDP is probably the better of the two protocols to use.
- Once you have wirelessly connected your mobile device to the NAVLINK, you will need to run the Application on your mobile device that accepts NMEA data over a TPC or UDP connection. For TCP you need to enter the IP address and port that NAVLINK transmits data on as shown below and for UDP you just enter the port number;

IP Address - 192.168.1.1
Port - 2000

- You should now be able to receive data wirelessly from the NAVLINK.
- The data that the NAVLINK outputs is standard NMEA0183 and some apps (such as our free iAIS app) will display the raw data, which is a good method of testing the system is working.
- The screen shot in Fig 1, is from our iAIS app and shows the NMEA0183 data being received in the black terminal window.

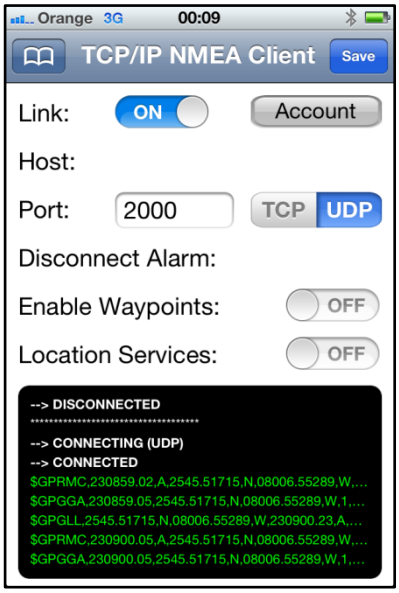


Figure 1