



SAIL BOAT



SPORT FISHING



MOTOR BOAT



AIS WI-FI GATEWAY WIRELESS NMEA INTERFACE

Installation and instruction Manual



1. Introduction

Congratulations on the purchase of your AIS WI-FI GATEWAY Wireless NMEA Interface.

It is recommended that your product is installed by a professional installer, particularly when it comes to interfacing with other equipment.



Before installing and operating this unit you should consult the user manual of the navigation equipment that you are connecting this unit to.

2. Before you start

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

- The AIS WI-FI GATEWAY (supplied)
- A 12V or 24V DC power connection where the unit will be installed
- M3 or M4 screws or other fixings appropriate to the mounting location (not supplied).

To receive/display wireless data from the AIS WI-FI GATEWAY you will need:

- A suitable App for a mobile wireless device that can receive AIS data via wireless NMEA.
- An AIS receiver or transponder with a suitable NMEA 0183 data output that is transmitting AIS data at 38400 baud.



3. Installation

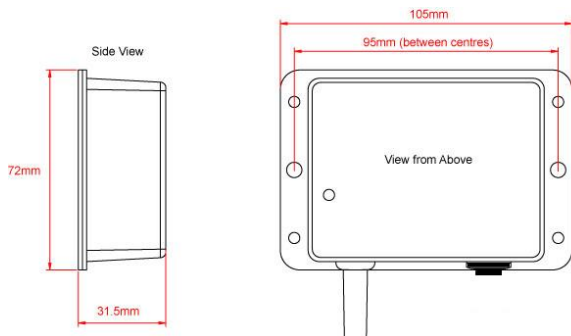
Before installing select a suitable location for the AIS WI-FI GATEWAY device. The unit is water resistant; however it should be installed below deck in a dry location. When locating the unit you should consider:

- Routing of power and NMEA0183 interfacing cables to the unit.
- Provision of sufficient space below the unit for cable connections and access to reset switch.
- Best location for Wifi reception i.e. central location within the vessel, not inside a metal enclosure, etc.

Installation Step 1 - Cabling

- Run 12v or 24v power connections to the AIS WI-FI GATEWAY
- Run the NMEA 0183 interfacing cables to the AIS WI-FI GATEWAY
- Do not make any connections yet

Installation Step 2 – Mounting

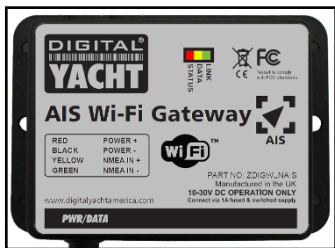


Use suitable fixings (not supplied) to fix the AIS WI-FI GATEWAY to a flat surface. Note that the unit may be installed in any orientation.



Installation Step 3 – Powering the AIS WI-FI GATEWAY

- Provide power connections to the unit. Power is connected to the four core PWR/DATA cable on the Red and Black wires. Red wire is the positive (+) connection, Black wire is the negative (-) connection.
- Connect the stripped wires to the nearest source of primary 12V or 24V DC power. Ensure that the supply is connected via a 1A fuse (not supplied) or suitable circuit breaker. The fuse should be fitted in the positive power connection to the unit if necessary.
- Apply power to the AIS WI-FI GATEWAY and 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
Flashing	No wireless connection	Data	UDP Connection
ON			TCP Connection
OFF	Wireless device connected	No Data	No Power

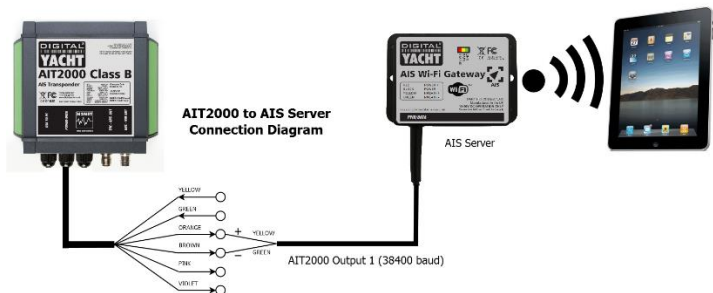
- Turn off the AIS WI-FI GATEWAY and continue with the NMEA interfacing.



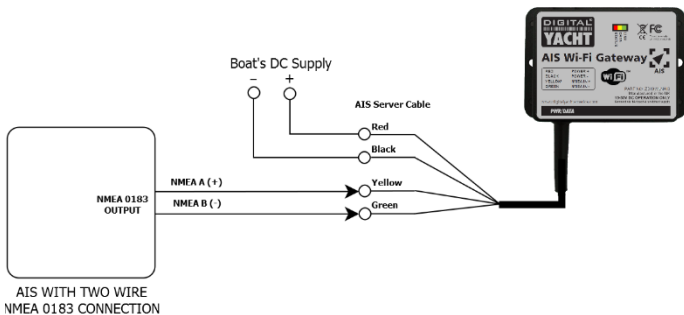
Installation Step 4 – Interfacing (NMEA)

- The AIS WI-FI GATEWAY allows AIS data to be taken from an AIS receiver or transponder and be wirelessly transmitted to a suitable app running on a wireless mobile device such as a smart phone, tablet or laptop.
- AIS WI-FI GATEWAY operates at 38400 baud, the high speed data rate for AIS equipment.
- All NMEA0183 data received, not just AIS data, is converted to Wireless NMEA0183 data and so you can connect the AIS WI-FI GATEWAY to the 38400 baud output of an NMEA Multiplexer.

Below is a typical connection diagram for connecting the AIS WI-FI GATEWAY to a Digital Yacht AIS. The AIS output wires of Digital Yacht AIS Units are always the Orange(+) and the Brown(-) and these should be connected to the GATEWAY's Yellow(+) and Green(-) Input wires.



To connect the AIS Wi-Fi GATEWAY to 3rd Party AIS units, you will need to find out which connections are the NMEA0183 High Speed AIS Output and connect these to the Yellow(+) and Green(-) Input wires of the GATEWAY, as shown on the next page.



If you have correctly interfaced AIS WI-FI GATEWAY to your AIS system, then the Yellow “Data” LED should flash each time an AIS message is received, the frequency of which will vary depending upon the number of vessels around you transmitting their position.

Installation Step 5 – Wireless Interfacing

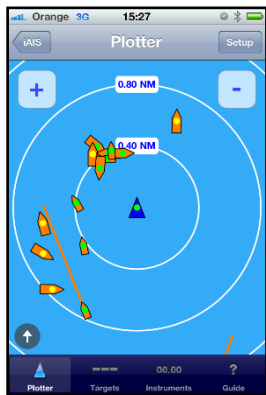
- AIS WI-FI GATEWAY has an integrated 802.11b+g wireless adaptor which creates a wireless hotspot on-board your boat. The SSID (name) of the wireless hotspot that AIS WI-FI GATEWAY creates will be “DY-AIS_WiFi-xxxx” where xxxx is a four digit code unique to your AIS WI-FI GATEWAY.
- To connect to AIS WI-FI GATEWAY, 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.
- Once your mobile device is connected wirelessly to AIS WI-FI GATEWAY, all you have to do is run the Navigation App that you want to use to display AIS data on your mobile device.



- There are many apps available and please visit our blog for more info <http://digitalyacht.net>
Search for "iOS Apps" or "Android Apps"
- The image opposite shows how the AIS targets are shown on our free iAIS app for Apple iOS devices.
- Our AIS WI-FI GATEWAY supports TCP or UDP connections and the settings that need to be entered on the App are;

IP Address = 192.168.1.1

Port = 2000



Normal Operation

The AIS WI-FI GATEWAY consumes around 0.1 Amp and can be left on whenever the boat is sailing. Whenever NMEA data is received by the AIS WI-FI GATEWAY, the yellow data LED will flash. In some systems with lots of NMEA data, it is not unusual for the yellow LED to be constantly flickering.

Should you have a problem connecting wirelessly to AIS WI-FI GATEWAY, 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 connection to be made to AIS WI-FI GATEWAY, but once underway (at sea) a strong and reliable connection will be achieved.



**For more information on Digital Yacht Products please visit
<http://digitalyachtamerica.com>**