DIGITAL YACHT

SAIL BOAT SPORT FISHING MOTOR BOAT

AISnode
NMEA2000
AIS RECEIVER

Installation and instruction Manual

1. Introduction

Congratulations on the purchase of your AISnode AIS Receiver. It is recommended that this unit is installed by a professional installer with suitable experience of NMEA2000.

ⓘ **The AISnode is very easy to install, just one connection to the NMEA2000 network, but because the unit takes its power from the NMEA2000 network (LEN = 3) it is important to check that your network has enough power connections and capacity for the AISnode to be added without causing any problems.**

2. Before you start

You will need the following items and tools to complete the installation:
- Class B AIS Transponder.
- Dedicated VHF/AIS antenna or splitter – not supplied
- A spare "T-Piece" connection to the NMEA2000 network
- Four M4 screws or other fixings appropriate to the mounting location.

To test the unit, you will need to be;
- Within range of some AIS targets
- Have a suitable NMEA2000 chart plotter powered up and connected to the NMEA2000 network
- Any manufacturer specific NMEA2000 Adaptor cable i.e. Raymarine SeaTalkNG to NMEA2000 cable or Simrad Simnet to NMEA2000 cable.

3. Installation

Before starting installation select a suitable location for the AIS Receiver. 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 NMEA2000 and VHF antenna cables to the unit.
- Provision of sufficient space in front of the unit for cable connections.
- Maintaining the compass safe distance of 0.5m.
- Visibility of the front panel indicators.

Installation Step 1 – VHF/AIS Antenna or Splitter

- Install the VHF/AIS antenna (not supplied) according to the hand book instructions supplied with the antenna.

- If you are going to share the boat's existing VHF antenna i.e. use the antenna for both the VHF and AIS, you will need to install a suitable antenna splitter. It is important to note that most AIS receiver splitters will reduce the VHF and AIS reception by 3dB (half power), so we generally recommend the use of a dedicated VHF/AIS antenna on AIS receiver installations.

- A small dedicated VHF/AIS whip antenna mounted at deck level should provide a good 10-15NM range on AIS without the negative affect on VHF reception that a splitter produces. Also, if you install the AIS receiver close to the VHF and leave enough spare cable, the new dedicated antenna can be used as an emergency VHF antenna in the event of a de-mast.

- The AIS antenna connector on the AISnode is a BNC type connector and it may be necessary to get a PL259 to BNC adaptor if you are connecting a normal VHF antenna to the AISnode as these are terminated in the standard PL259 VHF connector.

Installation Step 2 – Locating and Fixing the unit

- The AISnode can be mounted in any orientation, although in damp environments it is good practice to mount the unit vertically so that any surface water runs off the cables and does not sit on the gland or BNC connector.

- The NMEA2000 specification recommends that all "drop cables" are less than 6m in length, so it is important that the AISnode unit is mounted within 6m of the NMEA2000 network or within 1m if you do not want to add any additional cabling.

Unit Dimensions
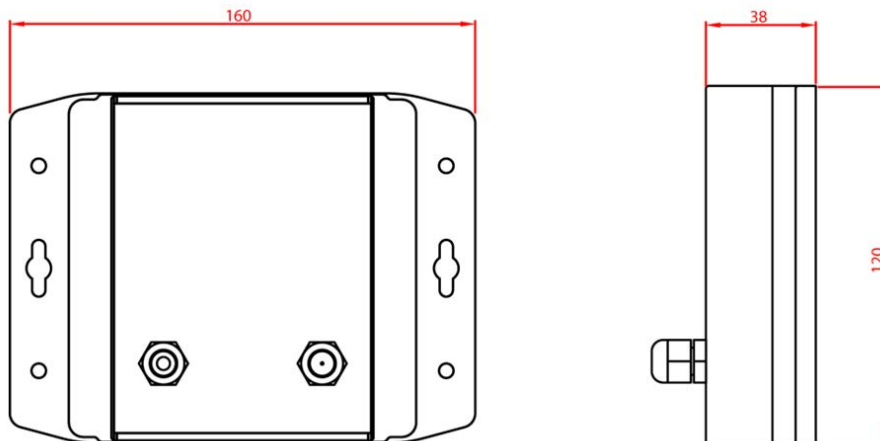
- Once you are confident that the AISnode is in the best location, secure the AIS receiver to a flat surface in the selected location, using four M4 wood screws or other fixings suited to the material the unit is being fixed to.

Installation Step 3 – Connecting to the NMEA2000 Network

- Before connecting the AISnode to the NMEA2000 network, make sure that the power to the NMEA2000 network is turned off.

- The AISnode has an integral 0.75m NMEA2000 cable terminated in a standard micro male NMEA2000 connector, that will plug straight in to a spare female "T Piece" on many NMEA2000 networks. on some "proprietary" NMEA2000 networks, a special adaptor cable will be required from the manufacturer.

    o Raymarine SeaTalkNG to NMEA2000 Adaptor Cable Part No A06045

    o Simrad Simnet to NMEA2000 Adaptor Cable Part No 24006199

- Once the AISnode is connected to the NMEA2000 network, it will take its power from the network and transmit AIS data on to the network.

- If the AISnode is powered up correctly, the green "Power" LED will be illuminated.

- Each time that a valid AIS message is received the yellow "RX" LED will flash and the AISnode will output an NMEA2000 PGN (message) on the network.

Installation Step 4 – NMEA2000 Interfacing

- A table showing all of the NMEA2000 PGNs (messages) that the AISnode transmits on to the NMEA2000 network are shown below. Some chart plotters do not support all of these PGNs, so please contact the chart plotter manufacturer if not all AIS target types are being displayed.

PGN No.	PGN Title
129038	Class A Position Report
129039	Class B Position Report
129040	Class B Extended Position Report
129793	AIS UTC and Date report
129794	AIS Class A Static and Voyage Related Data
129800	AIS UTC/Date Inquiry
129801	AIS Address Safety Message
129802	AIS Broadcast Safety Message
129810	AIS Class B static data part B
129809	AIS Class B static data part A
129041	AtoN position report

Installation Step 5 – Power Up

- Turn on the DC power to the NMEA2000 network

- Verify that the green "Power" LED illuminates.

- If you are within AIS reception range and should be able to detect AIS traffic, ensure that the yellow "RX" LED flashes each time it receives an AIS message.

- Installation is now complete.