

A Guide to Buying/Installing AIS

Adding an AIS system to your boat can be a complex operation, so we have written this step-by-step guide to help you.

There are several things you need...

1 The Display

The first (obvious) item you require is a display for the AIS Data. This is normally your GPS/Chart-plotter. Most GPS/Chart-plotters produced since 2010 are able to decode the AIS data and display it on the screen. Most GPS/Chart-plotters produced before 2005 are NOT able to display AIS data. For models produced between these dates you will need to check your individual equipment – if there is a Menu Option for AIS Display, then you are OK. Some equipment from this period can be updated; for example early models of the Raymarine C80 were NOT AIS compatible but there is a software upgrade to fix them.

2 Receive or Transceive

You need to decide whether you want receive only (other ships can be seen on your display) OR you want Transceive function (your boat also transmits information to other boats in the area). The cost of a Transceive system is somewhat more but is much safer.

Unfortunately, there is no easy “upgrade” path and if you initially install a receive only system and later decide to change to a Transceive system, most of the items will need to be replaced.

3 Existing Antenna or New Dedicated Antenna

You then need to decide whether you want to use your existing VHF antenna with a “splitter” or use a dedicated AIS antenna. For receive only, using a splitter is the preferred option because it's cheaper and generally satisfactory, but for a Transceive setup it is not so clear-cut...

- a> for a sailing boat with the antenna on the mast, then using a splitter so the same antenna is used for both your marine VHF and the AIS is probably the preferred option
- b> but for a motor vessel, a second antenna may be the better option (it is often easy to add a second antenna with similar performance to the existing one).

Also bear in mind that long range for AIS signals is less important than for your normal VHF Marine Two-way Radio. You are really only interested in seeing AIS Targets that are within say a 10 to 15 minute range; this is generally only within 5 to 10 miles of your location. Anything more is just extra clutter on your display.

4 Choose the actual equipment

Finally you can choose what AIS receiver (or transceiver) to use and what splitter or antenna to use.

We stock a wide range of products from Comar, Digital Yacht, NASA Marine, Quark etc. plus Splitters and Antennas from Banten, Comar, Raymarine etc.

5 Interfacing

There is also one technical potential complication... AIS Data to the display normally uses “NMEA 38400”; this is different to the depth, wind and GPS data often interconnected that uses “NMEA 4800”. You will usually, therefore, need to have a separate, unused data input to the display to connect the AIS data to the display.

There are some solutions and exceptions to this problem – there are “Data Combiners” or “Multiplexers” available that can add the “NMEA 4800” to the “NMEA 38400” data so only one input is required and some equipment uses “NMEA2000” or “SeaTalkNG” which allows this combination to take place.

When you have chosen which equipment you want to use, most of the products can be purchased from our Internet Shop at <https://www.universalyachtparts.com/AIS>

We hope this hasn't completely confused you.

If you want to talk to an expert about any AIS related question, then phone us on 023 8000 1088 or 07989 557888.

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