



Article Number - 00058-2014

Date - 9th May 2014

Article applies to - All Digital Yacht **AIS products**

ISSUE: Connecting Digital Yacht AIS to Simrad/B&G/Lowrance Plotters

Navico the largest marine electronics manufacturer whose product brands include; Simrad, B&G and Lowrance produce some of the most popular chart plotters and multi-function displays (MFDs) on the market today. Over recent years Navico have standardised the electronics hardware that the products from these three brands use but we have found that slight differences in the installation manuals have created some confusion for customers interfacing Digital Yacht AIS products to these plotters via NMEA0183.

To assist further we have prepared this Tech Note that tries to explain clearly how to connect our AIS products to these plotters via NMEA0183.

With older Lowrance 5" and 7" plotters we use to recommend the fitting of a small capacitor in the NMEA0183 positive line when connecting our AIS receivers to these units (see Tech Note 0008-2010), but after testing the latest Lowrance units, we can confirm that it is no longer necessary to fit the capacitor and our AIS receiver products will drive all of the latest Navico products.

Finally, for customers connecting a Digital Yacht AIS product to a Navico plotter via NMEA2000 (SimNet), there could be an issue with older Navico products not reading some of the Static Data, (Boat name, Call sign, Vessel Type, etc.) of Class B AIS transponders. We are pleased to report that with the latest Navico units and firmware updates, that this issue is no longer present.

SOLUTION:

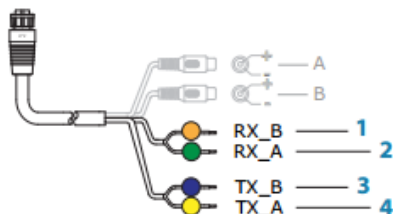
The diagrams on the following pages show the different labelling of the NMEA0183 wiring for Simrad, B&G and Lowrance plotters. As you can see, in the Simrad and B&G manuals the Orange wire is referred to as "NMEA_RX B" and the Green wire as "NMEA_RX A", whilst in the Lowrance manual the Orange wire is referred to as "Receive A" and the Green wire is "Receive B".

Regardless of the labelling in the installation manuals, Digital Yacht AIS receivers and transponders should always be connected as follows....

Digital Yacht AIS (Power+Data Cable)	Navico Chart Plotter (NMEA Cable)
ORANGE (NMEA OP+)	ORANGE
BROWN (NMEA OP-)	GREEN

SIMRAD CONNECTIONS

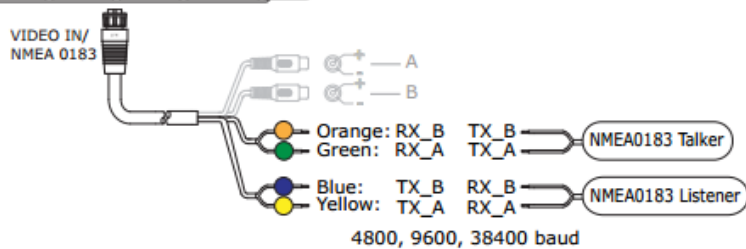
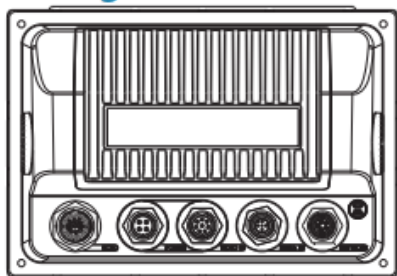
NMEA 0183 device connection



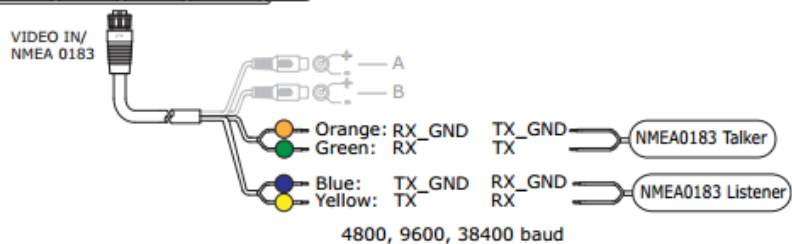
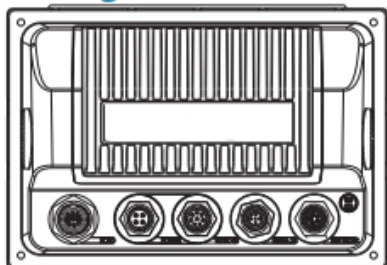
- 1 NMEA 0183 RX_B (orange)
- 2 NMEA 0183 RX_A (green)
- 3 NMEA 0183 TX_B (blue)
- 4 NMEA 0183 TX_A (yellow)

B&G CONNECTIONS

Wiring NMEA 0183 for serial balanced output

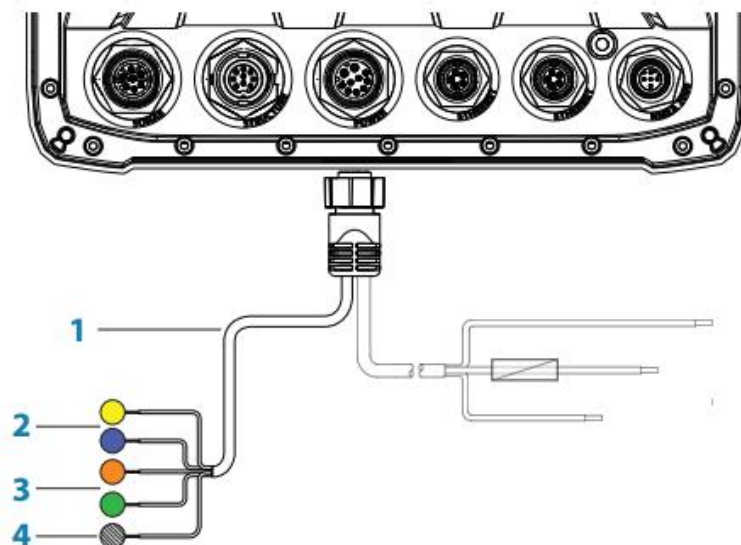


Wiring NMEA 0183 for single ended output



LOWRANCE CONNECTIONS

NMEA 0183 device connection



1 Data cable (combined in same plug as power cable)

2 Transmit: A (yellow), B (blue)

3 Receive: A (orange), B (green)

4 ground (shield)