Article Number -   00063-2015

Date -   6th March 2015

Article applies to - AIT1500/2000/3000 Transponder + WLN10HS Wireless NMEA Server

ISSUE: Interfacing to a Single NMEA Port MFD + WLN10HS

Many of our customers have a Raymarine Classic C or E series Multi-Function Display that has just one NMEA 0183 Port to connect external equipment to. We are often asked how to connect one of our AIS Transponders and Wireless NMEA servers (WLN10HS) to these MFDs and in most cases customers want to get the AIS, GPS and Raymarine Instrument data to their iPads and iPhones for display on iNavX, iRegatta or other navigation apps.

With just one NMEA Port on these MFDs, which must be set to 38400 baud rate in order to read AIS data, this means that the Seatalk Instrument data will also come out of the MFD at 38400 baud. By default our transponders expect to receive instrument data at the standard 4800 baud rate, so it is necessary to use a special configuration file that increases the baud rate of the second Port and only outputs the instrument data on Port 2, otherwise you would have a "data loop" of instrument data that could confuse the MFD.

SOLUTION:

The Transponder, MFD and Wireless NMEA server should be connected as shown below.
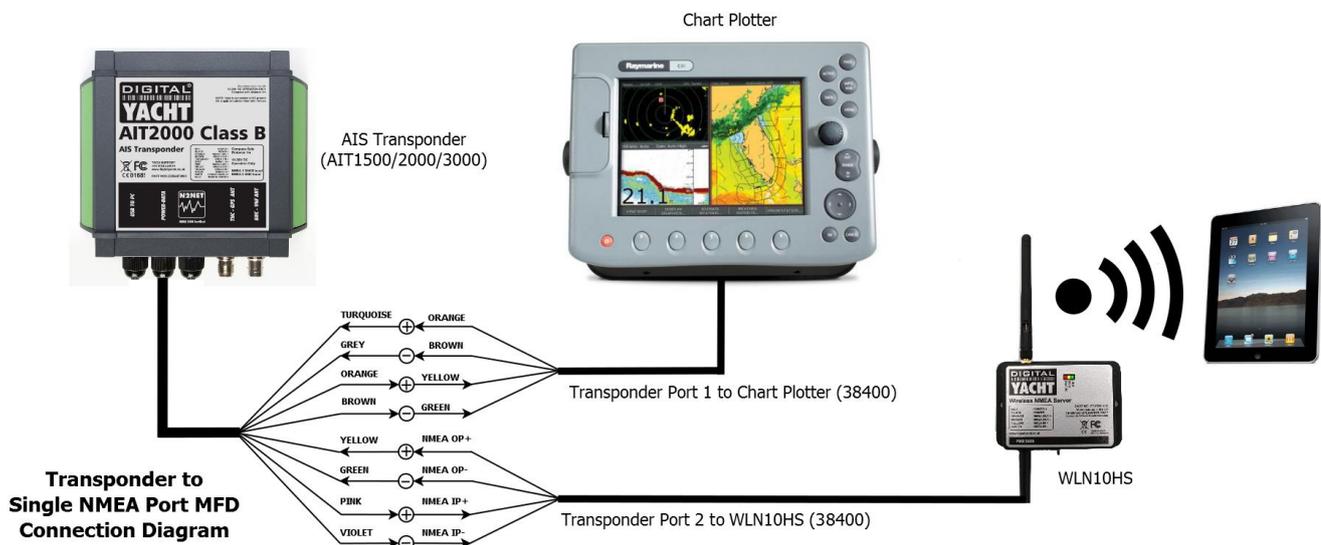
To configure our AIT1500/2000/3000 you will need to install a free terminal program called Tera Term on your PC. A copy of this program is included on the Digital Yacht "Software and Drivers" CD-Rom (in the Utilities folder), or is available for download at the link shown below.

http://sourceforge.jp/frs/redir.php?m=jaist&f=%2Fttssh2%2F62901%2Fteraterm-4.86.exe

After installation is complete (only install the main program, not all of the add-ons), run TeraTerm and a "New Connection" window will be displayed (as shown below). Select a "Serial" connection and from the drop down list, select the COM port that is labelled "AIS Class B Transceiver" (COM11 in this example).
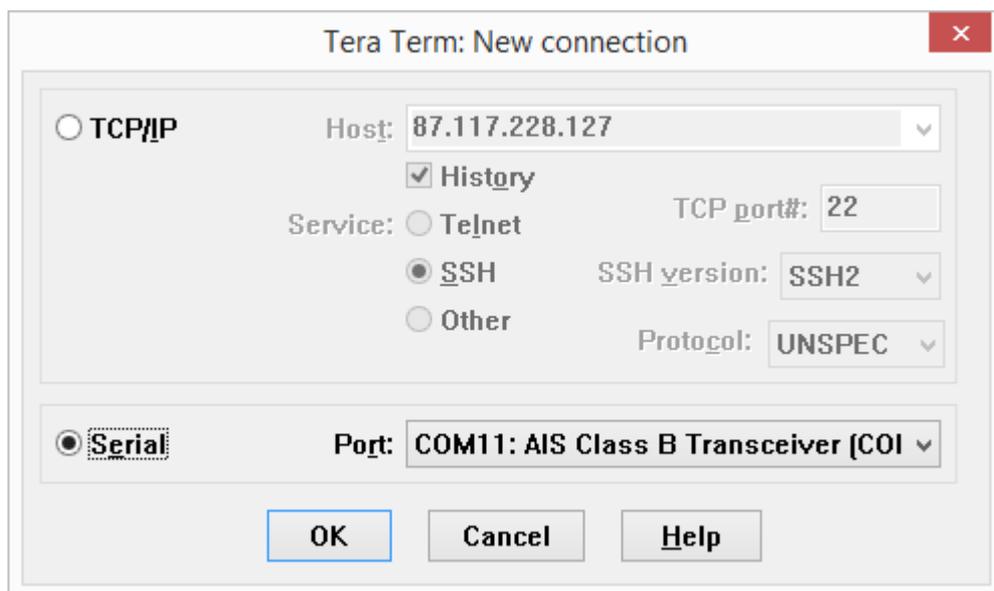
Now click "OK" and a connection will be made to the AIT2000 and you should see some NMEA messages scrolling down the window, as shown.


Now we need to send the transponder a series of configuration commands but to make this easier, we have created a TeraTerm Macro file that does this for you automatically. Download the macro from here…

http://www.digitalyachtamerica.com/index.php/en/support/support-manuals/utilities?download=435:teraterm-macro-for-tech-note-00063-2015

Once you have downloaded the macro file, in TeraTerm click on "Control>Macro" and then select the macro file you downloaded. The Macro will now run and you should click "OK" when prompted. You should see a screen similar to the one below and the "$PSMT,255" messages from line 4 downwards are the acknowledgements that the commands have been received and actioned.

If you do not see these lines or the Macro stalls and displays an error then the configuration change has not been successful and you should contact support@digitalyacht.co.uk

Please note that the exact command will be different to the ones shown below, but as long as some "$PSMT,255" messages appear everything should be OK.
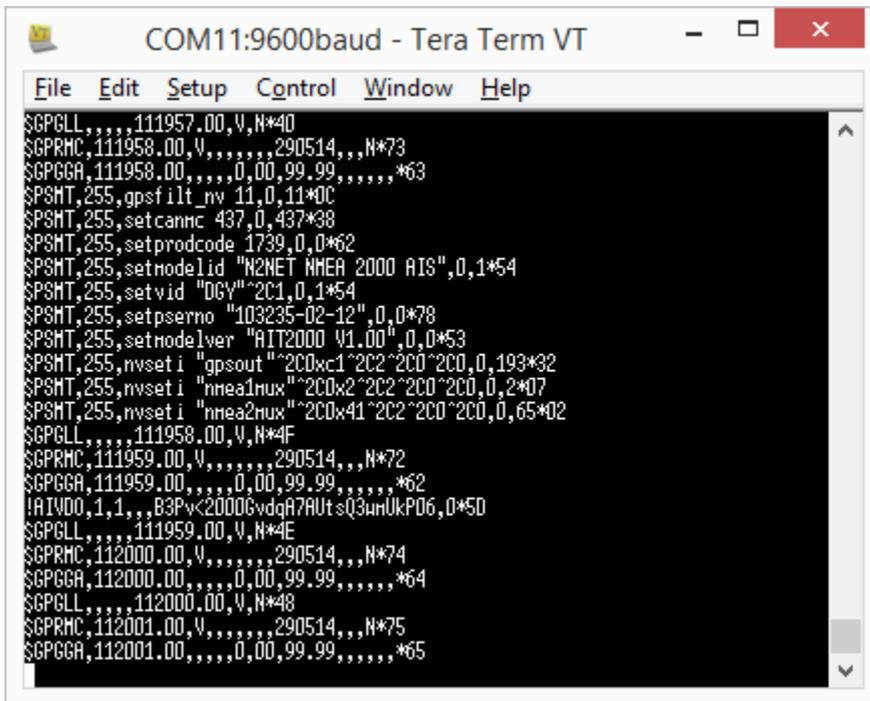
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COM11:9600baud - Tera Term VT                        -  □  ×
File  Edit  Setup  Control  Window  Help
$GPGLL,,,,,111957.00,V,N*40
$GPRMC,111958.00,V,,,,,,,290514,,,N*73
$GPGGA,111958.00,,,,,0,00,99.99,,,,,,*63
$PSMT,255,gpsfilt_nv 11,0,11*0C
$PSMT,255,setcanmc 437,0,437*38
$PSMT,255,setprodcode 1739,0,0*62
$PSMT,255,setmodelid "N2NET NMEA 2000 AIS",0,1*54
$PSMT,255,setvid "DGY"^2C1,0,1*54
$PSMT,255,setpserno "103235-02-12",0,0*78
$PSMT,255,setmodelver "AIT2000 V1.00",0,0*53
$PSMT,255,nvseti "gpsout"^2C0xc1^2C2^2C0^2C0,0,193*32
$PSMT,255,nvseti "nmea1mux"^2C0x2^2C2^2C0^2C0,0,2*07
$PSMT,255,nvseti "nmea2mux"^2C0x41^2C2^2C0^2C0,0,65*02
$GPGLL,,,,,111958.00,V,N*4F
$GPRMC,111959.00,V,,,,,,,290514,,,N*72
$GPGGA,111959.00,,,,,0,00,99.99,,,,,,*62
!AIVDO,1,1,,,B3Pv<2000GvdqA7AUtsQ3wmUkPO6,0*5D
$GPGLL,,,,,111959.00,V,N*4E
$GPRMC,112000.00,V,,,,,,,290514,,,N*74
$GPGGA,112000.00,,,,,0,00,99.99,,,,,,*64
$GPGLL,,,,,112000.00,V,N*48
$GPRMC,112001.00,V,,,,,,,290514,,,N*75
$GPGGA,112001.00,,,,,0,00,99.99,,,,,,*65
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Assuming that the macro completed successfully, a message will appear asking if you want to configure another transponder, select NO by typing "N" and clicking the OK button.

The transponder should now be configured correctly and to apply the settings, power cycle the unit OFF and then ON again, but removing the USB lead and the 12/24v DC Supply voltage from the transponder.

Now the WLN10HS should receive AIS+GPS+Instrument data, while the MFD will just receive AIS+GPS data.