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Article applies to - All Digital Yacht Wireless NMEA products

ISSUE: Using Digital Yacht Wireless Products with OpenCPN V3.2 and above

We know that many of our Wireless NMEA products are used with the popular open source navigation software OpenCPN and we have posted a couple of articles on our blog <http://digitalyacht.net> about how to configure OpenCPN for Windows/Mac OSX/LINUX.

Version 3.2 of OpenCPN which was released at the end of 2012, was the first version of OpenCPN to support network data connections either wired or wireless and so you must be running version 3.2 or higher if you want to use OpenCPN with our wireless NMEA products.

This Tech Note focuses on connecting our wireless NMEA products to OpenCPN. If you want to connect our products to OpenCPN via USB, then please refer to Tech Note 00061-2014.

SOLUTION:

The Tech Note assumes that you have already connected your computer wirelessly to one of our wireless NMEA products. For more information on setting up a wireless connection, please refer to the User Manual for your Digital Yacht product.

OpenCPN Connections Menu

With the latest V3.2 and higher versions of OpenCPN you can have multiple data connections and to create a new connection you must click on the “Settings” icon (spanner) and then click on the “Connections” tab.

As you can see in Fig.1, we currently have no Data Connections setup and so we click on the “Add Connection” button.

Now we select a “Network” Connection by clicking the check box next to the Properties “Network” option. You should now see the window change to the layout shown in Fig.3.

There are three types of network protocol supported by OpenCPN; TCP, UDP and GPsD, but GPsD is a protocol for sharing serial ports and Digital Yacht wireless NMEA products only support TCP or UDP.

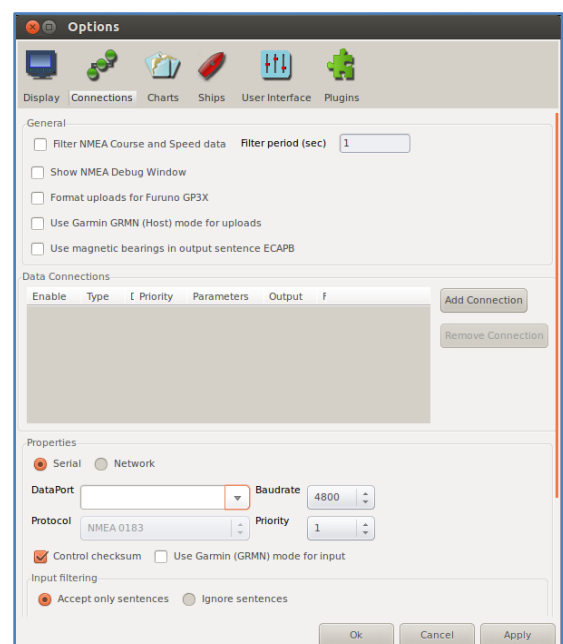


Figure 1

Which protocol you use depends upon how many devices you want to connect to our wireless device and if you want bi-directional transfer of data which is only possible with the more secure TCP protocol.

TCP protocol is more reliable, allows bi-directional data transfer but only one device to connect at a time, while UDP is a uni-directional, broadcast protocol allowing up to seven devices to all receive the same data.

All our Digital Yacht's wireless NMEA devices (except iNavHub) use IP address 169.254.1.1 and Port 2000. These are the values that you must enter in the Address and DataPort boxes for both TCP and UDP protocols.

None of the other settings usually need to be changed and once you are happy that everything is correct, click on the "Apply" button to save the settings and you will see the new connection now in the list (Fig.3).

If you wish to test the connection, click on the "Show NMEA Debug Window" tick box and a new window will show raw NMEA data scrolling down the page, with the time it was received and the connection it came in on (see Fig.4).



Figure 2

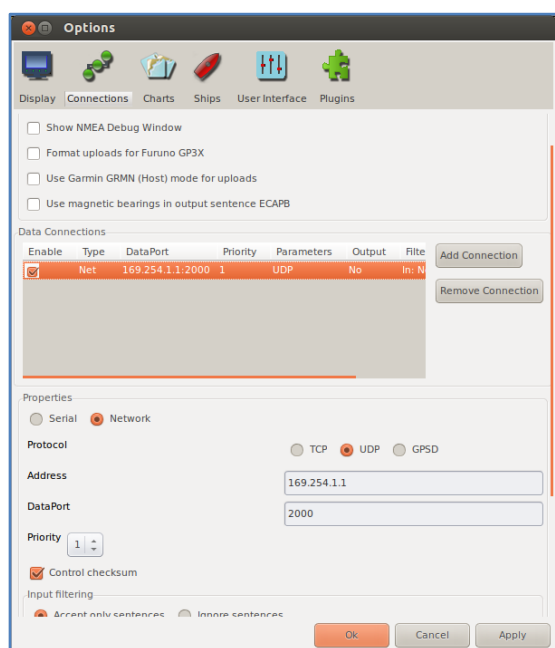


Figure 3

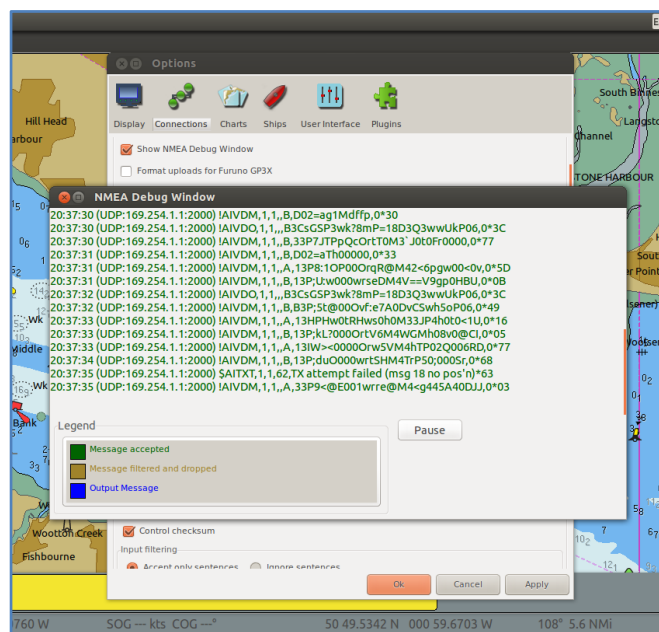


Figure 4

Once you are happy that your new wireless connection is working correctly, click "OK" to exit and return to the Chart screen. You should now see the Boat displayed accurately on the chart, if AIS data is coming through then a series of AIS targets should also be displayed on the chart and if you have the Dashboard Instrument Plugin installed, you should be able to display instrument data as well.

Important Note

We have had some reports of customers having to go in to the Input Filtering "Accept Only" options and clicking the "Select All" Sentences button. There does not seem to be any rhyme or reason for this and we recommend only changing the Input Filtering if no data is being displayed and you are sure everything else is set and working correctly.