How to set an “Alternate IP Address” on Windows 7/Vista to connect to Furuno Ethernet Sensors

Introduction:
When connecting to a Furuno Ethernet Network (NavNet, DFF1, FAR2XX7…) the computer must be set up with an IP address compatible with the Furuno Network (172.31.x.x / 255.255.0.0) in order to be able to communicate with the Furuno Ethernet Sensors. When possible, it is recommended to manually set the PC with a fix IP address (172.31.3.100 / 255.255.0.0). This is not a problem when the PC is installed on the boat for dedicated navigation use. However, if the customer uses a laptop that he carries on the boat, it can be difficult for the user to remember to change IP addresses while on the boat and while at home or at the office.

The “Alternate IP address” is a Windows feature that allows you to set a fix IP address that will be used automatically by the computer when no DHCP server is detected on the local network (within one minute). The only drawback is that the customer will have to wait approximately one minute when connecting (or after starting) the computer to a Furuno Network before opening TimeZero.

Note: When connected to a NavNet3D network, the MFD set as a “Master” is a DHCP server and in theory can assign automatically an IP Address to the computer (just like any router at home of at the office). However, in some cases, the NavNet3D DHCP server is unable to automatically assign an IP address to the computer, either because the Master MFD is not power ON at the time the computer is started or because the integrated chipset of the computer is not compatible with the DHCP server of NavNet3D (rare case). We recommend to set up the Alternate IP address even when connected to a NN3D Network.

Instructions:
Click on the Windows “Start” menu and search for “Network”. Under the “Control Panel” category, click on “Network and Sharing Center”:
Click on “Change Adapter Settings”:

Double click on the Network Adapter connected to the NavNet3D network (usually “Local Area Connection”):

Note: If you have multiple Area Connections (multiple Ethernet Cards) and if you don’t know which one is used for the Furuno network, you can temporary disconnect the Ethernet Cable connected to the Furuno Network and look at which icon will display a red cross. This will indicate the LAN that has been
disconnected, and thus the one that needs to be configured for the Furuno Network:
Click on “Properties”:

Double click on “Internet Protocol Version 4 (TCP/IPv4)”:
Make sure that “Obtain an IP address automatically” is checked (DHCP) then click on the tab “Alternate Configuration”:

![Internet Protocol Version 4 (TCP/IPv4) Properties dialog box](image)

Enter the IP address and subnet mask as below (leave all the other fields blank):

![Internet Protocol Version 4 (TCP/IPv4) Properties dialog box](image)

Click on “OK” to save the changes and close the various windows.

From now on, whenever you power ON the computer or connect it to an Ethernet HUB/Switch, the computer will begin to search for a DHCP server. If no IP address is assigned automatically within one minute (no DHCP server available), the computer will automatically set the manual IP address to 172.31.3.150.

**IMPORTANT:** When connecting the computer to the Furuno network make sure to wait at least one minute before launching TimeZero!
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