Quick-Start Guide

Genesis Software for use with a

Tritech MicronNav USBL System

0716-SOM-00105-02

The following is intended as a quick start guide for the connection and operation of a Tritech MicronNav USBL system under the Genesis software.

For details of electrical wiring, please see the relevant section of the hardware manual for the individual product through our website www.moog.com/tritech

MicronNav Hub Setup

Please note that the screen illustrations may differ slightly from that displayed on your computer.

As you connect the devices they will be automatically detected and added to the program. The main area will display the default configuration and the status icons for the devices will appear in the top right of the menu bar area.

Clicking on the icon will bring up the settings and properties for the device with any error messages shown in the diagnostic tab of the device properties.

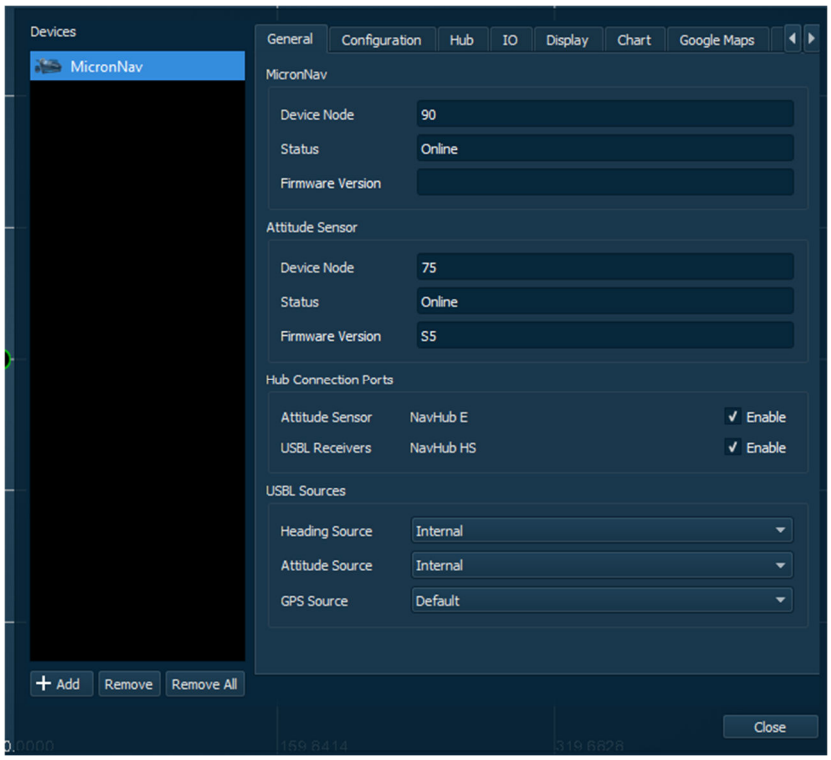
General

This displays general information when the MicronNav Hub is connected.

The *General* tab contains:

- MicronNav ID, status and firmware details
- Attitude Sensor ID, Status and Firmware details
- Hub Connection Ports- for enabling or disabling Dunking transducer or the internal attitude sensor
- USBL Sources- For configuring external or internal sensors such as , GPS, Heading and Pitch and Roll

For details of setting up and configuring the MicronNav Hub please refer to the Genesis Quick Start guide and manual.



Configuration

This allows the user to configure the software for use with their intended platform and application.

USBL Selection- This contains a number of options for the selection of Transponder or Responder mode.

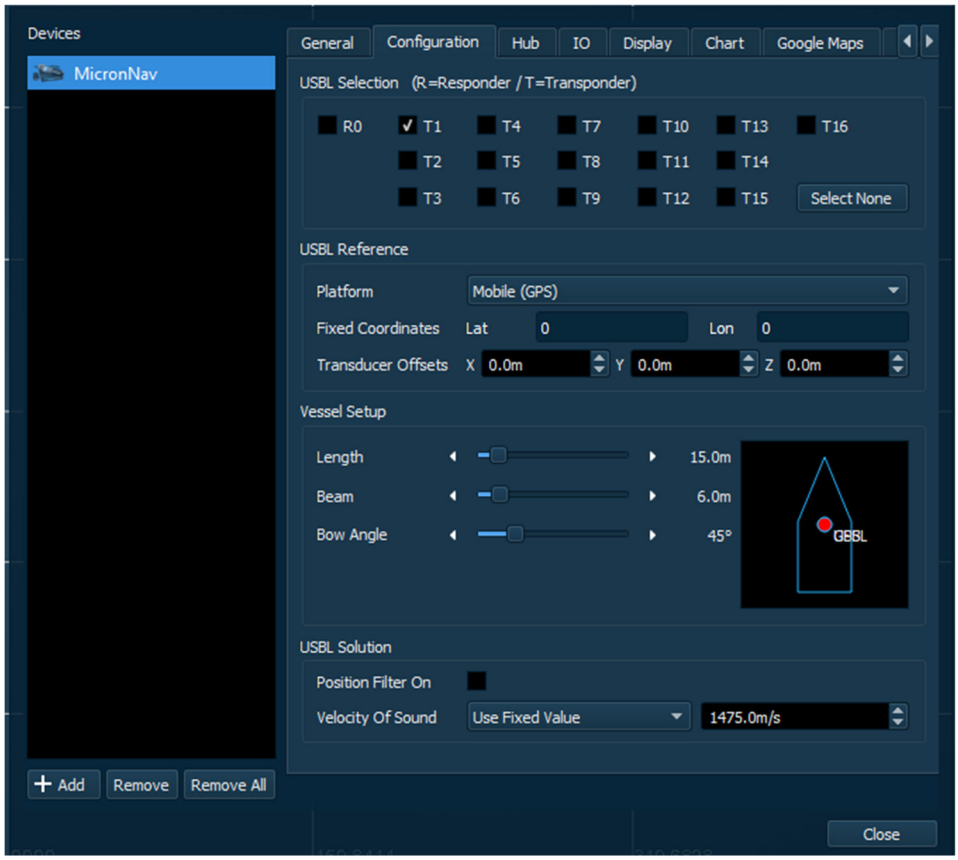
USBL Reference – This allows the user to select either Mobile Platform with GPS, or Fixed Platform with no GPS and entering Latitude/ Longitude coordinates.

Transducer Offsets- This allows for accurate positioning of the dunking transducer on the users platform, by placing the measurements into the table.

X: Left-Right Y: Up-Down Z: Depth/ Height

Vessel Setup- This allows the user to enter the Length, Beam and Bow Angle of the Vessel being used. This will be displayed when the Show Vessel Overlay tick box is selected.

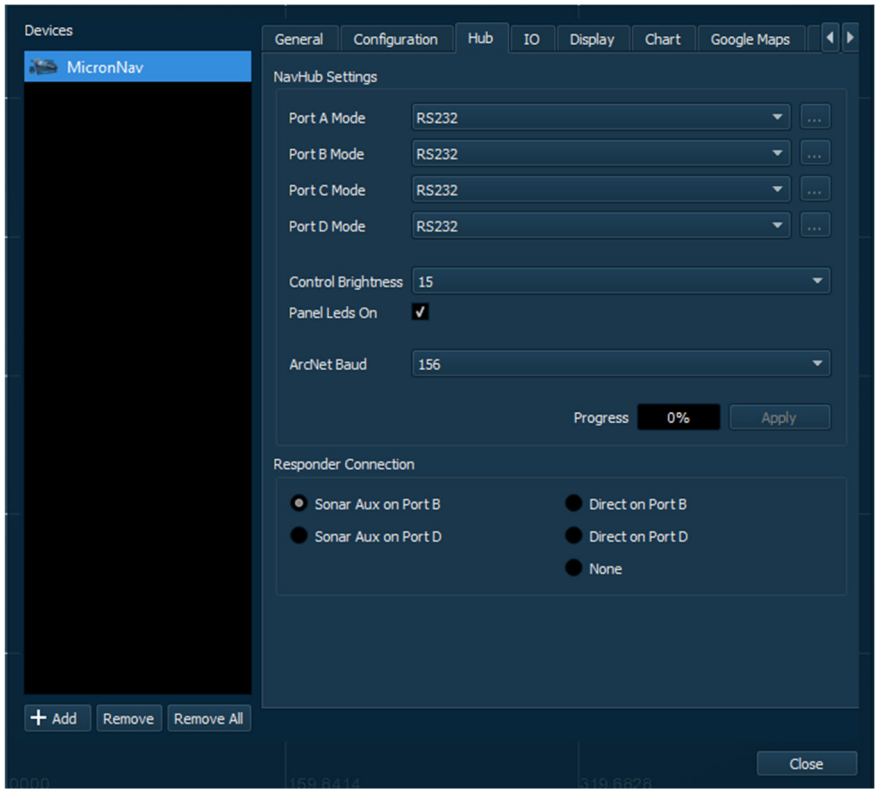
USBL Solution- This has two options, the first is the Position Filter, which aids in more accurate Navigation, by filtering lower quality signals. The second is the VOS tab, which is used with an entered fixed value or an external sensor.



Hub

This is where the MicronNav Hub settings are changed. If you are setting up a Tritech peripheral device, then you will need ensure that the port is setup correctly.

The MicronNav Hub port baud rates are set in the configuration for attached sensor e.g. Sonar, and not in the MicronNav Hub settings.



Port A
Port Comms
RS232/RS485

Port B
Port Comms
RS232/RS485/RS422

Port C
Port Comms
RS232/RS485/Arcnet

Port D
Port Comms
RS232/RS485/Arcnet

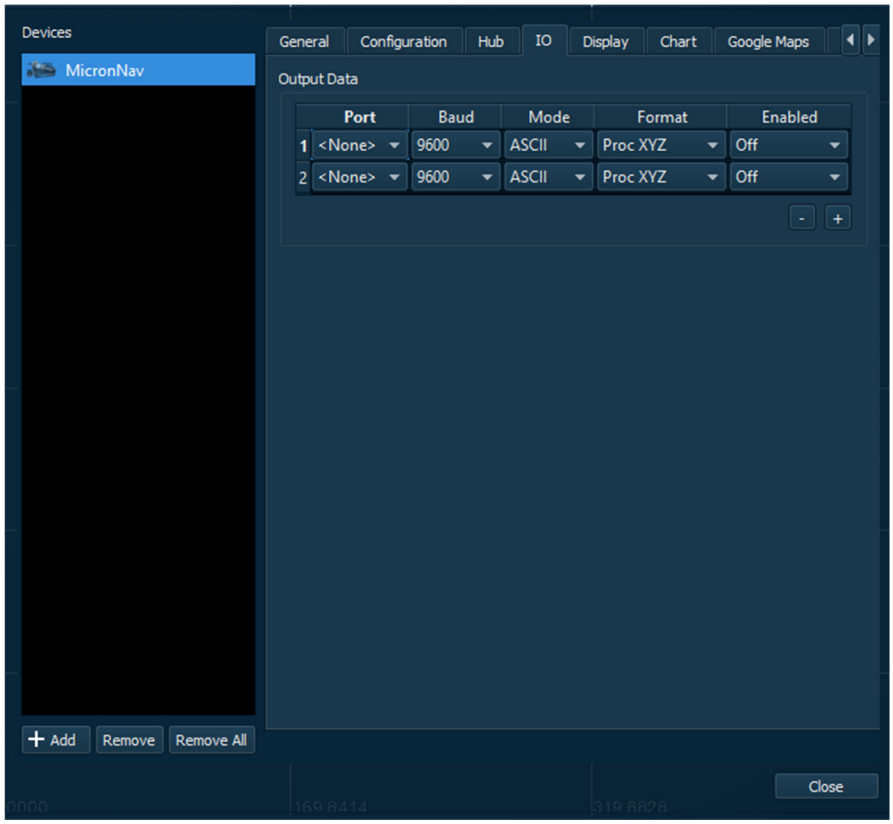
Control Brightness
Adjust the brightness of the Nav Hub front LED's 1 through 15 increasing brightness

Panel Leds On
Switch the front panel LEDS *ON/OFF*

ArcNet Baud
Setting Arcnet baud rate across all ports
312 *(Deep Towfish)*
156 *(High)*
78 *(Low)*

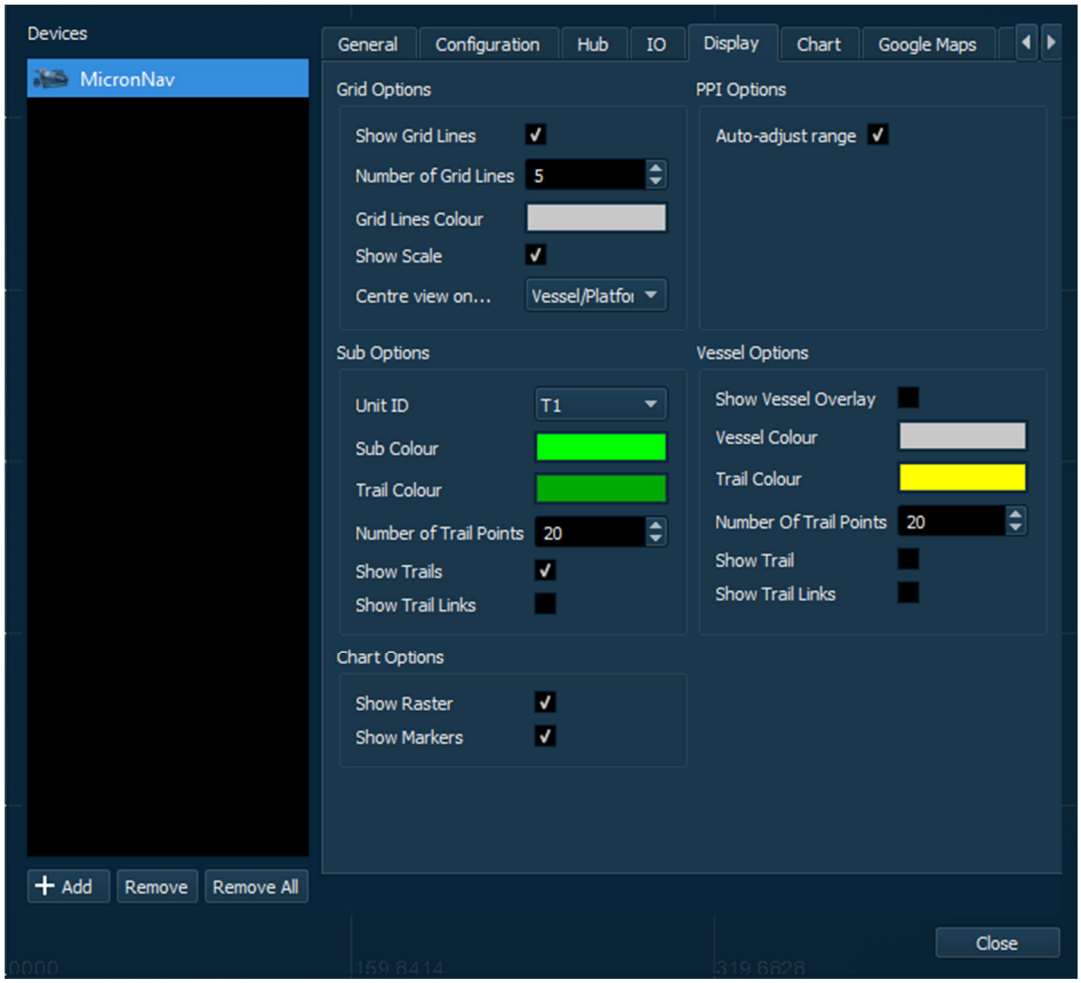
After any setting change the *Apply* button must be pressed.

IO



The *IO* tab (shown above) contains the setup options for Remote Communications. This allows the outputting of sensor data to a survey computer.

Display



The *Display* tab contains the following options:

Grid Options- for setting up the grid lines and colour

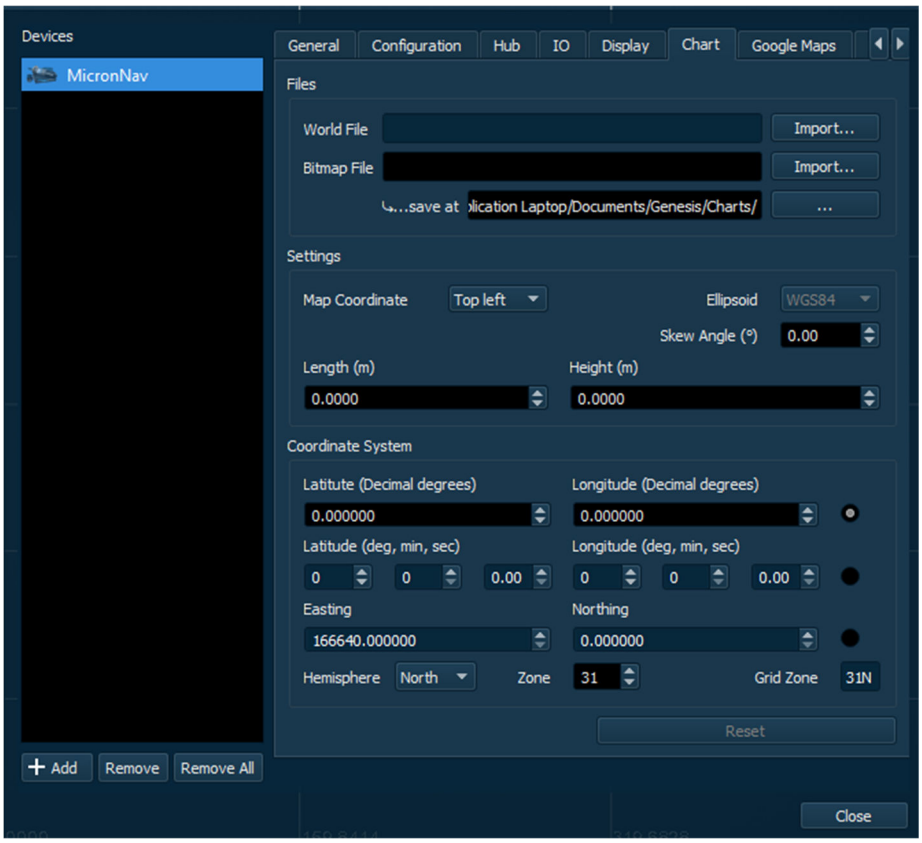
PPI Options- for selecting auto dynamic range on PPI Display

Sub Options- This enables the user to select options for individual Transponders and a Responder

Vessel Options- This enables the user to select options for the Mobile Position.

Chart Options- This gives the user the option to toggle on/off markers that may have been added into a chart. Here there is the option to toggle on/ off the Raster Image when working with Bitmap files.

Chart



The Chart Tab contains the following options:

Files-

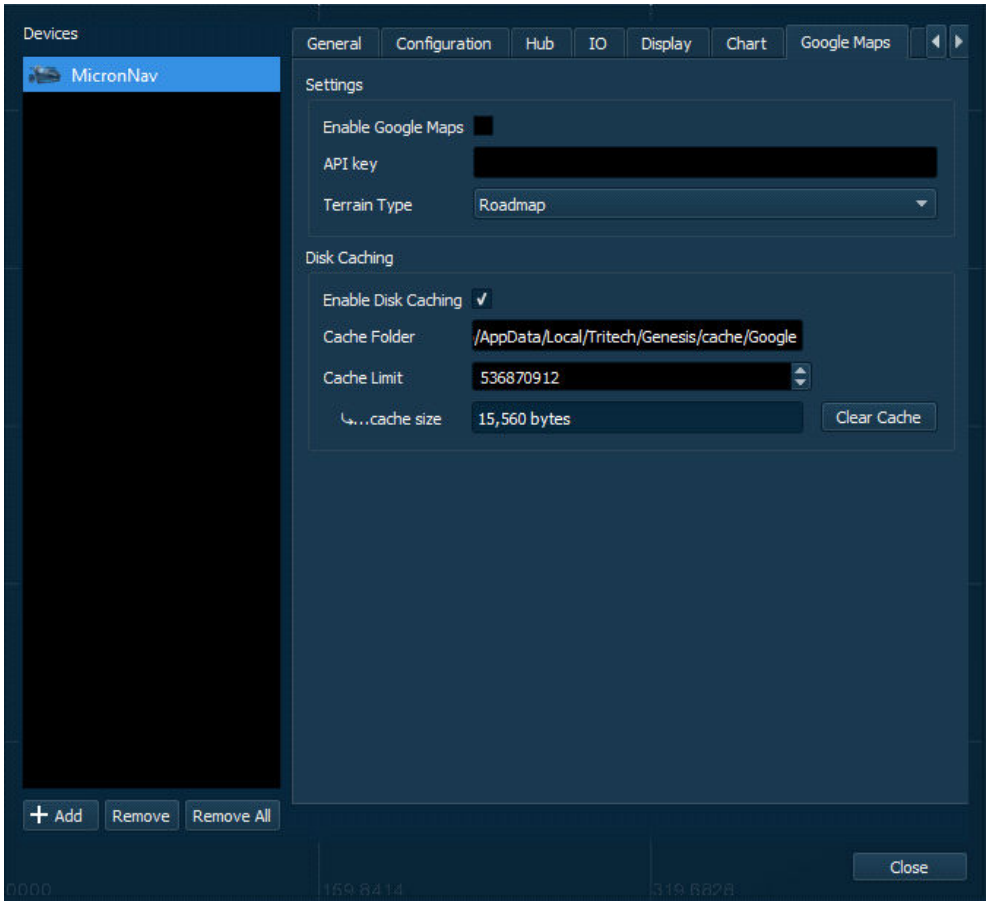
World File- This enables the user to load a World file of the required chart they have saved to the computer.

Bitmap File- This is the visual of the required chart which is used to illustrate the position on the screen.

Settings- This enables the user to set the point of reference for the chart, the length and the height.

Coordinate System- This allows the user to set the co-ordinate system for the intended chart.

Google Maps



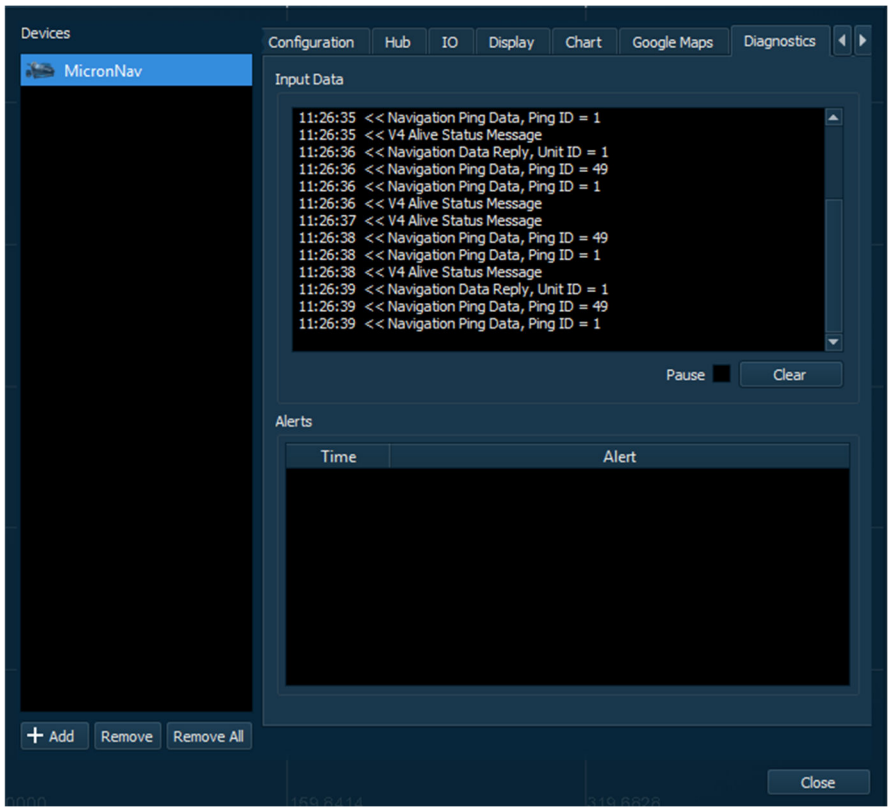
The Google Maps tab contains the following options:

Settings- This enables the user to select Google Maps as an alternative to a chart. Google Maps is an online only service and requires an internet connection. The user can enable a hotspot on their mobile phone and use this feature remotely.

Disk Caching-Retains a temporary copy of the map locally to prevent having to download again. This feature will still require an online internet connection, to validate and use the cached data.

Diagnostics

This displays the status messages from the main node of the MicronNav Hub. This is useful during problem solving.



Input Data
Time stamped messaged received on the Main MicronNav Hub port

Alerts
Time stamped Alert messaged generated by Genesis.

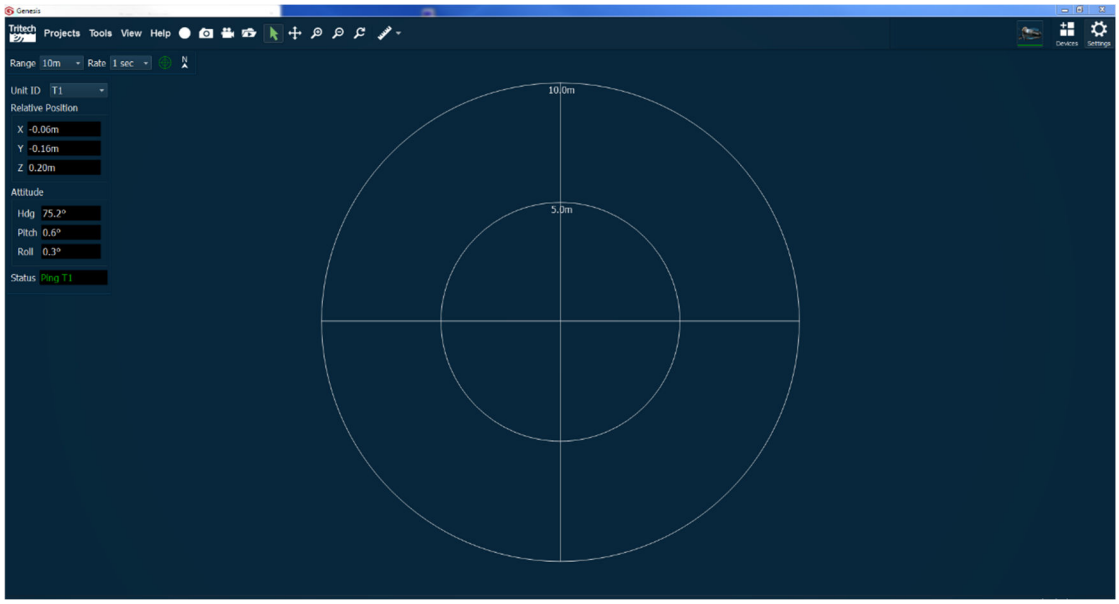
If the Micron Nav Hub is disconnected the *Diagnostics* tab will be updated with a warning symbol and the alert message detailed in the *Alerts* window.

Quick Project Setup

This guide shows how to setup a basic navigation project and configure range and ping interval.

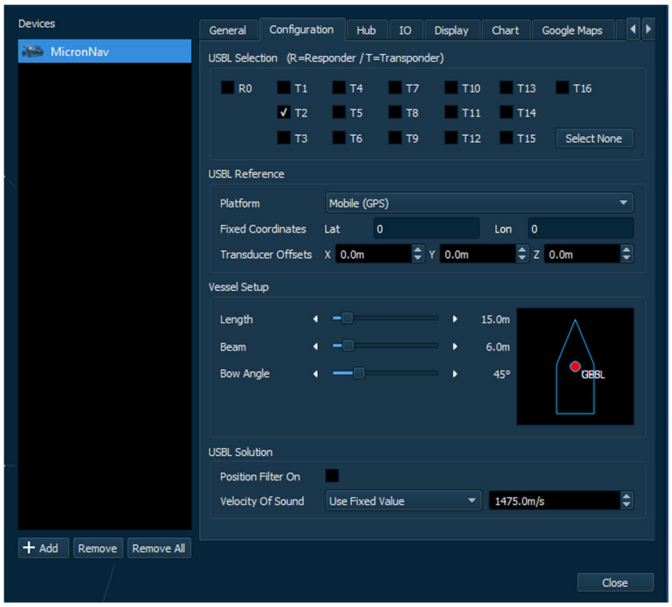
Step 1

Connect up all components of the system and apply power. Start up the Genesis software, this software will automatically recognise the MicronNav Hub and an USBL icon will appear in the top task bar.



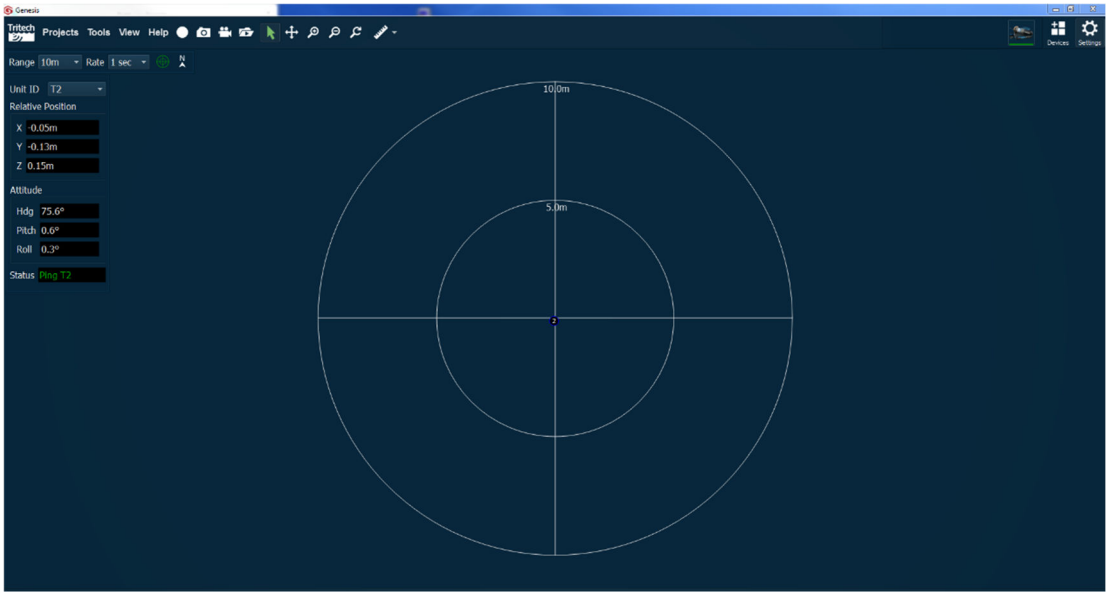
Step 2

Click on the device icon to configure your corresponding Transponder or Responder device. For this example T2 is selected. Close the menu once you have selected the required Transponder/Responder.



Step 3

This setup page shows the system working and interrogating Transponder 2 (T2), on the PPI display.



Step 4

To adjust the range or interrogation (ping) intervals select the menu from the top left hand side of the page.