Quick-Start Guide

Genesis Software for use with

Mechanical Sonars

0716-SOM-00102-01

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

Sonar Installation

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

The comms mode of the sonar determines the software installation method and so will be detailed separately in this document. Ethernet and Arcnet heads, to a certain extent, will initialise automatically whereas Serial heads will need to be added manually into the software.

Serial Sonars need to be added manually to Genesis.

Arcnet and Ethernet Sonars are added to Genesis automatically

Genesis currently only allows for one mechanical sonar installation

For Sonar wiring see the relevant section of the hardware manual for the individual product through our website www.tritech.co.uk.

Connecting Devices

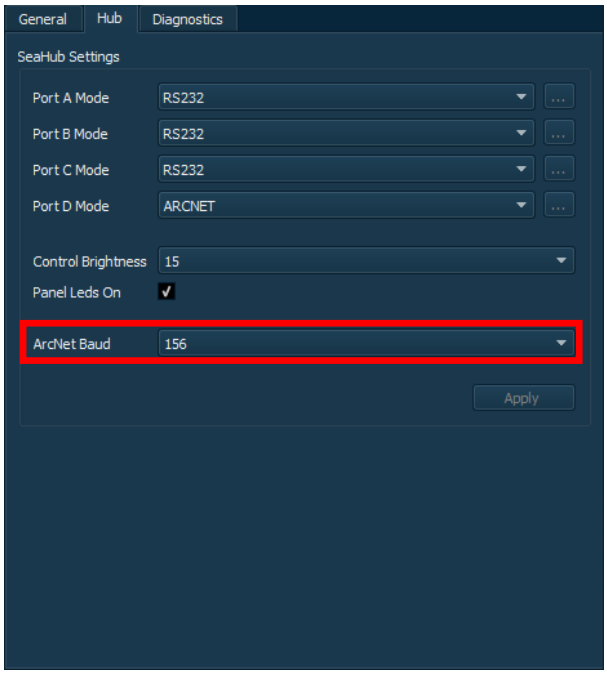
Ethernet

The TCP/IPv4 network configuration of the host network adapter (PC, SCU or similar) should be set to an IP address of 192.168.2.xxx with a subnet mask 255.255.255.0. Do not use the IP address for any of the sonar devices or reserved addresses xxx.2.17, xxx.2.200, xxx.2.201 or the "Obtain an IP address automatically" option.

If the hardware adapter is setup correctly then the Sonar will be populated automatically in Genesis.

Arcnet

Arcnet requires a topside Tritech Arcnet adapter. The Arcnet baud rate needs to be set correctly for the sonar that you are using. In general this is 156 baud.

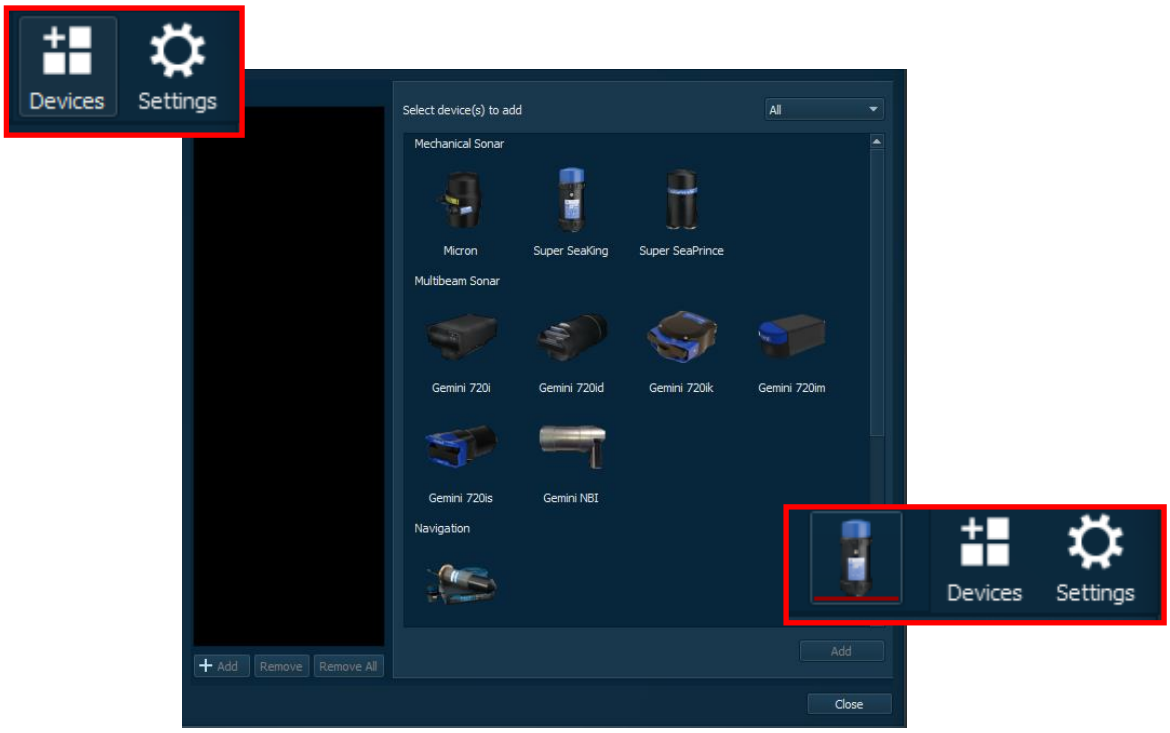


If the topside Arcnet adapter is setup correctly then the Sonar will be populated automatically in Genesis.

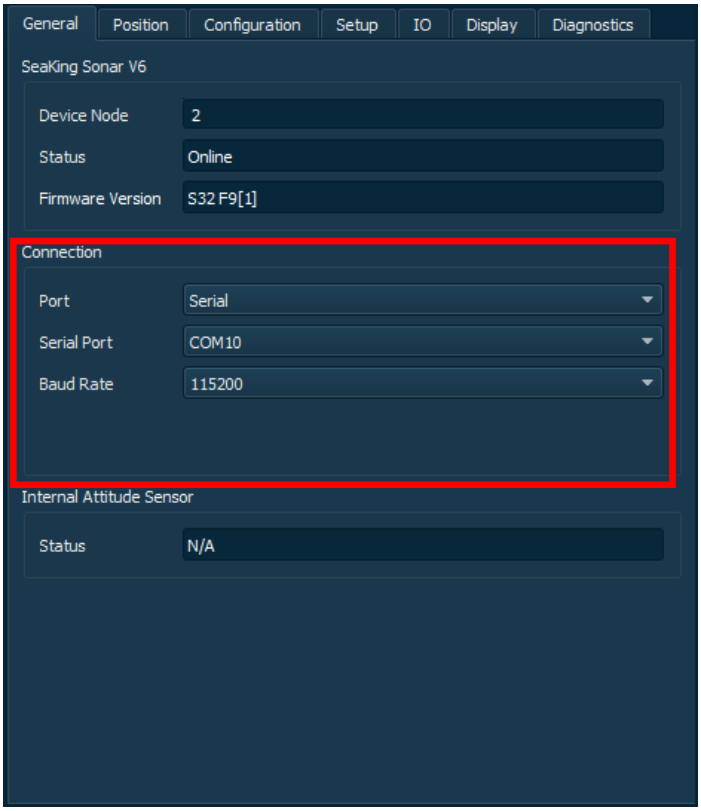
Serial Comms

Sensors running serial communications are required to be manually entered into Genesis.

Select *Devices* then select the Mechanical sonar that matches the equipment that you are using and click *Add*. The sonar will then populate the device listing highlighted red.



In the *General* tab ensure that under *Connection* the correct details are entered.



Connection

Port

Serial should be selected.

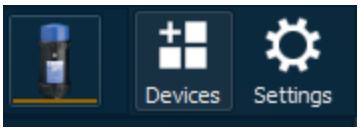
Serial Port

The serial port number that you are using should be selected from the dropdown menu.

Baud Rate

Select the baud rate for the sonar that you are using.

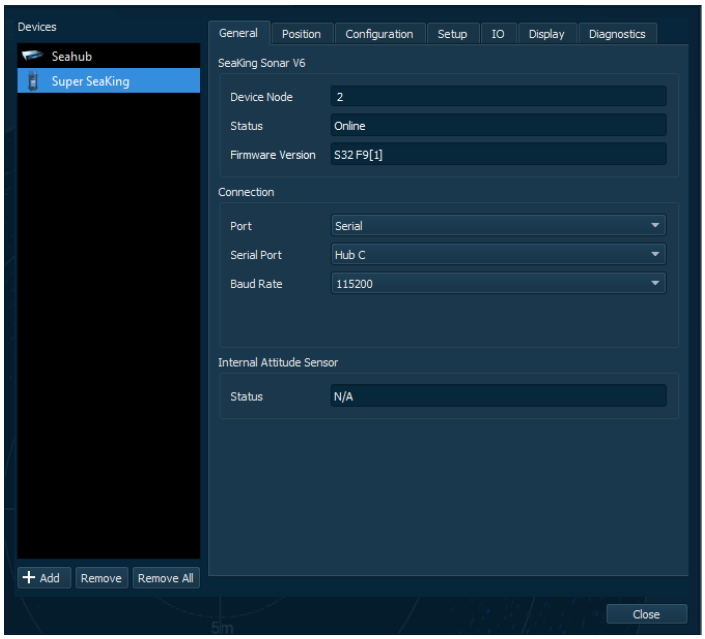
If the setup is successful, then the Sonar will come up amber ready to be put online



Sonar Setup

General

This displays the connection information when the Sonar is added to Genesis software and is where you set the topside adapter to communicate with the head.



Device Node

Displays the node of the sonar

Status

Online when the Sonar is connected
Offline when the Sonar is disconnected

Firmware Version

Displays the firmware installed on the Sonar.

This pesists if the Sonar is removed

Connection

The ***topside*** comms connection. This must match the sonar

Ethernet

Serial

Hub Arcnet

Serial Port

The port that the head is connected to

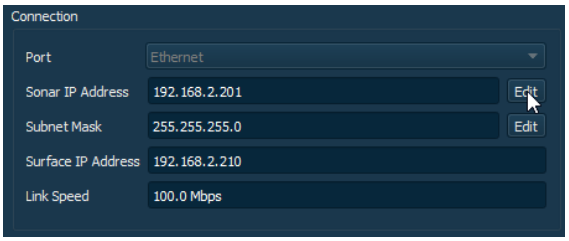
Baud Rate

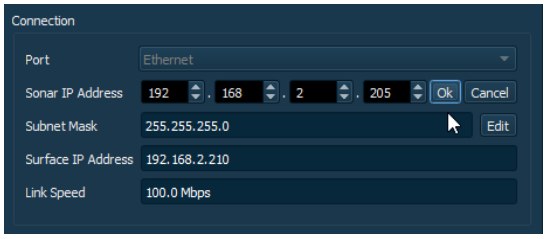
The ***topside*** baud rate to connect to the sonar

If the sonar is connected via Ethernet, each device must have a different IP address to allow them to communicate with the Genesis software.

To change the IP address of a connected device, ensure the device is online and select the device and adjust the settings under the *Connection* section.

The *Sonar IP Address* and *Subnet Mask* can be adjusted and saved to the sonar.





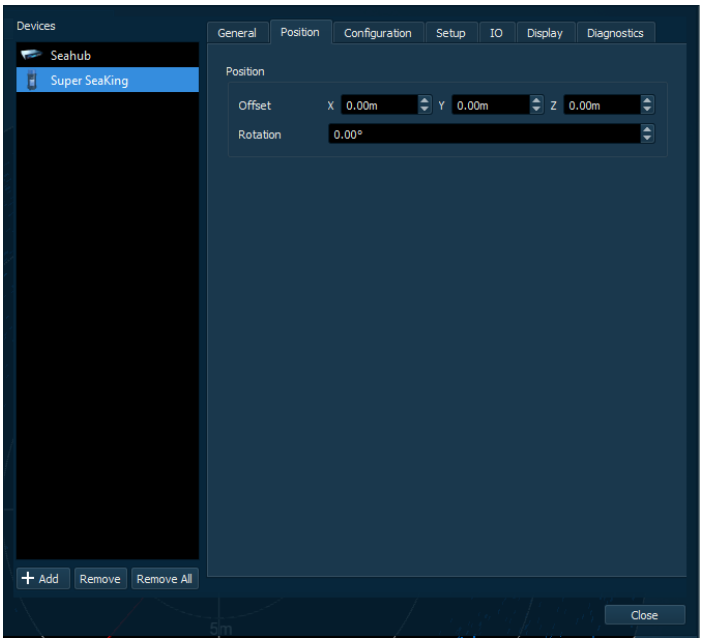
If two devices with the same IP address are connected at the same time neither will communicate with Genesis. If you require to change the IP address of a device it is recommended that only the device being changed is connected.

If you change the device default settings always record any changes to the IP Address or Subnet Mask.

Position

This is positional data for the sonar and only used for Georeferenced data or moving the selected sonar PPI when overlaid on another sonar PPI screen.

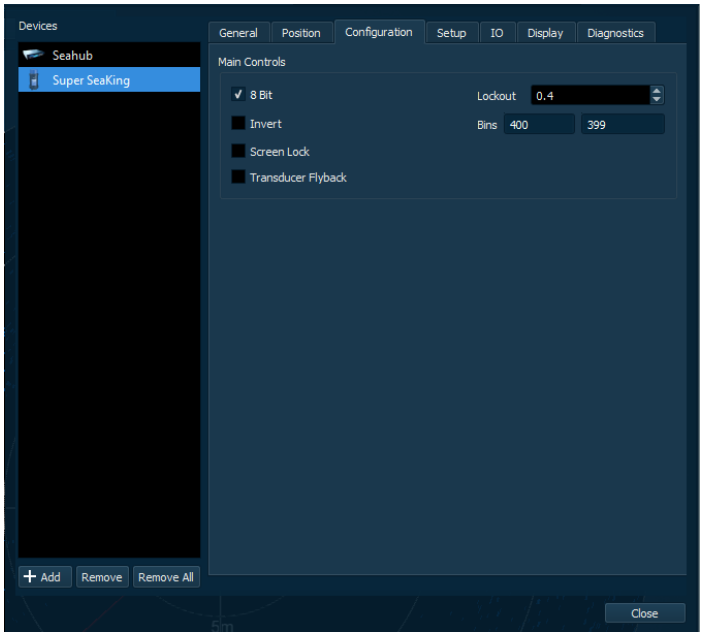
In general use these settings do not require to be changed.



Offset
X
Left/Right movement (horizontal)
Y
Up/Down movement (vertical)
Z
In/Out screen
Rotation
The rotation of the sonar PPI

Configuration

These are lists of the main controls for the sonar setting how the data is packaged from the head.



8Bit
8Bit or 4Bit
As standard the system runs in 8bit

Invert
Select if the sonar is fitted boot down.
Boot Up – Standard
Boot Down - Inverted

Screen Lock
Locks the number of sampling bins to the resolution of the screen else *Bins* values used.

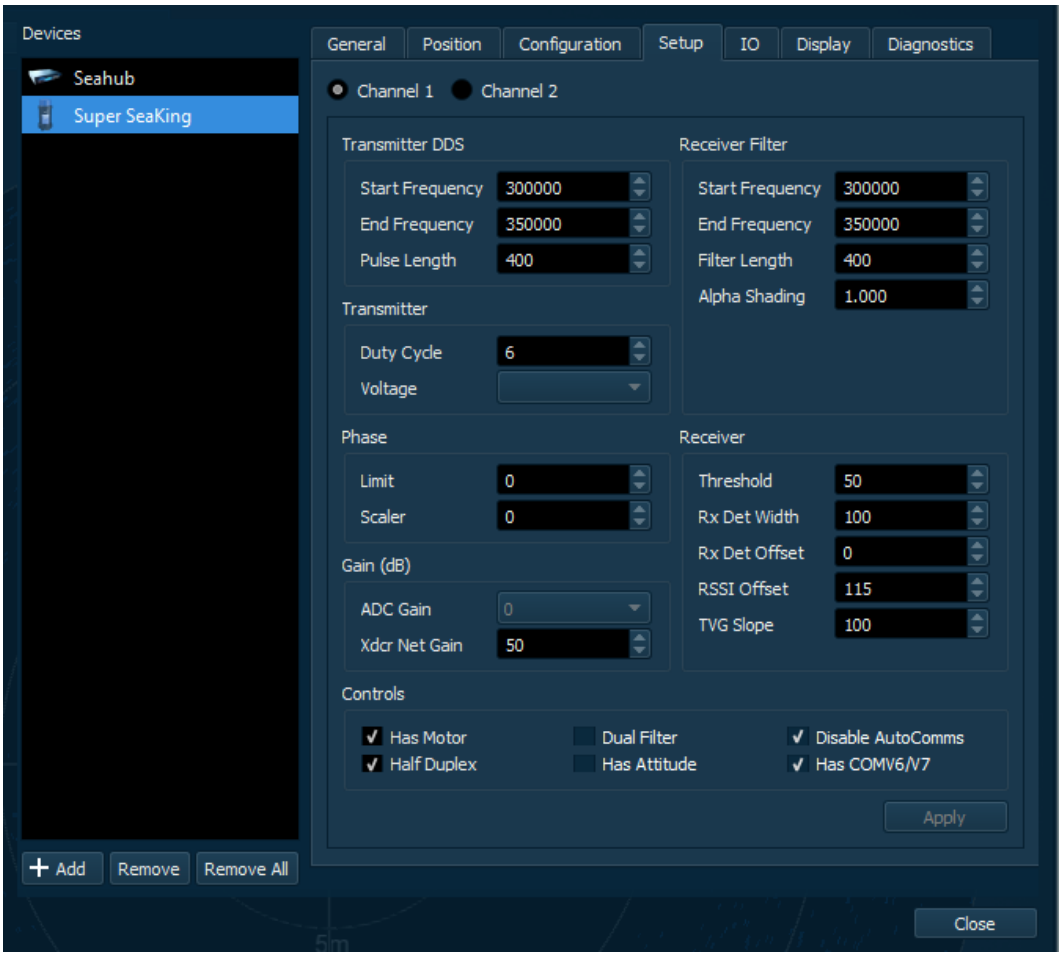
Transducer Flyback
Only works on a sector scan.
When selected the sonar scan will always move in the same direction.
Once a sector has been scanned the transducer will move to the start point to continue rather than move left and right

Lockout
The minimum range before the receiver listens

Bins
Manual sample bin entry.
Sample Bins automatically increase with range

Setup

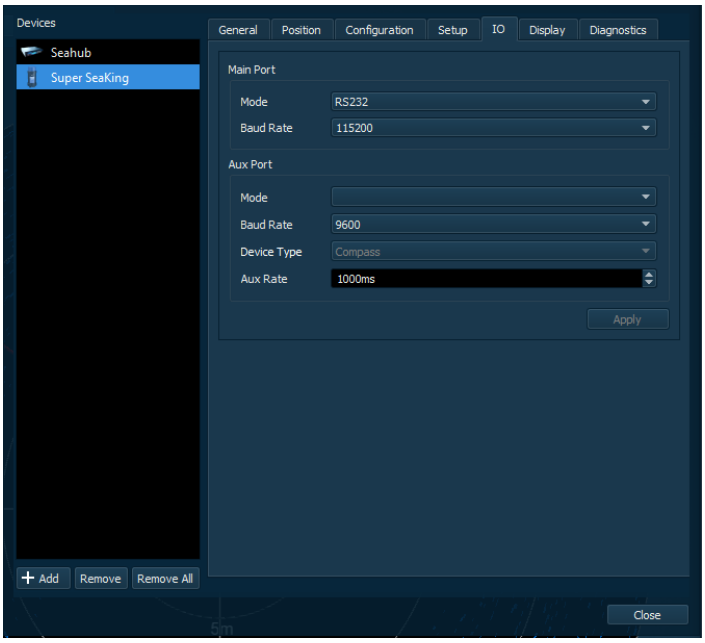
These are the factory settings for the head. These are not configurable by the end user and cannot be changed.



IO

This page sets the communication protocol for the Micron, V6 and V7 sonar head ports. If you are changing the head comms this is where it is done.

Comms changes on V5 heads are done using hardware switches or jumpers. Please see the ARCNET & Serial Communication Settings within the Software Manuals section of our website www.tritech.co.uk **for more details.**



Main Port
Mode
The sonar main port comms (only digital heads)

Baud rate
The sonar main port baud rate

Aux Port
Mode
Sonar aux port comms

Baud Rate
Aux port baud rate.

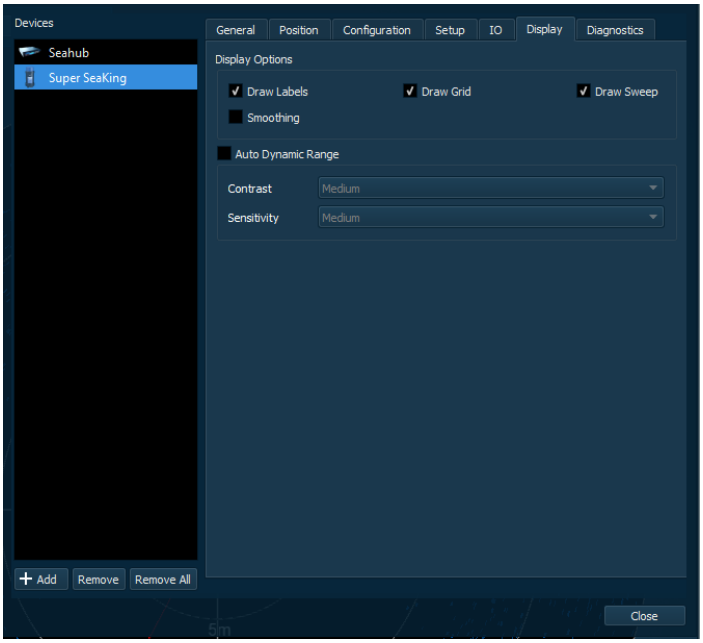
Device Type
Setting the decode for the aux port.

Aux Rate
Sets to the aux port sample rate. Prevents overloading the sonar with data from a free running source

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

Display

These settings control the sonar display of the selected device. They are all visual tools that are applied to the data at the surface.



Draw Labels
Range and Bearing identifiers *ON/OFF*

Draw Grid
Grid Lines *ON/OFF*

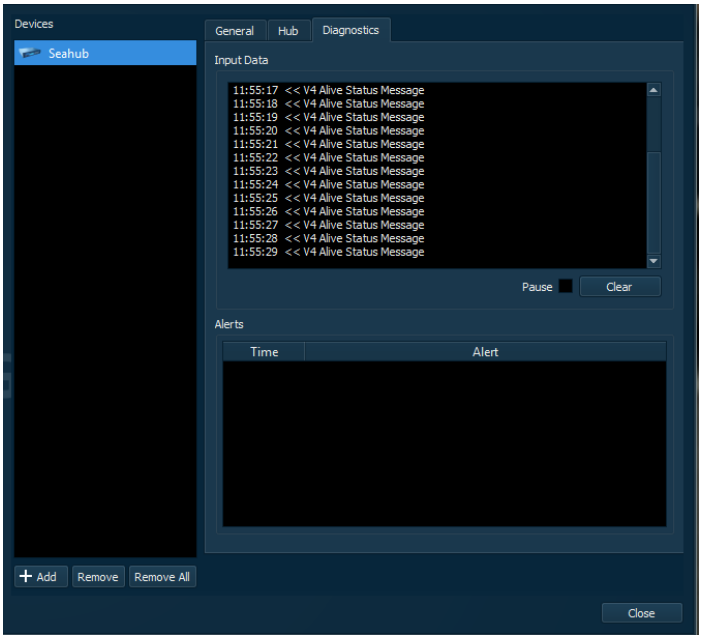
Draw Sweep
Sweep indication line *ON/OFF*

Smoothing
Applies graphic smoothing to the image.

Auto Dynamic Range
Default on. Fine tune in *Contrast* and *Sensitivity*

Diagnostics

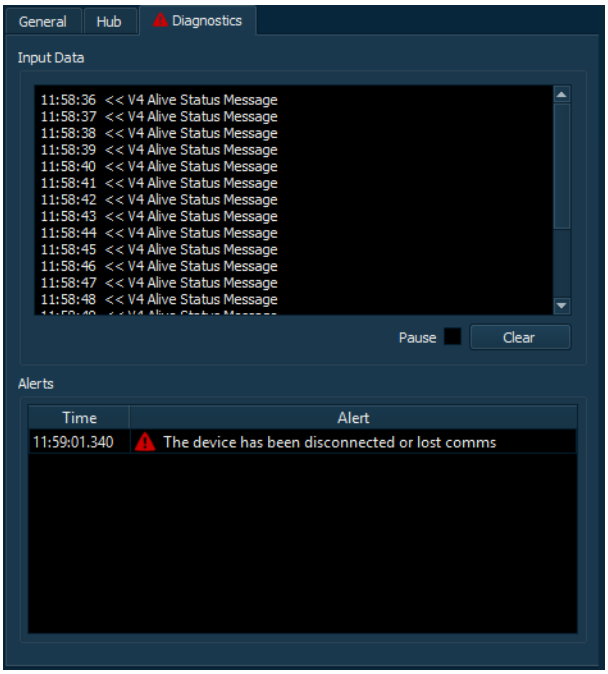
This displays the status messages from the Sonar. This is useful during problem solving.



Input Data
Time stamped messages received from the sonar

Alerts
Time stamped Alert messaged generated by Genesis.

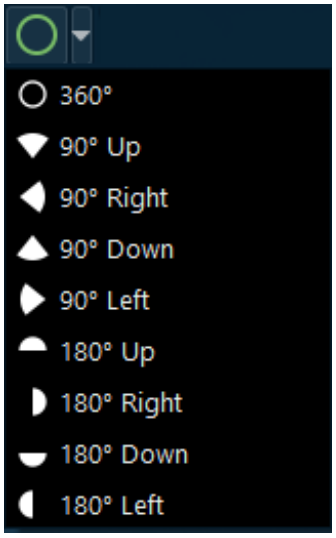
If the Sonar is disconnected the *Diagnostics* tab with be updated with a warning symbol and the alert message detailed in the *Alert* window as below:



Device Display Options

The controls within the different device windows change according to the type of device attached. Specific controls relevant to the mechanical sonars include:

Device *OFFLINE / ONLINE*



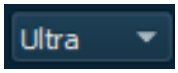
Sweep Sector Configuration

Sonar scan Direction

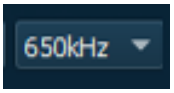
Acoustic Zoom *OFF / ON*

Range Grid and Label display options
OFF / LABEL / GRID / BOTH

Screen Lock *OFF/ON*



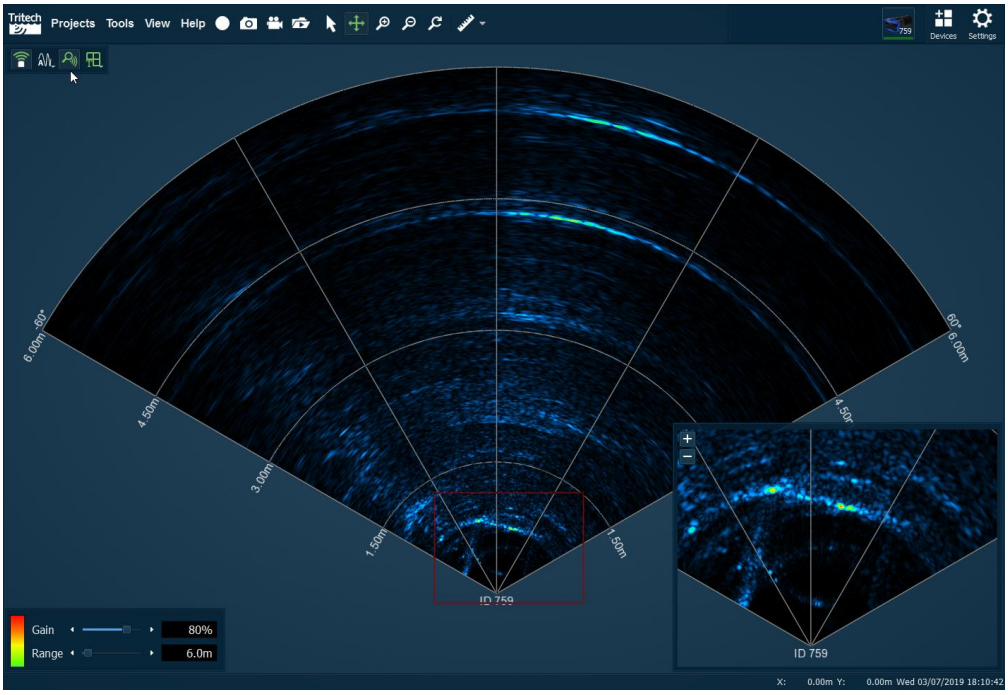
Scan resolution



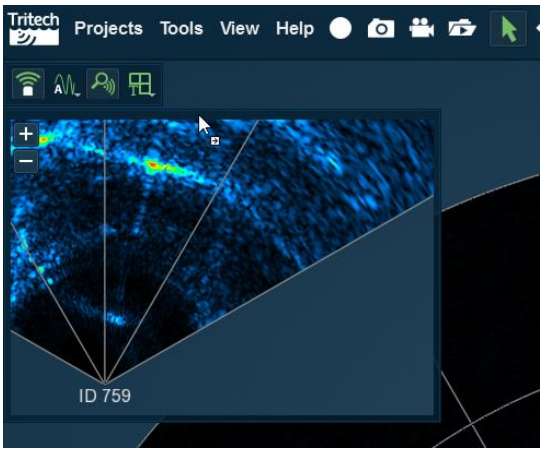
Frequency of operation

Acoustic Zoom

Acoustic Zoom is a feature common across the majority of Tritech devices that allows a separately operated zoom window to be opened within the device display area.

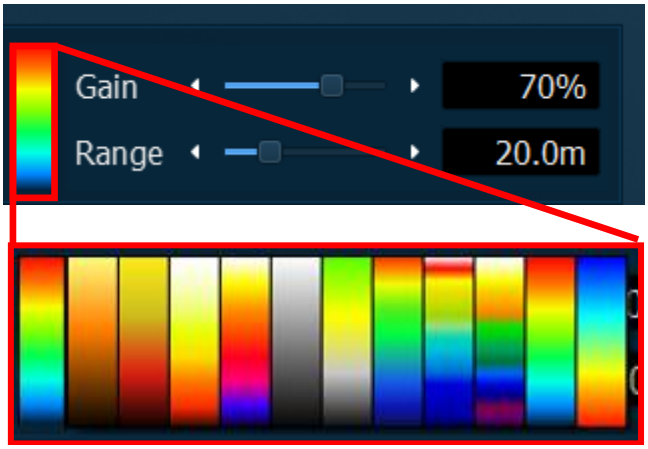


The acoustic zoom for each device window is turned on and off using the control button at the top left of each device window.



The zoom window can be selected and moved into the corners of the device display window. The corner areas of the main window are highlighted after you start to drag the zoom window. You can increase and decrease the zoom using the + and - buttons and the zoom area is shown as a red box on the main screen. If you hover with the mouse over the red box it will turn blue and can be dragged to a different area of the main device display.

Colour Palette

The colour palette for the sonar imagery is accessed via the palette to the left of the Gain and Range controls.

Left clicking on a palette will apply it to the selected sonar.