

NAVIGATOR

Doc. P/N: WSP-009-003
Version: V1.4
Issue Date: June 2012

Document Revision History

Revision Date	Reason for Change	Version
4 Feb 2010	Converted from original MS Word version	V1.0
13 Feb 2010	Completed first release version.	V1.1
28 Jan 2011	Added features from second release version	V1.2
20 Nov 2011	Updated figures & specs	V1.3
27 June 2012	V1.01 updates	V1.4

Related Documents

Document P/Number	Title
WSP-009-002	WASSP System Installation Manual
WSP-009-001	WASSP Operator Manual

General Notices

ENL reserves the right to change the contents of this manual and any system specifications without notice.

Contact ENL regarding copying or reproducing this manual.

WASSP is not designed to comply with hydrographic mapping standards and therefore must not be used as a navigational mapping tool.

Warnings, Cautions, and Notes

Warnings, cautions, and notes are indicated by the following icons throughout this manual:



A WARNING indicates that if the instruction is not heeded, the action may result in loss of life or serious injury.



A CAUTION indicates that if the instruction is not heeded, the action may result in equipment damage or software malfunction.



A Note indicates a tip or additional information that could be helpful while performing a procedure.

Safety Notices

The installer of the equipment is solely responsible for the correct installation of the equipment. ENL assumes no responsibility for any damage associated with incorrect installation.

Electrical Safety

- Fire, electrical shock, or equipment damage may occur if the transceiver becomes wet.

Contents

4	Purpose of this Manual
4	Introducing the WMB Navigator System
6	System Configuration
7	Software Installation
7	Software Installation
7	Hardware Connection
8	Loading and Launching Navigator
9	Chart Loading
10	Navigator Operation
12	System Setup
12	System Tab
14	Display Tab
16	Database Tab
20	Tools
22	Overlays
27	Ship
28	Marks
31	3D Window
31	Vertical Scale
20	Options
33	3D Fish

Purpose of this Manual

This manual describes how to operate the WMB Navigator software program through its graphical user interface.

Introducing the WASSP Navigator System

The WASSP Navigator is an adjunct to the WASSP Multibeam Sonar System. The Navigator software connects to the WASSP software and processes the WASSP output data to produce geo-referenced maps in real time. The interconnection uses the computer network which allows WASSP and Navigator to be operated on two different computers, thus providing a performance improvement.

The Navigator maps can subsequently be viewed independently to the WASSP system. The operator can move to any part of the globe and view previously recorded maps in 2D and 3D. The maps provide an ability to dynamically change the depth colours while viewing and to adjust the colours and shading for depth, contours and backscatter displays.

The 3D display on the Navigator provides an ability to change the vertical scale (1x, 2x, 4x), to rotate the view from any angle, and can provide a simple 3D view of water column data such as fish.

Main Features The WASSP Navigator provides the following features:

- ▶ **Create maps in real-time from the WASSP.**
Generate new maps from the WASSP bottom detections at up to four times the resolution of the current WASSP maps.
- ▶ **Maps can be found at any part of the globe.**
The operator can position the displayed view to be in any part of the world. The view can be zoomed in or out to show smaller or larger areas.
- ▶ **Dynamic Resolution.**
The displayed resolution of the maps is dynamically changed to suit the current level of zoom. This provides a performance advantage because the operator is not delayed while unnecessary detail is loaded.
- ▶ **Map Resolution Based on Depth.**
The Navigator dynamically changes the resolution of the stored maps to suit the depth of the seafloor. Shallow seafloor is stored at resolutions as high as 250mm to give the maximum detail available, while deep seafloors have their resolution restricted to 4m to avoid saving spurious fine detail.
- ▶ **Chart Overlay.**
The Navigator can display the WASSP seafloor data overlaid on a vector Navionics hydrographic chart. The displayed chart features can be selectively turned on or off as required.

► **Use Your Existing Navionics Charts.**

The Wassp Navigator uses standard Navionics Gold SD Card maps plugged in to a Navionics card reader. Maps are available from Navionics to cover almost every part of the World.

► **Boat Position Shown.**

The position of the boat is shown on the map as the data is received from the Wassp in real time. The boat icon also indicates the current boat heading and thus provides a simple but effective charting function.

► **Depth Indicators.**

The depth under the cursor at any point on the Wassp seafloor displayed can be dynamically displayed on the 2D and 3D maps. The depth is updated continuously as the cursor is moved.

► **Vessel Track.**

The track of the vessel may be displayed if desired.

► **Marks**

The chart can be annotated with marks at the current vessel position and marks at the cursor position. A menu options allows marks to be displayed or hidden. Marks can be edited, colour and symbol changed.

► **Profile**

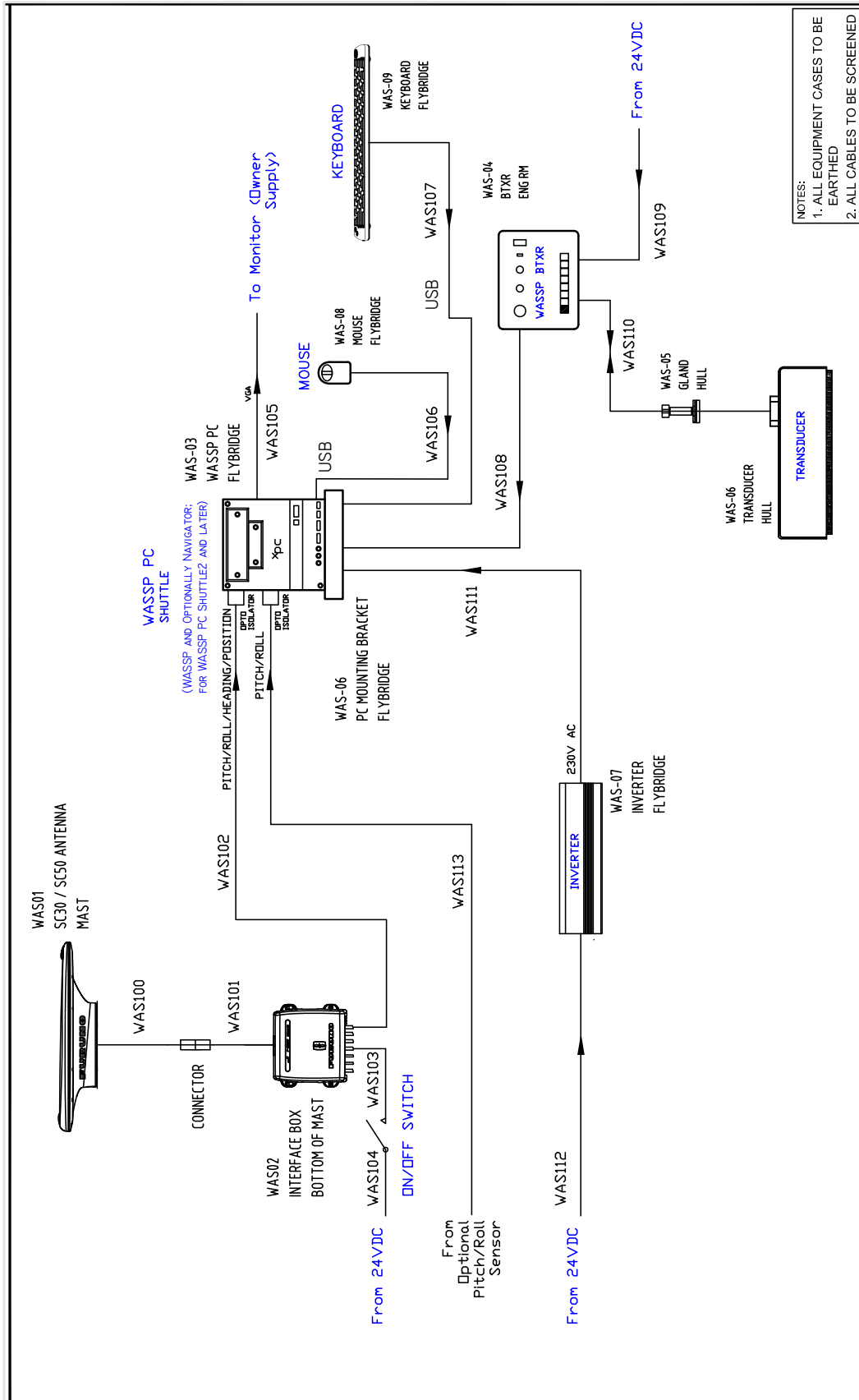
Using the two profile markers a cross section of the seafloor can be displayed in a separate profile window.

► **Databases.**

The Navigator uses one or more database to store and display the Wassp data including the depths, backscatter, and water column information. Additional databases can be created at any time and the incoming data switched to it.

Existing databases can be selected for viewing at any time and it is possible to view one database while recording to another. The databases are not restricted by geographic area (they can span the whole world) nor by resolution (they will contain all depth resolutions proportional to the depths of the points stored).

System Configuration



Software Installation **Dongle**

The Navigator requires the use of a USB Dongle to operate. If the correct dongle is not detected then the program will not operate.



The Dongle contains encrypted files and structures. Do not edit any files on the Dongle. Additionally, do not re-format the Dongle or copy the files to another Dongle as this will damage the Dongle and it will not operate.

Hardware Connection

Wassp Navigator can either be run on the WASSP shuttle computer or a separate computer connected to your existing WASSP shuttle computer via an Ethernet hub/switch. Refer to the WASSP Navigator Interconnection Diagram (Fig.1) for more information.

Connecting cables are straight CAT5E or equivalent with RJ45 connectors each end.

Note that if an Ethernet hub/switch is used it will normally come with its own plug-pack power supply which will require its own power outlet.

Loading and Launching Navigator

The WASSP Navigator setup is located on the supplied dongle.

Install the Navigator software by double-clicking on the "setup" icon. Follow the on-screen installation instructions.

Once installed the Navigator is launched by double-clicking on the Navigator desktop icon. On start up Navigator first checks for the Dongle.

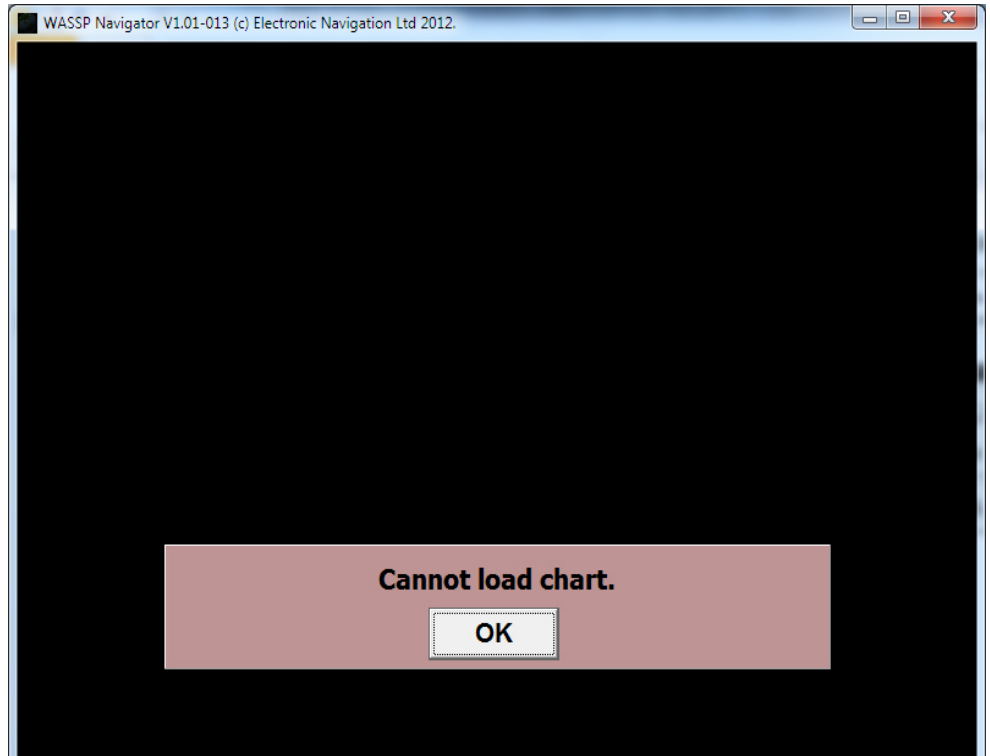


If the dongle is not found then Navigator will not run in realtime. Click on OK. If you wish to use the connection to the WASSP to create maps or move the vessel about on the map you will need to insert a dongle and rescan for a dongle, or restart the Navigator application.



Chart Loading

When the Navigator starts up, it checks for a Navionics Map Reader and Map. If a map cannot be found then Navigator displays a message advising that no maps could be loaded. In this configuration, the world map is used.

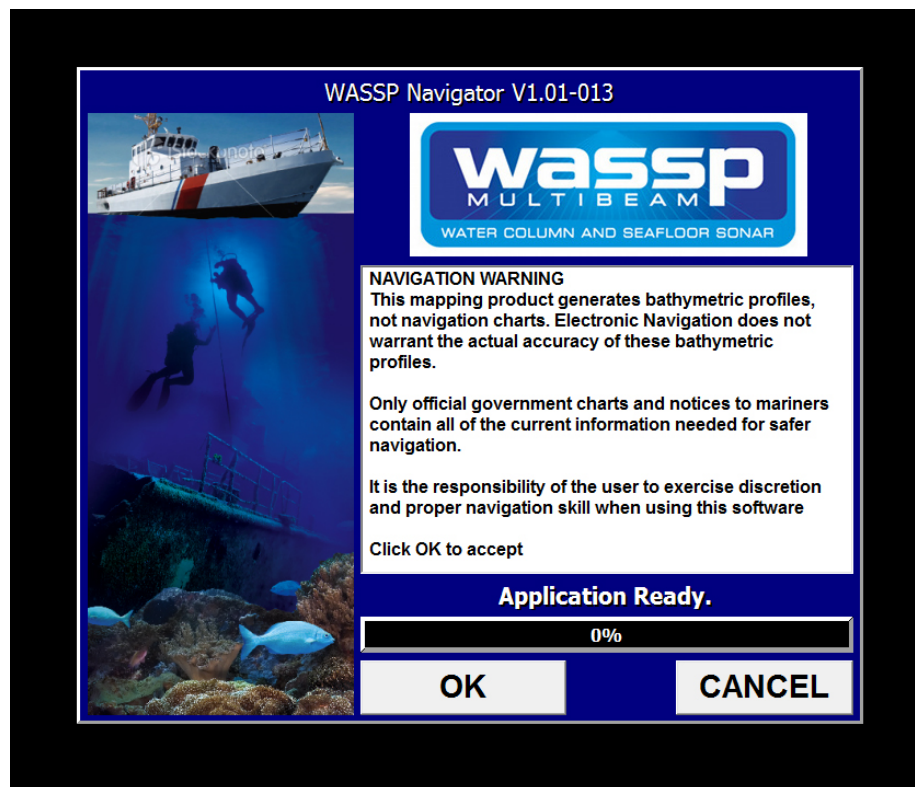


If you get an error message "unable to load charts", click on OK. Confirm that the SD Chart Card is correctly inserted in the Navionics Chart Card Reader and select "Rescan for Chart Card" in the System Setup window - see page 12.

If the SD chart card is changed, the "Rescan for Chart Card" must also be selected.

Navigator Operation

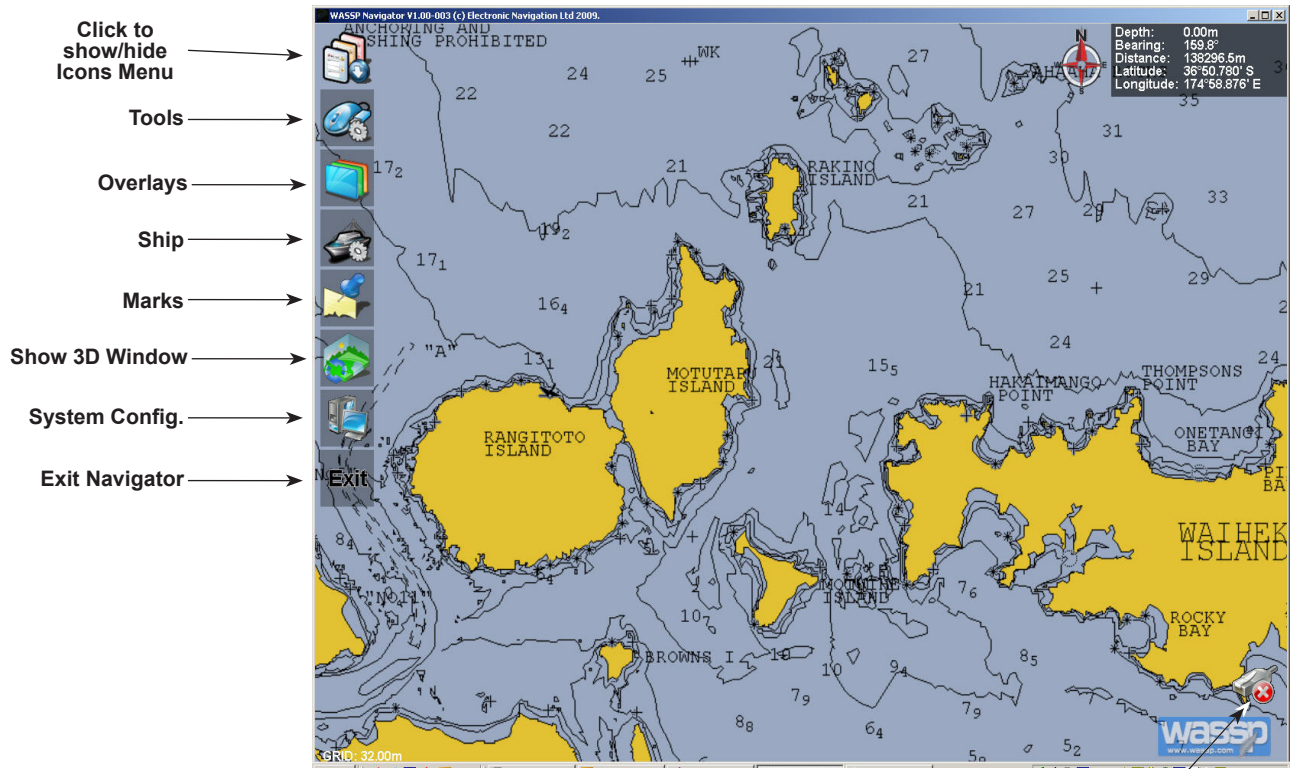
After clicking on the Navigator Icon on your computer's desktop, the Navigator application will load. After a few seconds, you will see the start-up screen display shown below:



Click on OK to continue on to the Navigator chart screen - see next page.

Once the initial splash screens have been displayed the Navigator displays the last viewed map at the previous location and zoom scale.

The System Menu is initially shown as an icon at the top left hand corner of the display. Clicking on this icon reveals a number of further icons that provide access to lower level menu functions.



Error Icons

Database recording change		No Network Connection	
No chart card or chart card is not being read by reader.		Chart Overlay turned off	
		No Dongle Found (WASSP Link Disabled)	

System Setup



The System Setup Menu provides an on-screen window with three tabs. These tabs allow the user to set the interface between the Navigator and Wassp, to configure the information that is displayed on various Overlays, and to select and administer the Databases.

System Tab

Network IP Address →

Connect button →

WMB GUI Connection

For real-time operation with Wassp, the Network IP Address must be set to the network address of the computer that the Wassp GUI is running on. If Wassp, GUI and Navigator are running on the same PC network the IP address should be set to 127.0.0.1



Software default settings are shown, e.g. depth in Meters. These may be changed to suit individual preferences.

Click on the "Connect" button to establish a connection if the configuration is first setup or changed.

Day/Night

Two buttons are provided to switch between daytime and night-time viewing modes. Note: If Windows XP is not set to "Windows Classic" under Display, the title bar will not dim in night mode.

Night Factor is used to set the amount of dimming used for night mode.

Monochrome Depth Colour

This allows the user to select the colour the seafloor will appear in monochrome mode. The seafloor will be rendered in this colour with shading. It is useful for when the 3D water column information is being shown.

Print Current View

Print Current View To File will save an image of the current screen.
Print Current View will send the current view to the selected printer.

Note: if the view is in night mode, the output to file/printer will also be dark.

Rescan For Dongle

Used to rescan for the WASSP Navigator dongle if it is no longer detected. The system will check for the presence of the dongle periodically and if the dongle is missing, the realtime inputs will be disabled.

Rescan For Chart Card

If the Navionics Gold SD card is not read correctly on startup or if you change the SD card after running the Navigator you can use this button to re-scan for the chart card.

Latitude, Longitude Format

Allow selection of how the latitude and longitude will be displayed in the Nav Box on the main window.

Units

Selects the unit used for showing depth soundings and measurements. This will only effect vertical depth values and not horizontal distance values.

Mapping Options

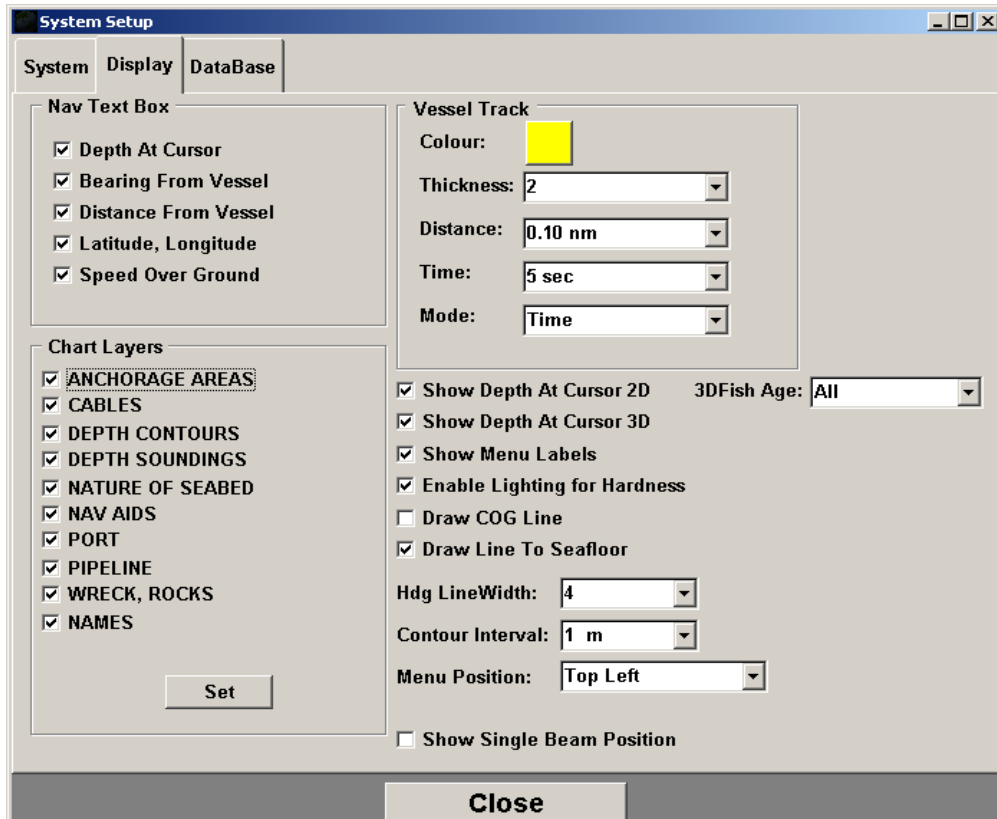


It is recommended to .select Best Beam method and to enable the noise filter.

- ▶ **Best Beam**
This stops less accurate points from the outside beams overwriting the more accurate points from the inside beams.
- ▶ **Overwrite All**
This option allows the user to overwrite all map points with new points as they are received.
- ▶ **Enable Noise Filter**
When enabled this filter will reduce the noisy points which occur when the detection line mistracks the seafloor.

Display Tab

The Display Tab provides the operator with the ability to determine which information is displayed on the Navionics charts by turning the chart layers on or off, how the vessel track is displayed, and where and how depth information is displayed.



Nav Text Box

These options effect what is shown in the Nav Box overlay on the main window.

- ▶ **Depth At Cursor** Shows the depth value at the mouse cursor.
- ▶ **Bearing From Vessel** The angle from the center of the vessel to the mouse cursor.
- ▶ **Distance From Vessel** Distance from center of the vessel to the mouse cursor.
- ▶ **Latitude, Longitude** Shows the latitude and longitude at the mouse cursor position.

Chart Layers

Selects the layers which will be shown on the chart overlay. Set must be pressed for changes to occur.

- ▶ **Anchorage Areas** Areas where vessels can anchor and shows marinas, jet ties and wharfs.
- ▶ **Cables** Overlays locations of underwater cables.
- ▶ **Depth Contours** Shows the depth contour lines from the chart card.
- ▶ **Depth Soundings** Shows the single depth soundings from the chart card.
- ▶ **Nature Of Seabed** Indicates what the seabed is at various locations.
- ▶ **Nav Aids** Shows location of navigational lights, beacons, buoys and markers
- ▶ **Port** Show port shapes such as pylons.
- ▶ **Pipeline** Show location of pipelines.
- ▶ **Wreck, Rocks** Locations of wrecks and rocky areas.
- ▶ **Names** Shows names of harbours and locations on the chart. Will also show warnings and information.

Vessel Track

Allows customising how the vessel track will be shown on the main window.

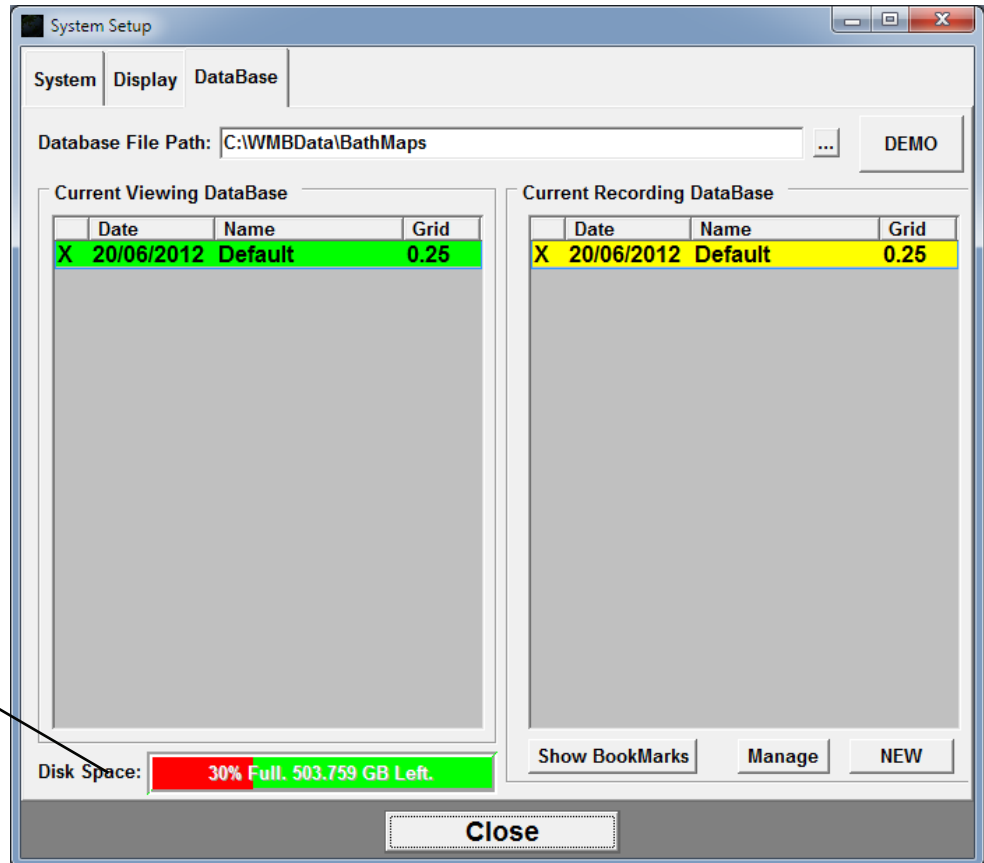
- ▶ **Colour** Allows the colour of the vessel track to be changed.
- ▶ **Thickness** Changes how thick the vessel track will be drawn.
- ▶ **Distance** Distance between track points when using distance mode.
- ▶ **Time** Time between adding new vessel track points when using time mode.
- ▶ **Mode** Selects track by distance or time.

Other Settings

- ▶ **3D Fish Age** Select how long 3D fish are displayed for.
- ▶ **Show Depth At Cursor 2D** Shows depth label at mouse cursor on 2D.
- ▶ **Show Depth At Cursor 3D** Shows depth label at mouse cursor on 3D.
- ▶ **Show Menu Labels** Draws menu title next to menu icons.
- ▶ **Lighting for Hardness** When selecting backscatter overlay, this will show lighting changes due to slope if enabled.
- ▶ **Draw COG Line** Shows a shorter course over ground line from vessel icon.
- ▶ **Draw Line To Seafloor** Draws vertical line from vessel to seafloor in 3D.
- ▶ **Hdg Line Width** Changes thickness of the heading line drawn from the vessel icon.
- ▶ **Contour Interval** Sets how often the contour lines are drawn for the generate WASSP data when in contour mode.
- ▶ **Menu Position** Allows re-location of where the icon menu will be displayed. This can be useful if using a touch screen.
- ▶ **Show Single Beam Pos** **This section enables a hand to display the position of the Cursor of the WASSP Fish Finder View in Navigator.**

Database Tab

Navigator stores and displays the Wassp information in Databases. Each database can store information from any geographic area or areas. The areas do not have to be co-located or continuous but can cover different parts of the globe if desired.

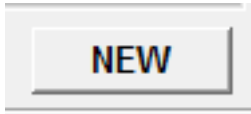


Disk Space Remaining Indication.

The Database File Path must be set to the directory in which the databases are created. Additional databases can be created by clicking on the "New" button. The databases allow the operator to store Wassp information from one or more visits to an area. This allows changes between the visits to be easily compared for example. A database may however be over written by selecting it for writing on a subsequent visit.

The Database Tab provides an ability to select both a "Viewing" and a "Recording" database. The information displayed on the Navigator is always taken from the "Viewing" database. Incoming data from the Wassp is always written to the "Recording" database. The two databases are usually the same but they do not have to be. By selecting a different database for "Viewing" than "Recording", the operator is able to look at the information previously recorded while still saving to the recording database.

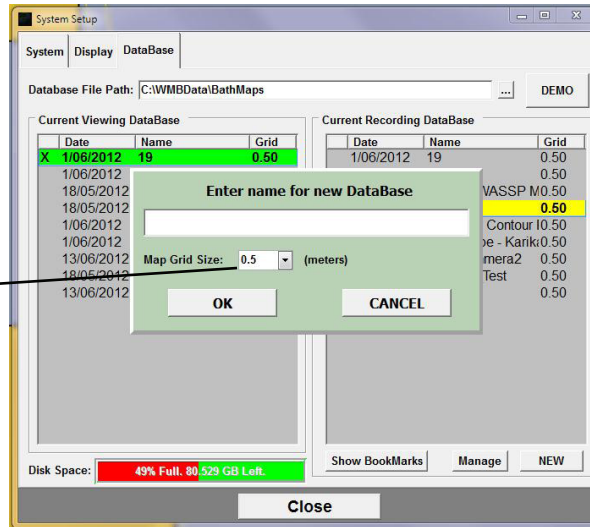
When the WASSP Navigator is first installed a Database called "Default" will be generated. This is automatically setup ready for storing WASSP information.



Adding a new database

To add a new database, click on the "NEW" button at the bottom right of the

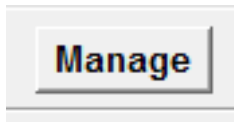
Database Grid Size can be chosen (0.25, 0.5 or 1; 1m being the lowest resolution for smaller file size)



As the database will be created as a new folder on the PC. It is best to use plain text and numbers as some characters cannot be used.

Enter a name for the database. And click "OK" to add.

The new database will show up on both the viewing and recording side. The database files are sorted by name so the database may not show up at the bottom of the list.



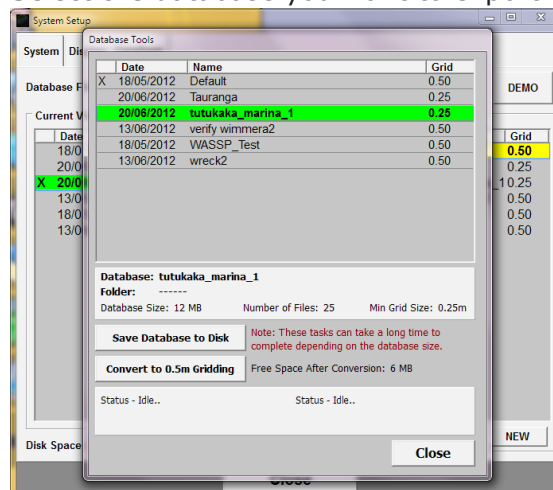
Database Management

Database Management allows you to export recorded databases to an external storage location such as a USB drive. This allows you to free up space on the WASSP PC.

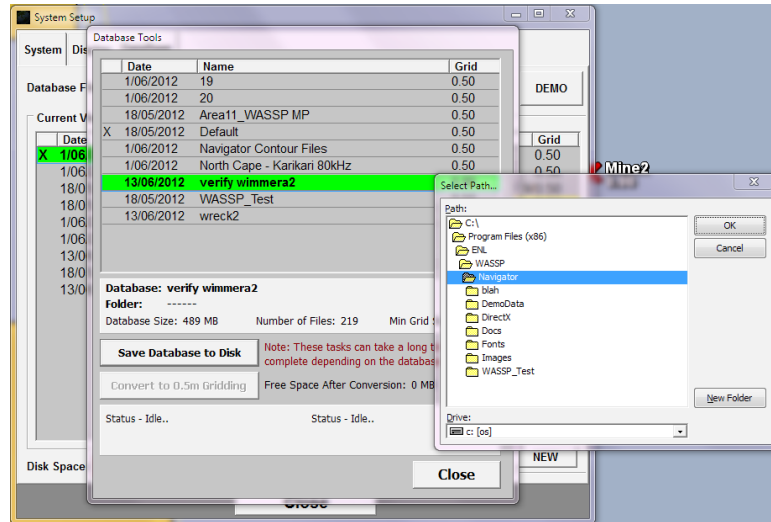
Database Export

Click on the "Manage" button on the bottom right of the window.

Select the database you want to export.



Click "Save Database to Disk" and select location to save.

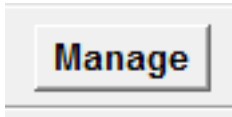


Database Reduction

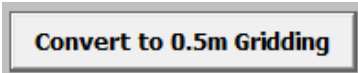
A database on the WASSP PC can be reduced in size by converting it from a high resolution to a medium resolution database. When this is done the grid size is changed from 0.25 to 0.5 metres.



Before reducing the database, carry out the database export as above, as all high resolution data will be lost.



Click on the "Manage" button on the bottom right of the window.



Select the database you want to export.

In the window the size of the database is displayed.

Next to the "Convert to 0.5 Gridding" button, the size reduction is indicated.

Click the "Convert to 0.5 Gridding" button and select location to save.

Database File Path

Databases will be generated in C:\WMBData\BathMaps as default. This can be changed by clicking on the "..." button. Several locations on the PC hard-drive can be used if required and changed when necessary.



Be aware that if you change the file path while recording to a database, that data base will no longer be visible and data loss can occur.

Demo

As part of a standard WASSP Navigator install there is a small demo database which can be selected by pressing the Demo Button. When green this demo database is shown on the “viewing” side.

If the demo database is selected, the Navigator will automatically go to the location of the database for demo viewing. When the demo button is clicked again, the Navigator will return the view to the previous position.

The text ‘Demo Mode’ will be present on the main window when in demo mode.

Show Bookmarks

This button opens the Bookmarks List. For more information about bookmarks read about the Add Bookmark mark function.

2D Window The 2D window shows a birds-eye view of the chart and WASSP seafloor data. This is the main window and is used for moving around the globe and zooming in/out.

The interface to the Navigator uses the functions of a standard mouse or touch screen.

Left Mouse Button	Select menu, interface with map.
Mouse Wheel	Zoom In/Out

Tools The Tools Menu offers a selection of functions to enhance viewing of the map.



Pan

The pan mode allows the user to left click on the map and then move the mouse which in turn will move/pan the map. Once the mouse button is released then the map will be re-drawn at the new position.

This allows the user to move from one location on the map to another.



Zoom In



Zoom Out

Zoom In/Out buttons are provided in case there is not mouse wheel available. They can also be used when running on a touch screen. Left click/press and hold down to zoom In/Out.



Goto Cursor

Goto cursor mode allows the user to click/select a position on the map which then will be centered in the middle of the main window.

This is useful as the map zooms in/out based on the center of the main window. So goto cursor allows selection of an area of interest.

Also goto cursor provides a way of navigating the map on a touch screen instead of dragging your finger across the screen in pan mode.



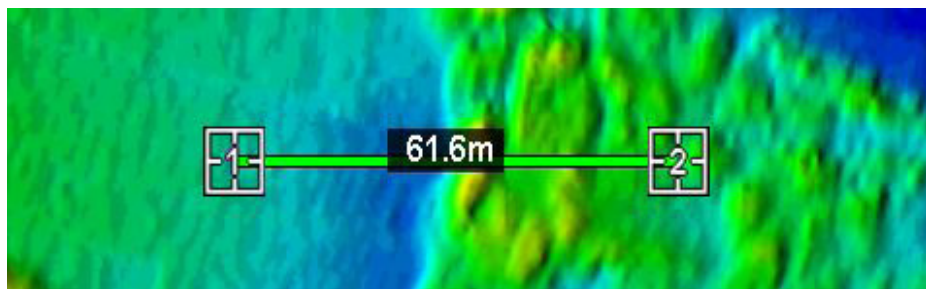
Add Measure

When the Add Measure button is clicked and green. The next two left mouse clicks will add two measure markers on the main window. After placing marker #1 the distance between both markers will be displayed on the line between them. When placing marker #2 the line will then be anchored in place.

After this both marker can be re-located by placing the mouse cursor over the marker and then holding down the left mouse button and dragging the marker to a new location.

The marker purpose is to provide a measuring tool between two points on the map and also to provide a profiling function which will provide a cross section of the sea floor depths between the two marks in the profile window.

Click the Add Measure button again to remove markers.



Show Profile Window

Opens a new window which shows the cross section of the sea floor between the two markers.



When the mouse cursor is placed over the profile window the two values at the bottom of the window are updated to give the cursor depth and distance from marker #1.

Overlays

The Overlay Menus select the type of information to be displayed on the map.



Configuration

The configuration button will open a new window for setting the colours, lighting and hardness.

The **Colour** tab window shown allows you to set the depth limits over which the colour range will apply when viewing seafloor data.

There are two angled arrow buttons. The top one sets the depth the colours will start from. The bottom one sets the depth the colours will end at.

Both buttons can be clicked on with the left mouse button and then dragged up/down. Then the mouse button is released the colours will change on the main window.

The other four up/down arrow buttons can be used to fine-tune the colour range.

Colours only effect the display of seafloor data if in colour depth mode.

The Auto Colour From WASSP check box links the Navigator Depth Colour selection to that of the WASSP GUI. When the WASSP Colours change the Navigator colour settings change to match those of the WASSP system. This means if the WASSP Auto colour feature is selected the colours on Navigator will update automatically.

It is not possible to change the colour range in Navigator unless the Auto Colour From WASSP check box is unchecked.



The **Lighting** tab window shown here allows you to set the direction from which the apparent light is coming from when viewing a seafloor data.

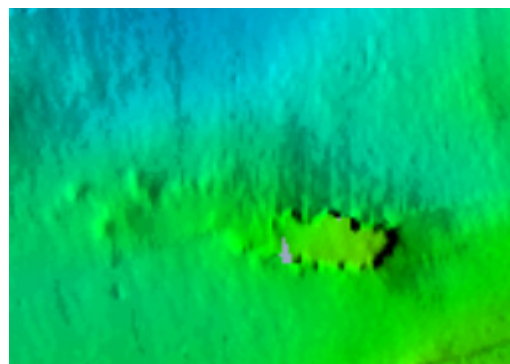
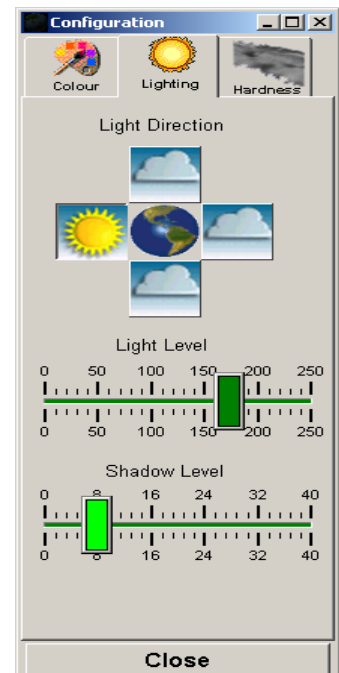
There are four choices.
Light from North, South, East or West.

Left click on one of the four buttons around the globe image to change the lighting direction.

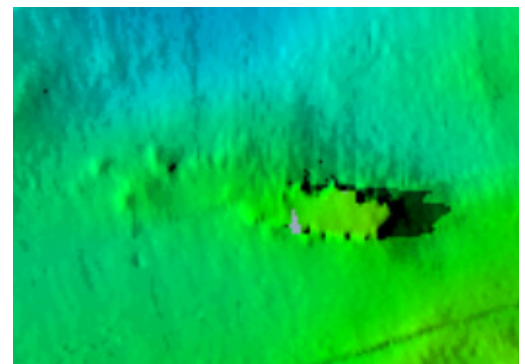
The Light Level slider can be left clicked with the mouse and dragged to change the intensity of the lighting.

When the left mouse is released, the seafloor data shown will be updated with the new lighting level.

The Shadow Level slider can be used in a similar way to the Light Level slider to adjust the length of shadows cast by objects on the sea-floor. The darkness of the shadow is adjusted by the Light Level slider.



Shadow Level set to zero, and it is difficult to tell the significance of this wreck.



Shadow Level set to eight makes this wreck cast a shadow. The length of the shadow reflects how big the wreck is.

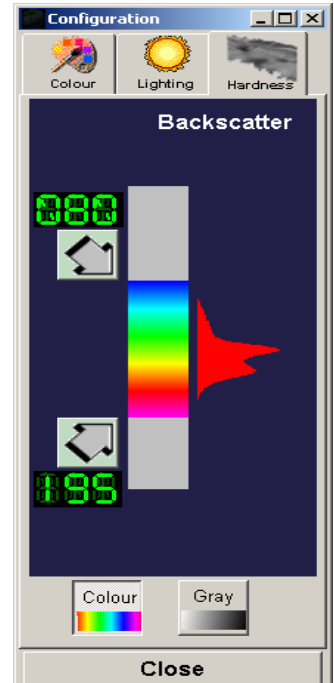
The **Hardness** tab window shown here allows you to set the backscatter colour range.

Correct setting of these controls will greatly help display seafloor changes.

To change the gain values for Soft/Steep bottom (top arrow) or Hard/Flat bottom (bottom arrow), left click on one of the buttons and hold, then drag up/down to change the values.

Colour or black and white (grey) backscatter can be selected by clicking on the Colour or Grey buttons at the bottom of the window.

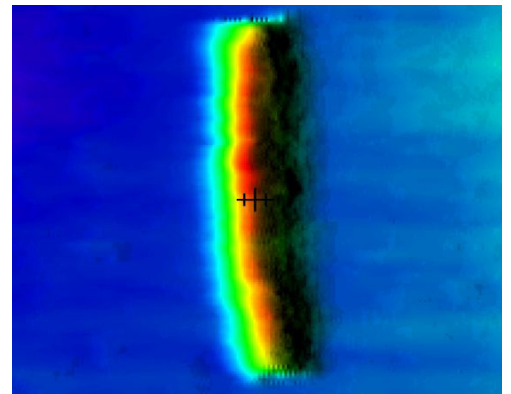
Click on **Close** to exit the Configuration window.



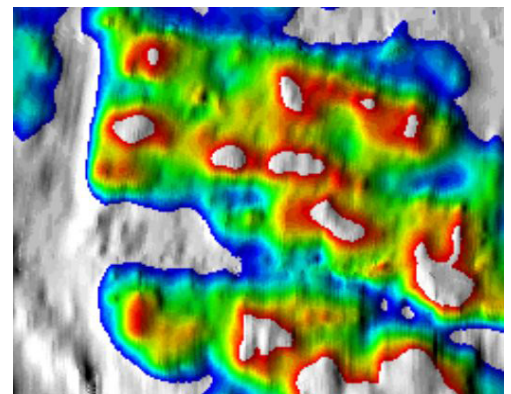
Colour Depth

Colour by depth allows the user to show the seafloor data coloured between the selected values on the configuration windows.

By changing this range of colours you can show up more detail of the area you are viewing.



Any area which is outside the selected colour range will show up as grey.



Overlays



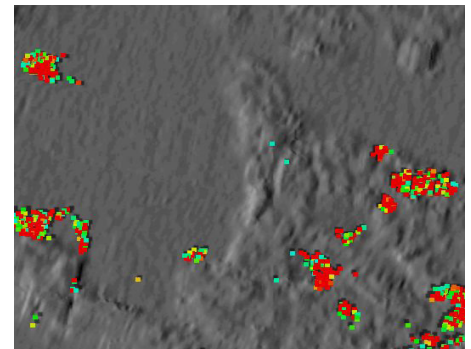
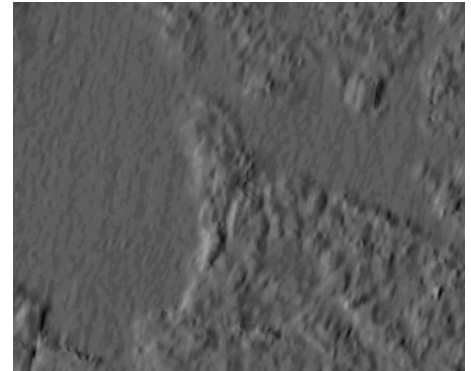
Monochrome Depth

Monochrome depth is used to display the seafloor using only one colour.

This colour can be changed from the System Config (System Page).

The seafloor image will still be lit from the selected lighting direction.

This mode is useful if using 3D water column to help distinguish between the 3D water column marks and the seafloor.



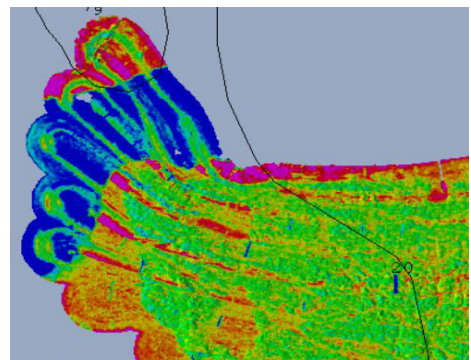
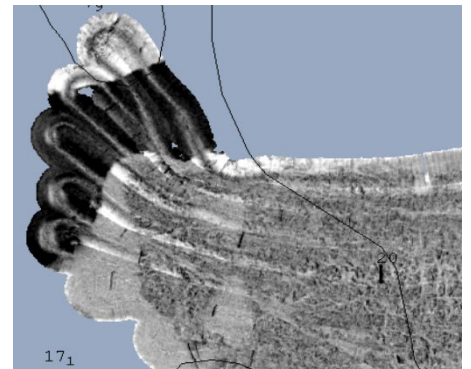
Show Backscatter

Show backscatter is used to display the backscatter/hardness information on top of the seafloor map.

The backscatter information can be displayed in grey-scale or colour-scale.

Changes in hardness will show up as different intensity/colour.

This mode is very useful for finding the changes in seafloor even when the seafloor is very flat. Giving the user a good indication on where the rocky/hard areas and the soft/muddy areas are.





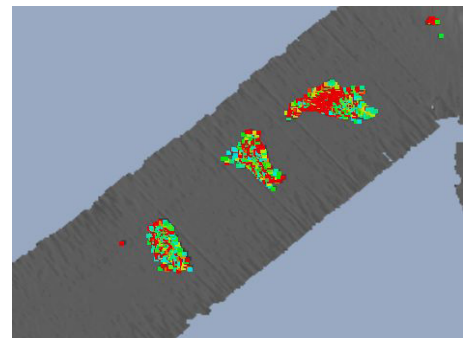
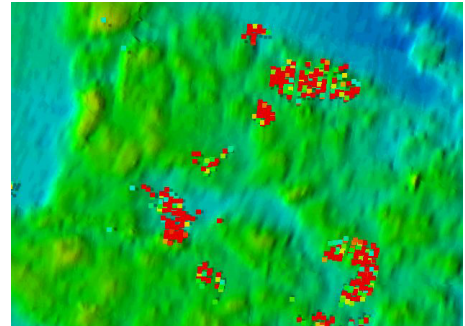
Show 3D Fish

Show 3D Fish will overlay the detected water column marks on the 2D seafloor display.

These marks are coloured by intensity, so red marks are strong echoes and blue marks weak echoes.

The fish marks are stored on the computers hard-drive. There is a finite number of fish marks which can be stored. Once this maximum has been reached for a geographical area, the oldest fish marks are removed.

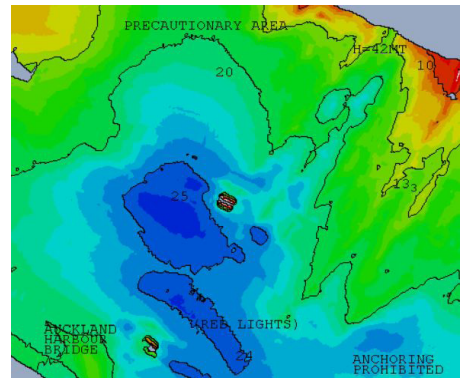
These marks also show up on the 3D window.



Contour Lines

This mode draws the seafloor by colour and traces the contours of the sea floor at the specified interval.

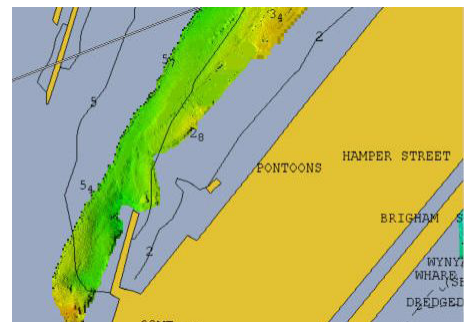
This interval is setup in the System Config under the Display Tab.



Show Chart

When this button is enabled the Navionics Gold SD card charts are overlaid on top of the WASSP Navigator seafloor data.

If the button is disabled, the charts will not be drawn and a warning icon will show.



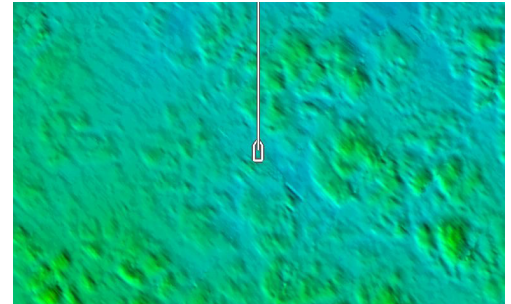
Ship



Center On Ship

When this button is enabled, the map will scroll along with the vessel as new GPS position information is received.

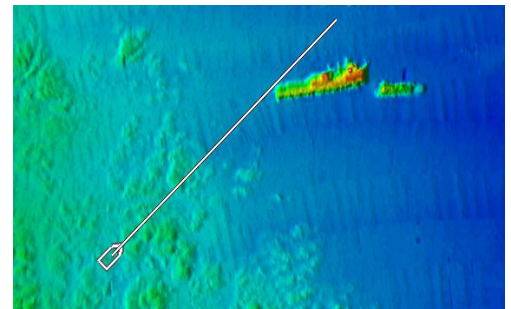
To disable this mode click on the icon again or pan the display.



North Up

When this button is enabled, the map will always be drawn with north pointing directly up the screen.

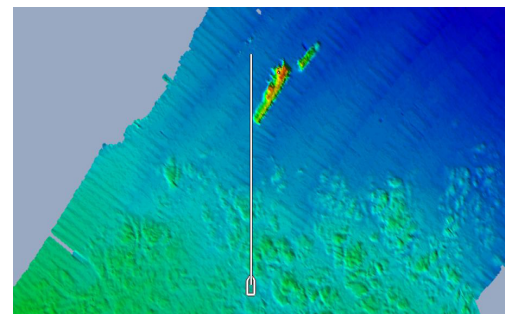
The vessel will rotate to show current heading.



Heading Up

When this button is enabled, the map rotate around the vessel.

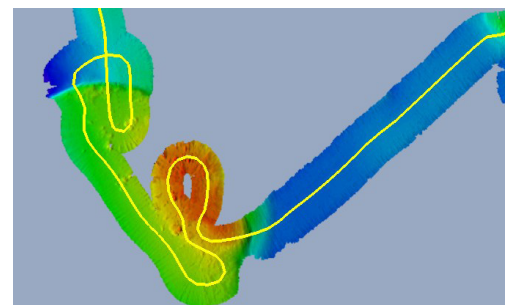
The vessel icon will always point directly up the screen.



Show Vessel Track

When this button is enabled, the vessel track will be displayed over the seafloor map and chart.

This track will continue to update based on user settings under System Config on the Display Tab.



Marks Marks are used to place a user marker at a location of interest



Mark At Vessel

When this button is clicked a mark will be placed at the current vessel position.

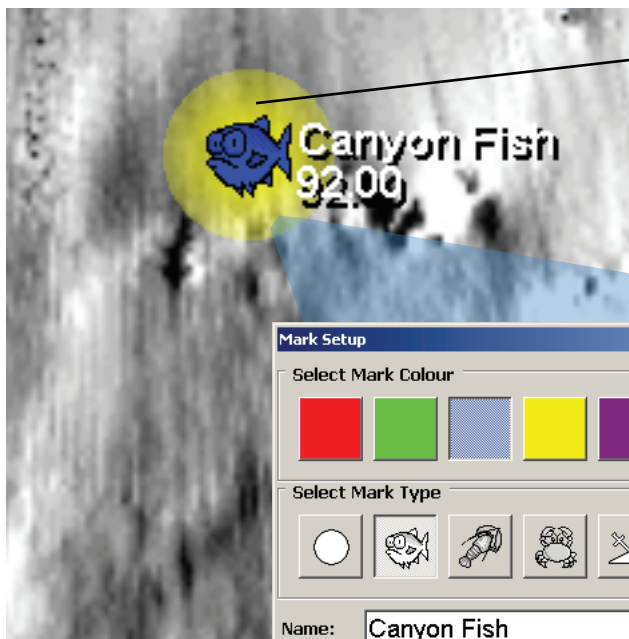
This mark will be identical to the last mark added. To change the mark settings simply left click on the mark you wish to change.



Mark At Cursor

When this button is clicked a mark will show under the mouse cursor.

The next time the left mouse button is clicked this mark will be placed at the mouse cursor position. This mark will be identical to the last mark added. To change the mark settings simply left click on the mark you wish to change.



The mark will have a yellow circle when it is highlighted. Left clicking will bring up the Mark Setup window. Configuring the mark is optional.

Mark Setup

Select Mark Colour

Select Mark Type

Name:

Value: Time: 13:32 Date: 28/01/2011

Latitude: Longitude:

UPDATE

Enable Delete

CLOSE

Press to change Mark Colour

Press to change Mark Shape

Enter Mark Name

Enter a number

Mark Position can be changed.

Press to Close without saving changes.

Press to Close AND Activate changes made to the Mark

Press this to enable deleting the mark. Press UPDATE to complete the process.

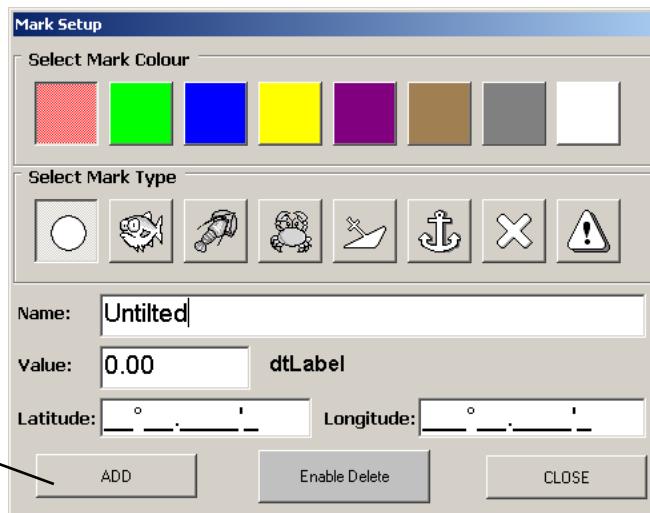


Mark At Lat/Long

When this button is clicked the Mark Setup form will appear.

Enter mark information including the mark position and press Add to add a new mark at the entered latitude and longitude. As with all marks the colour, shape, name and value can be modified as desired.

Enter a position in the form degrees, decimal minutes, quadrant (N/S/E/W) and press ADD to create the mark at his position.



The Mark Setup dialog box contains the following elements:

- Select Mark Colour:** A row of eight color swatches: red, green, blue, yellow, purple, brown, grey, and white.
- Select Mark Type:** A row of eight icons: a circle, a fish, a hand holding a tool, a crab, a boat, an anchor, an 'X', and a warning triangle.
- Name:** A text field containing 'Untitled'.
- Value:** A text field containing '0.00' and a label 'dtLabel'.
- Latitude:** A text field with a degree symbol, a decimal separator, and a quadrant indicator.
- Longitude:** A text field with a degree symbol, a decimal separator, and a quadrant indicator.
- Buttons:** 'ADD', 'Enable Delete', and 'CLOSE'.



Add Bookmark

When this button is clicked a bookmark will be placed at the cursor position when the operator next presses the left mouse button.

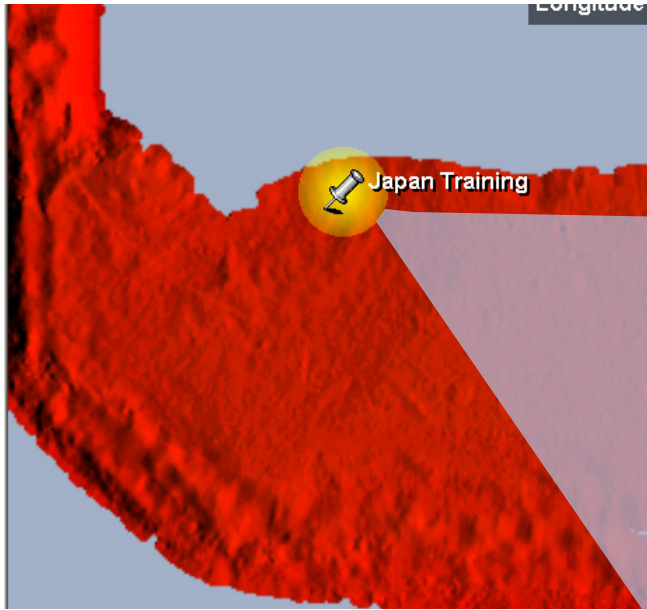


What is a bookmark?

A bookmark is similar to a marked screen position. It is designed for saving the area you can currently see. If you GOTO a bookmark:

- ▶ The Current view location changes to centre on the bookmark's position.
- ▶ The Zoom level changes to the zoom level at time of bookmark creation.
- ▶ The **Current Viewing DataBase** changes to the database being shown at the time the bookmark was created.

Left clicking on a Bookmark brings up the Bookmark list, and this enables moving to another bookmark, changing the name of any of the bookmarks, and shows the position and date of creation of each bookmark. The icon for a bookmark cannot be changed, unlike a mark.



Left click on one of these marks to select it.

Name	Latitude	Longitude	Date
Bookmark 0	63.651561	9.616371	28/01/2011
Japan Training	34.708299	135.325836	28/01/2011
Macduff Trench	57.779633	-2.098226	28/01/2011
Santa Barbra	34.407389	-119.678603	28/01/2011
Waikato	-35.652001	174.544477	28/01/2011

Trondheim

Press to update the name of the selected bookmark to the text entered..

Press this button to Close this window and to GOTO the selected bookmark.

Pressing this button deletes the bookmark **permanently**.

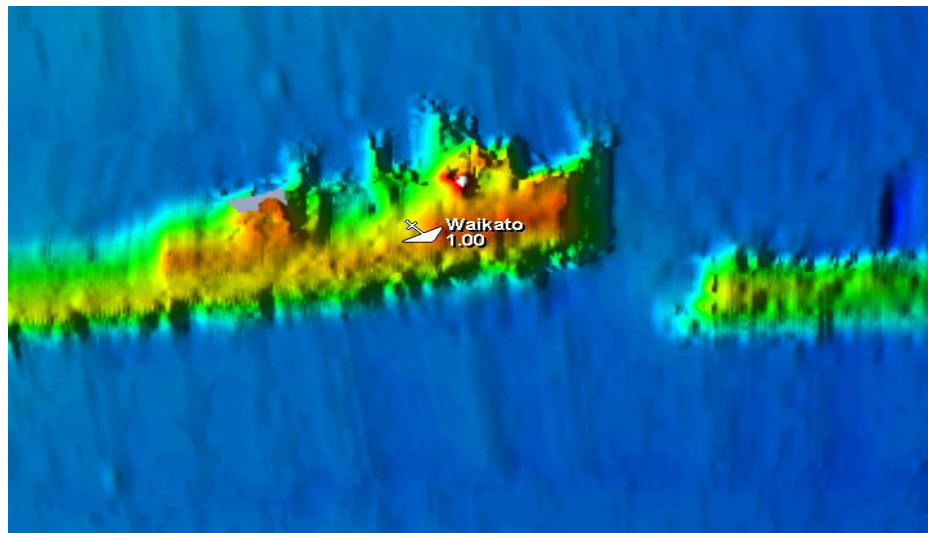
Press to Close



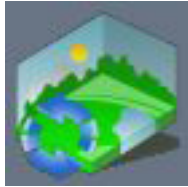
Mark Enable

When this button is enabled all marks will be shown on top the of map/ chart. When disabled all marks will be removed from the map display.

This allows the user to see the seafloor detail which the mark image may obscure.



Show 3D Window



3D Window

This button is used to bring up the 3D window.

The 3D window is used to show a 3D view of what is shown on the main window. This view can be moved/rotated to view the seafloor data in 3D.

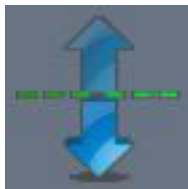
3D image data is the same data as shown on the 2D main window.

The interface to the Navigator uses the functions of a standard mouse or touch screen.

Left Mouse Button
Mouse Wheel
Right Mouse Button
Cursor Keys
Double Left Click

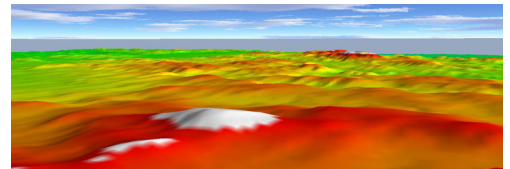
Select menu, interface with display.
Zoom In/Out.
Move display up/down.
Pan display left/right/up/down.
Return to center of display.

Vertical Scale



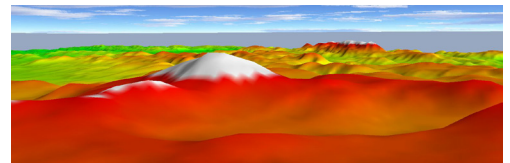
1x Vertical Scale

This scale is 1:1 so all features are drawn as they would be seen underwater.



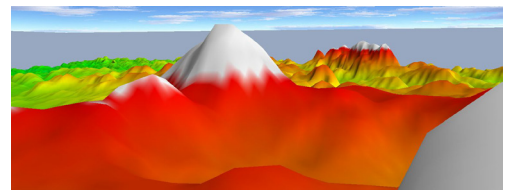
2x Vertical Scale

This scale is 2:1 so all features are drawn twice as high as they would be seen underwater. Depths will also be shown twice as deep.



4x Vertical Scale

This scale is 4:1 so all features are drawn four times as high as they would be seen underwater. Depths will also be shown four times as deep.



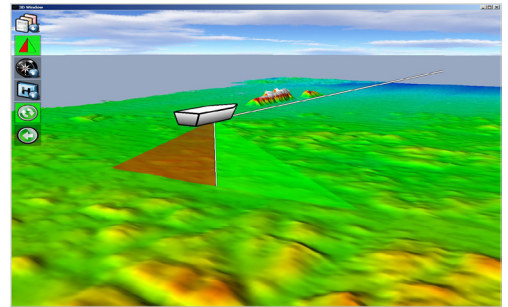
Options



Show Swath

Enabling show swath will draw a green/red swath coverage indicator under the current vessel position.

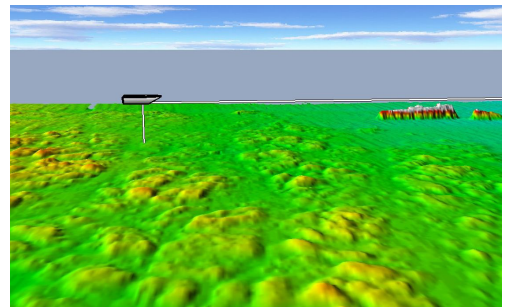
This can be used to give an indication on the area the sonar is currently seeing.



North Up

Selecting North up mode is the same as on the main window. North will always be up/into the screen.

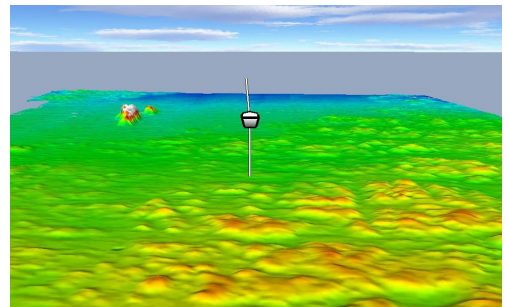
North Up in the 3D window can be different from the setting on the main window.



Heading Up

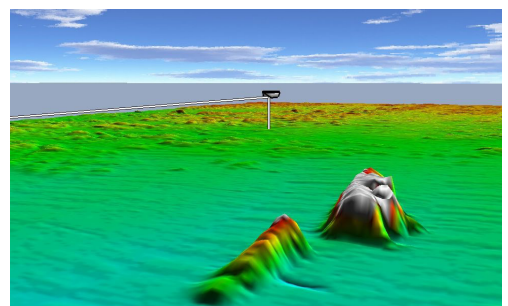
Selecting Heading up mode is the same as on the main window. The vessel will always point up/into the screen.

Heading Up in the 3D window can be different from the setting on the main window.



Free Rotate

Selecting Free Rotate allows the user to use the mouse to rotate, zoom and pan the 3D display using the mouse and keyboard cursor keys.



3D Fish



Show 3D Fish will overlay the detected water column marks on the 2D and 3D displays.

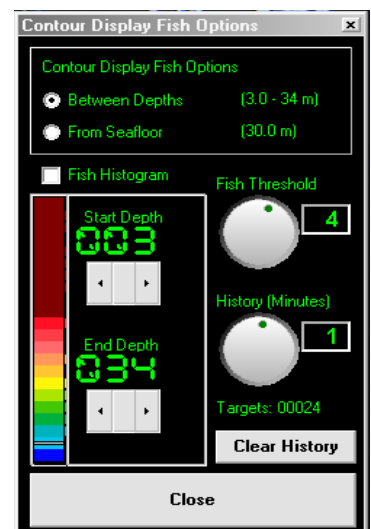
These marks are coloured by intensity, so red marks are strong echoes and blue marks weak echoes.

The fish marks are stored on the computers hard-drive. There is a finite number of fish marks which can be stored. Once this maximum has been reached for a geographical area, the oldest fish marks are removed.

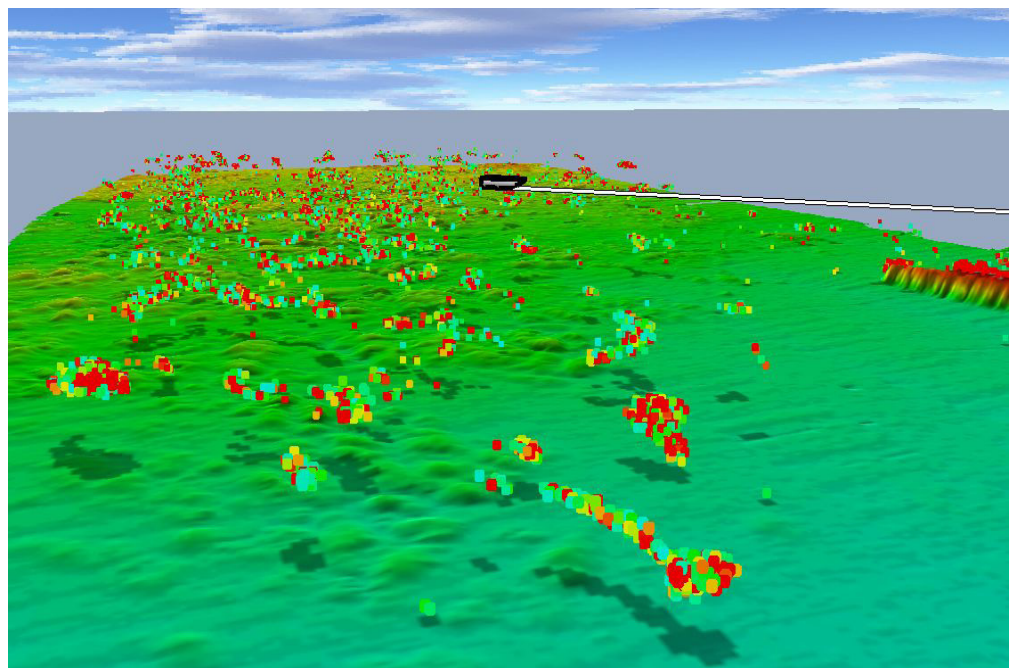
To get the best from the water column data, the WASSP WMB160F or WMB80F fish overlay settings should be correctly set.

It is recommended that the fish threshold in WASSP be set to 4 or above depending on how noisy the sonar display is.

The Start Depth/End Depth are not used in WASSP for the Navigator software at this time.



WMB160F/WMB80F Fish Options



NOTES:

Release Notes:

V100-004 Release Version Enhancements

- ▶ Added bookmarks to allow user to mark a location and then jump back to that location and zoom level.
- ▶ Shadows can now be cast North, South, East, West on seafloor data. Angle of shadows can also be set.
- ▶ Navigator can now link into WASSP V104 colours for depth. This will automatically change Navigator colours when WASSP V104 colours change.
- ▶ Improved map buffering to disk progress bar updating.
- ▶ Navigator will now run in Demo mode if no dongle is found and allow viewing of map data. Realtime is disabled.
- ▶ Added ability to lock 2D & 3D window to current position, removing the title bar.
- ▶ Marks can now be added by entering latitude and longitude, marks can be moved by modifying their latitude, longitude.
- ▶ Profile form can now be re-sized and cursor depth is now shown.
- ▶ Profile will update if vessel travels over area for profile or user zooms.
- ▶ Added pointer on 2D map for where cursor is on WASSP V104 single beam display (middle beam)
- ▶ Improved drawing of lines for chart contours.
- ▶ Added indicator icon when marks are disabled and now shown
- ▶ Added indicator to show if hard drive is getting below 5%, also indicator bar on Database page.
- ▶ When opening config window, it will default to depth/backscatter depending on drawing mode.
- ▶ Added cross to Enable Mark button to indicate when marks are disabled.
- ▶ Added Speed Over Ground to nav display window.
- ▶ When moving profile line, distance reading will move to profile point being moved/highlighted instead of middle of line.
- ▶ Distance can now be set to feet or meters.
- ▶ Profile distance now in nautical miles.
- ▶ Cursor depth in 3D window will now give the depth of fish points.
- ▶ 3D Fish can now be set to show only fish up to 1 day ago or show all fish.
- ▶ Improved positioning of map data.
- ▶ Improved user interface for use on touch screen displays.
- ▶ Mouse wheel can now be used to change depth colours by hovering the mouse pointer over the up/down buttons