

LOWRANCE®

HDS Gen3 Operator Manual

ENGLISH



Preface

Disclaimer

As Navico is continuously improving this product, we retain the right to make changes to the product at any time which may not be reflected in this version of the manual. Please contact your nearest distributor if you require any further assistance.

It is the owner's sole responsibility to install and use the equipment in a manner that will not cause accidents, personal injury or property damage. The user of this product is solely responsible for observing safe boating practices.

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Navico product references

This manual can refer to the following Navico products:

- Broadband Radar™ (Broadband Radar)
- Broadband 3G™ Radar (Broadband 3G Radar)
- Broadband 4G™ Radar (Broadband 4G Radar)
- Broadband Sounder™ (Broadband Sounder)
- DownScan Imaging™ (DownScan)
- DownScan Overlay™ (Overlay)
- GoFree™ (GoFree)
- INSIGHT GENESIS® (Insight Genesis)
- SmartSteer™ (SmartSteer)
- SonicHub® (SonicHub)
- StructureMap™ (StructureMap)
- StructureScan® (StructureScan)
- StructureScan® HD (StructureScan HD)

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Warranty

The warranty card is supplied as a separate document.

In case of any queries, refer to the brand website of your display or system: www.lowrance.com.

Compliance statements

This equipment complies with:

- CE under 2014/53/EU Directive
- The requirements of level 2 devices of the Radio communications (Electromagnetic Compatibility) standard 2008
- Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The relevant Declaration of conformity is available in the product's section at the following website: www.lowrance.com.

Internet usage

Some features in this product use an internet connection to perform data downloads and uploads. Internet usage via a connected mobile/cell phone internet connection or a pay-per-MB type internet connection may require large data usage. Your service provider may charge you based on the amount of data you transfer. If you are unsure, contact your service provider to confirm rates and restrictions.

About this manual

This manual is a reference guide for operating the HDS Gen3. It assumes that all equipment is installed and configured, and that the system is ready to use.

The manual assumes that the user has basic knowledge of navigation, nautical terminology and practices.

Important text that requires special attention from the reader is emphasized as follows:

- **Note:** Used to draw the reader's attention to a comment or some important information.

⚠ Warning: Used when it is necessary to warn personnel that they should proceed carefully to prevent risk of injury and/or damage to equipment/personnel.

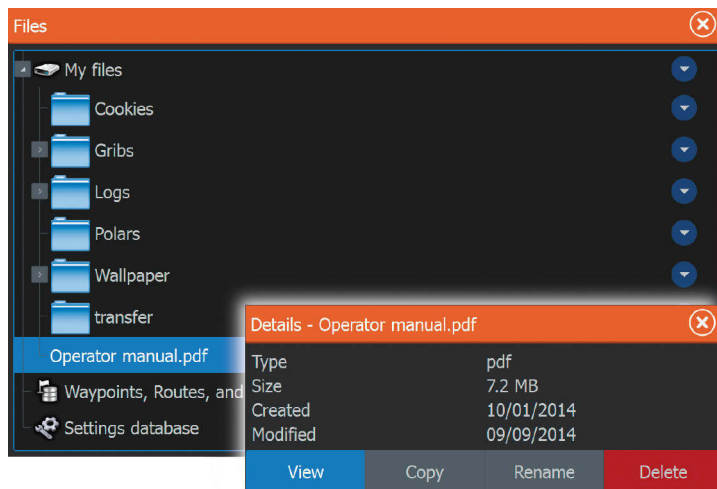
Manual version

This manual is written for software version 4.5. The manual is continually updated to match new software releases. The latest available manual version can be downloaded from www.lowrance.com.

Viewing the manual on the screen

The PDF viewer included in the unit makes it possible to read the manuals and other PDF files on the screen. Manuals can be downloaded from www.lowrance.com.

The manuals can be read from a card inserted in the card reader or copied to the unit's internal memory.



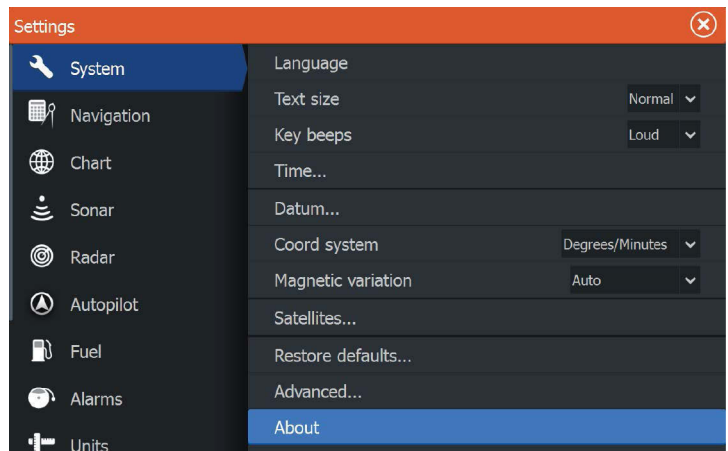
Use the menu options or the keys and on-screen buttons to maneuver in the PDF file as described below:

- Search, Goto page, Page Up and Down

- Select the relevant panel button.
- Scroll pages
Touch operation: Drag finger on the screen in any direction.
Key operation: Use the **Cursor** keys.
- Panning on the page
Touch operation: Drag finger on the screen in any direction.
Key operation: Use the arrow keys.
- Zoom In/Out
Select the relevant panel button.
Touch operation: Use pinch or spread gestures.
Key operation: Use the **+** and **-** keys.
- Exit the PDF viewer
Touch operation: Select the **X** in the upper right corner of the panel.
Key operation: Press the **X** key.

The Software version

The software version currently on this unit can be found in the About dialog. The About dialog is available in the System Settings. For more information, refer to *"About"* on page 171. For upgrading your software, refer to *"Software upgrades"* on page 179.



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1

Introduction

Operating the system

You can use both the keys and the touchscreen to operate the HDS Gen3.

This manual uses the following general terminology to describe operating the unit:

Select

- Touch: Tap the panel
- Key: Use the cursor keys to select, then confirm by pressing the **Enter** key

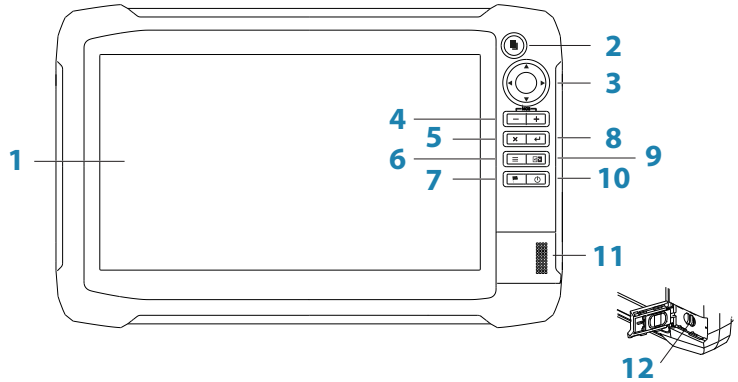
Press and hold

- Touch: Press and hold on the screen
- Key: Use the cursor keys to select, then press and hold the **Enter** key

Drag

- Touch: Drag an item to a new position
- Key: Use the cursor keys to select an item, confirm by pressing the **Enter** key. Use the cursor keys to select a new position, and then press the **Enter** key again to confirm the new position.

The front panel and keys



1 Touchscreen

2 Pages key

Press once to activate the **Home** page. Repeat short presses to cycle the favorite buttons. Press and hold from an active page to go to the last used page.

3 Cursor keys

Press arrows to move through menu items, to adjust a value, and to move the cursor on a panel.

4 Zoom Out / Zoom In keys and MOB key

Zoom keys for panels and images. Simultaneous pressing both keys saves a Man Overboard (MOB) waypoint at the current vessel position.

5 Exit (X) key

Press to exit a dialog, to return to previous menu level, and to remove the cursor from the panel.

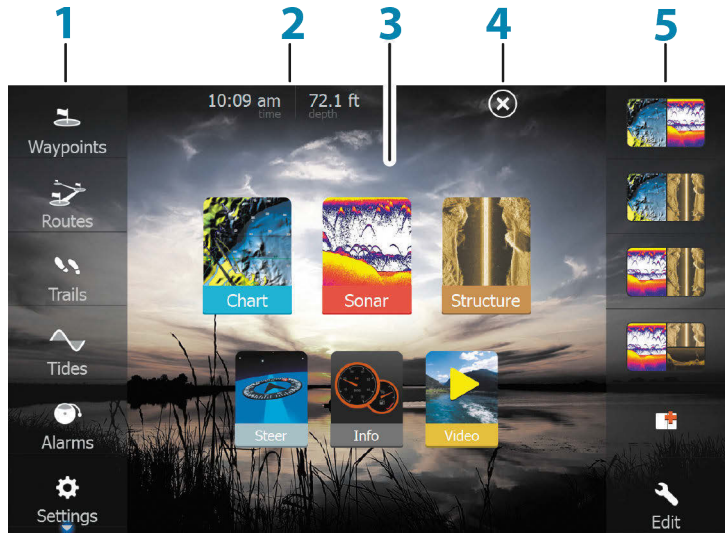
6 Menu key

A single press displays the menu for the active panel/overlay. Press and hold to hide or show the menu. A quick double-press displays the settings menu.

- 7 Waypoint key**
Press to display the dialog for saving new waypoints. Press twice to quick save a waypoint. Press and hold to access the Find menu.
- 8 Enter key**
Press to select or save your settings.
- 9 Panel key**
Used on multiple-panel pages. A short press switches between the panels, a long press expands active panel to a full page panel and back again.
- 10 Power key**
Press once to display the **System Controls** dialog. Repeat short presses to cycle the backlight brightness. Press and hold to turn the unit ON/OFF.
- 11 Card reader door**
- 12 microSD Card readers**

The Home page

The **Home** page is accessed from any operation by a short press on the **Pages** key.



1 Tools

Select a button to access dialogs used for carrying out a task, or for browsing stored information.

2 Local time and Water depth

3 Applications

Select a button to display the application as a full page panel.

Press and hold a button to display pre-configured split page options for the application.

4 Close button

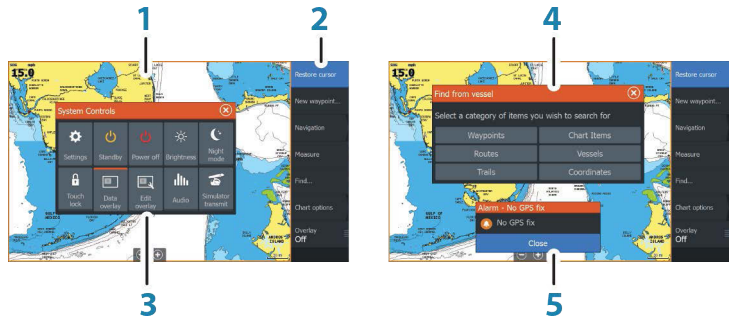
Select to exit the **Home** page and return to the previous active page.

5 Favorites

Select a button to display the panel combination.

Press and hold a favorite button to enter edit mode for the Favorites panel.

Application pages



Each application connected to the system is presented on panels. The application can be presented as a full page, or in combination with other panels in a multiple panel page.

All application pages are accessed from the **Home** page.

1 Application panel

2 Menu

Panel specific menu.

3 System Controls dialog

Quick access to basic system settings. Display the dialog by a short press on the **Power** key.

4 Dialog

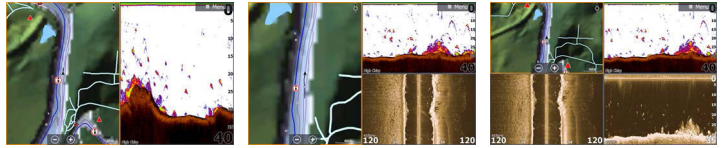
Information to or input from the user.

5 Alarm message

Displayed if dangerous situations or system faults occur.

Split pages

You can have up to 4 panels on each page.



2 panels page

3 panels page

4 panels page

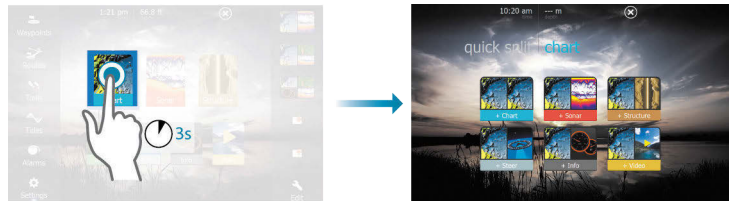
Panel sizes in a split page can be adjusted from the **System Controls** dialog.

Quick split pages

Each full screen application has several pre-configured **quick split** pages, featuring the selected application combined with each of the other panels.

→ **Note:** The number of quick split pages cannot be changed, and the pages cannot be customized or deleted.

Access a **quick split** page by pressing and holding the **application** button on the **Home** page.



Favorite pages

All preconfigured favorite pages can be modified and deleted, and you can create your own. You can have a total of 12 favorite pages.

For more information, refer to *"Adding new favorite pages"* on page 32.

Integration of 3rd party devices

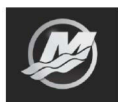
Several 3rd party devices can be connected to the HDS Gen3. The applications are displayed on separate panels or integrated with other panels.

A device connected to the NMEA 2000 network should automatically be identified by the system. If not, enable the feature from the advanced option in the System settings dialog.

The 3rd party device is operated by using menus and dialogs as on other panels.

This manual does not include specific operation instructions for any 3rd party device. For features and functionality, refer to the documentation included with the 3rd party device.

SmartCraft VesselView integration



SmartCraft data can be displayed and interaction are enabled through the unit when a Mercury VesselView® 4, 7, 403, 502, 702, 703, or Link is present on the network.

When the features are enabled, the display may prompt the user for some basic configuration information. Refer to the VesselView® manual or engine supplier for further information.

The engine supplier icon appears on the **Home** page when a device is available.

Suzuki Engine panel



If a Suzuki C10 gauge is available on the network, a Suzuki engine icon is added to the **Home** page. An icon is also added to the Page editor. You can select to display the Suzuki engine panel as a full page panel or as part of a multi-panel page.

The layout and content of the engine panel depends on selected panel size. The digital gauges can be customized, refer to *"Customizing the panel"* on page 99.

FUSION-Link integration

FUSION-Link devices connected to the NMEA 2000 network can be controlled from the HDS Gen3 system.

The FUSION-Link devices appear as additional sources when using the audio function. No additional icons are available.

Refer to *"Audio"* on page 152 for more information.



BEP CZone integration

The HDS Gen3 integrates with BEP's CZone system used for controlling and monitoring a distributed power system on your vessel.

The CZone icon is available in the Tools panel on the **Home** page when a CZone system is available on the network.

A separate manual is provided with your CZone system. Refer to this documentation and to the HDS Gen3 Installation manual for how to install and configure the CZone system.

CZone dashboard

When the CZone is installed and configured, an additional CZone dashboard is added to the Info panels.

You switch between a panel's dashboards by selecting the left and right arrow symbols or by selecting the dashboard from the menu.

Editing a CZone dashboard

You can customize a CZone dashboard by changing the data for each of the gauges. Available editing options depend on the type of gauge and which data sources that are connected to your system.

For more information, refer to *"Info panels"* on page 99.



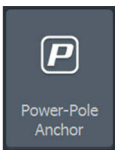
Power-Pole anchors

Power-Pole anchors, which can be controlled by the C-Monster Control System installed on your boat, can be controlled from the HDS Gen3. To control the Power-Poles, you *pair* the Power-Poles with the HDS Gen3 using Bluetooth wireless technology available in both products.

Power-Pole controls

When Power-Poles are paired with the HDS Gen3, the Power-Pole button becomes available in the System Controls dialog. Select it to display the Power-Pole controller.

For pairing Bluetooth devices, refer to *"Pairing Bluetooth devices"* on page 126. If you are pairing dual Power-Poles, also review *"Pairing with dual Power-Poles"* on page 127.

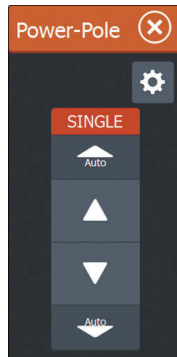


When the Power-Pole controller is opened, the system connects to paired Power-Poles. When the connection is confirmed the control buttons are enabled.

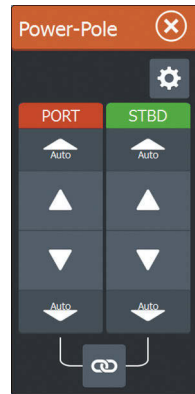
→ **Note:** The controls are grayed out until the system connects with the Power-Poles. Once connected and functional the arrows in the dialog turn white.

The Power-Pole controller displays control buttons for each Power-Pole that is paired to the HDS Gen3.

Single press the Auto buttons to raise and lower the Power-Poles automatically all the way up and down. The manual up and down buttons raise and lower them as quickly, and as high or low as you want.



Single Power-Pole controller



Dual Power-Poles controller



On a dual controller you can raise and lower the Power-Poles separately, or press the sync (links) button to allow for control of both with a single press of the auto buttons or the manual up and down buttons.



Stay connected

Select the Stay connected (cog) button on the Power-Pole controller to open the Power-Pole settings dialog where you can select to stay connected to all paired Power-Pole anchors.

→ **Note:** Selecting to **Stay connected** speeds up access to the controls, but the anchors cannot be controlled from another display when it is selected. Turn off this option to allow connection from other displays.

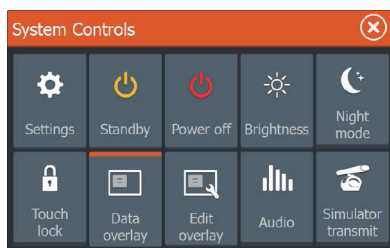
2

Basic operation

System Controls dialog

The System Controls dialog provides quick access to basic system settings. You display the dialog by making a short press on the **Power** key.

The icons displayed on the dialog can vary. For example, the adjust splits option is only available if you are viewing a split page when you open the **System Controls** dialog.



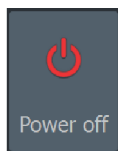
Activating functions

Select the icon of the function you want to set or toggle on or off. For those functions that toggle on and off, an orange bar across the top of the icon indicates the function is activated, as shown in the Data Overlay icon above.

Turning the system on and off

You turn the system on and off by pressing and holding the **Power** key. You can also turn the unit off from the **System Controls** dialog.

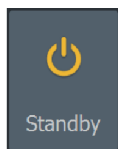
If the **Power** key is released before the shut-down is completed, the power off process is cancelled.



Standby mode

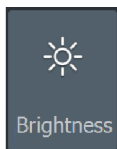
In Standby mode, the Sonar and the backlight for screen and keys are turned off to save power. The system continues to run in the background.

You select Standby mode from the **System Controls** dialog.



Switch from Standby mode to normal operation by a short press on the **Power** key.

Display illumination



Brightness

The display backlighting can be adjusted at any time from the **System Controls** dialog.

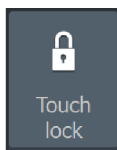
You can also cycle the preset backlight levels by short presses on the **Power** key.

Night mode

The night mode option optimizes the color palette and backlight for low light conditions.

→ **Note:** Details on the chart may be less visible when the Night mode is selected!

Locking the touchscreen



You can temporarily lock a touchscreen to prevent accidental operation of the system. Lock the touchscreen when large amounts of water are on the screen, for example, in heavy seas and weather. This feature is also useful when cleaning the screen while the unit is turned on.

When the touch lock is active you can only operate the unit from the keys.

→ **Note:** To prevent false touchscreen activation, the touchscreen will automatically lock when it detects a significant amount of water on the screen.

You lock the touchscreen from the **System Controls** dialog.

You remove the lock function by a short press on the **Power** key.

Using menus and dialogs

Menus

The menu is used to operate the system and to adjust settings.

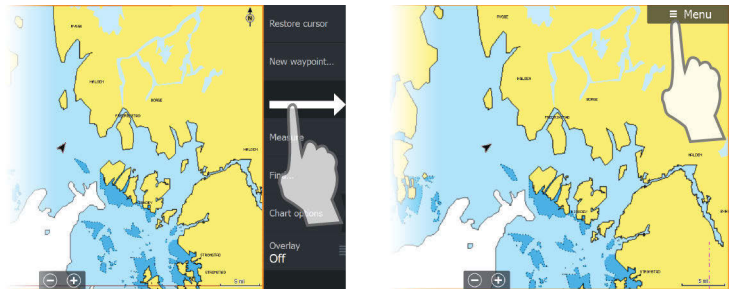
- Activate a menu item and toggle on/off an option by selecting it
- Adjust a slide bar value by either:

- dragging the slide bar
- selecting the **+** or **-** icons

Select the **Back** menu option or the **X** key to return to the previous menu level, and then exit.

Page menus can be hidden to allow pages to be a full screen view. To hide the menu, drag the menu to the right, or press and hold the **Menu** key.

When you hide a menu on one page, the menu on other pages is also hidden. To display the menu again, select the menu option, or press the **Menu** key.



The status of the cursor (active vs. inactive) changes the menu options.

Dialog boxes

Numeric and alphanumeric keyboards are automatically displayed when required for entering user information in dialogs.

A dialog is closed by saving or cancelling the entry.

A dialog can also be closed by selecting the **X** in the dialog's upper right corner or by pressing the **X** key.

Selecting pages and panels

Selecting a page

- Select a full page panel by selecting the relevant application button on the **Home** page
- Select a favorite page by selecting the relevant favorite button
- Select a predefined split panel by pressing and holding the relevant application icon

Select active panel

In a multiple panel page, only one panel can be active at a time. The active panel is outlined with a border.

You can only access the page menu of an active panel.

You activate a panel by:

- Touch operation: tapping the panel
- Key operation: pressing the **Panel** key

Using the cursor on the panel

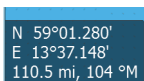
The cursor can be used to measure a distance, to mark a position, and to select items.

By default, the cursor is not shown on the panel.

Position the cursor by tapping the desired location on the screen or by using the **Cursor** keys to move the cursor.

When the cursor is active, the cursor position window is displayed.

To remove the cursor and cursor elements from the panel, press the **X** key or select the **Clear cursor** option.



N 59°01.280'
E 13°37.148'
110.5 mi, 104 °M

GoTo cursor

You can navigate to a selected position on the image by positioning the cursor on the panel, then using the **Goto Cursor** option in the menu.

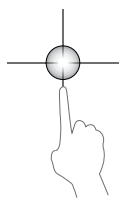
The cursor assist function

The cursor assist function allows for fine tuning and precision placement of the cursor without covering details with your finger.

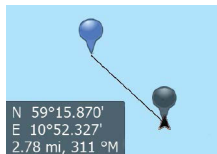
Activate the cursor on the panel, then press and hold your finger on the screen to switch the cursor symbol to a selection circle, appearing above your finger.

Without removing your finger from the screen, drag the selection circle to the desired position.

When you remove your finger from the screen the cursor reverts to normal cursor operation.



Measuring distance



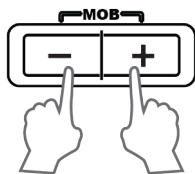
The cursor can be used to measure the distance between your vessel and a selected position, or between 2 points on the chart panel.

1. Position the cursor on the point from where you want to measure the distance. Start the measure function from the menu
 - The measuring icons appear with a line drawn from the vessel center to the cursor position, and the distance is listed in the cursor information window.
 2. You can reposition the measuring points by dragging either icon as long as the measuring function is active
- **Note:** The bearing is always measured from the grey icon to the blue icon.

You can also start the measuring function without an active cursor. Both measuring icons are then initially located at the vessel position. The grey icon follows the vessel as the vessel moves, while the blue icon remains at the position given when you activated the function.

You terminate the measuring function by selecting the **Finish measuring** menu option.

Creating a Man Overboard waypoint

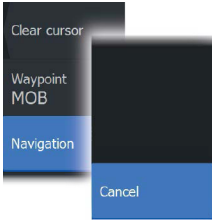


If an emergency situation should occur, you can save a Man Overboard (MOB) waypoint at the vessel's current position by pressing the **Zoom In (+)** and **Zoom out (-)** keys simultaneously.

When you activate the MOB function the following actions are automatically performed:

- a MOB waypoint is created at the vessel's position
- the display switches to a zoomed chart panel, centered on the vessel's position
- the system displays navigation information back to the MOB waypoint

Multiple MOB waypoints are saved by repeatedly pressing the **MOB** buttons. The vessel continues to show navigation information to the initial MOB waypoint. Navigation to subsequent MOB waypoints needs to be done manually.

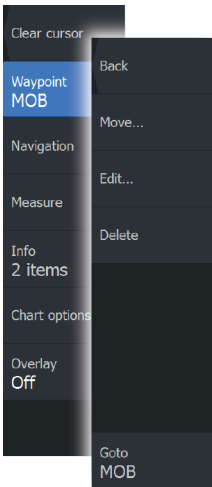


Cancel navigation to MOB

The system continues to display navigational information towards the MOB waypoint until you cancel the navigation from the menu.

Display MOB waypoint information

You can display MOB information by selecting the MOB waypoint and then the MOB waypoint pop-up.

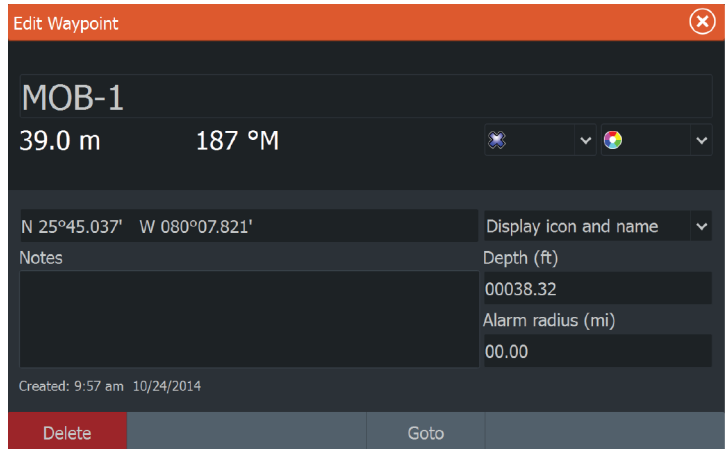


The MOB waypoint menu option

When an MOB waypoint is activated, you can use the **Waypoint MOB** menu option to:

- **Move** it on the panel
- **Edit** its attributes
- **Delete** it
- **Goto** it

When you select the Edit menu option the Edit Waypoint dialog opens.



Screen capture

Simultaneously press the **Pages** and **Power** keys to take a screen capture. Screen captures are saved to internal memory.

To view files, refer to *"Files"* on page 173.

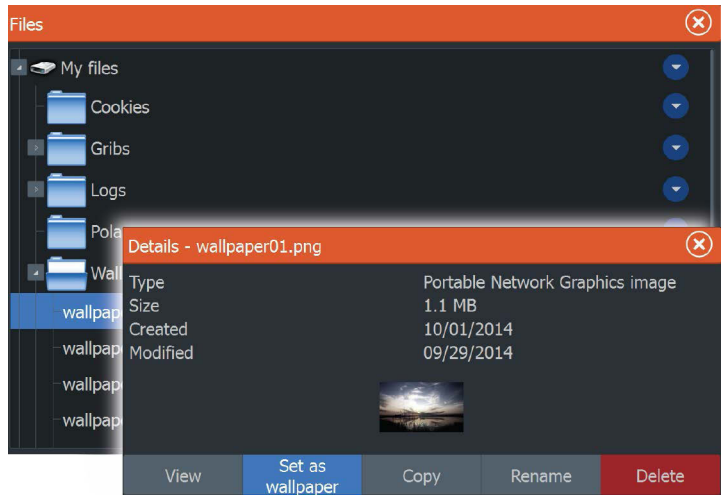
3

Customizing your system

Customizing the Home page wallpaper

The Home page's wallpaper can be customized. You can select one of the pictures included with the system, or you can use your own picture in .jpg or .png format.

The images can be available on any location that can be seen in the files browser. When a picture is chosen as the wallpaper, it is automatically copied to the Wallpaper folder.

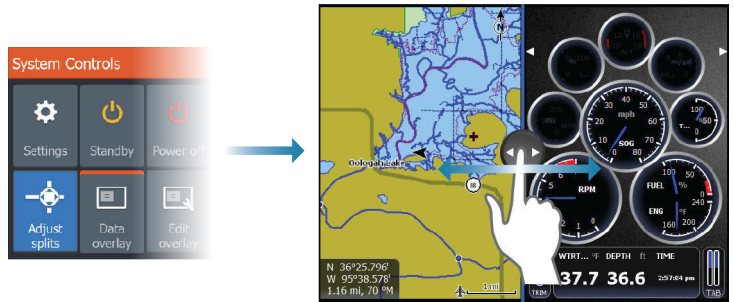


Adjusting panel size

You can change the panel size for an active split page. The panel size can be adjusted for both favorite pages and for predefined split pages.

1. Activate the **System Controls** dialog
2. Select the adjust splits option in the dialog
3. Adjust the panel size by:
 - Touch operation: dragging the adjustment icon
 - Key operation: using the **Cursor** keys to move the adjustment icon

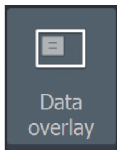
4. Confirm your changes by tapping one of the panels, selecting the save option in the menu, or by pressing the **Enter** key.



The changes are saved to the active favorite or split page.

Data Overlay

You can have data information as overlay on a page. The information can be any data available on the network.



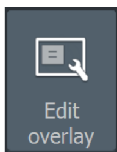
Turning Data overlay on and off

You can turn overlay data on or off for any active page by selecting the **Data overlay** icon on the **System Controls** dialog. When Data overlay is on, an orange bar appears above the icon.

Edit overlay data

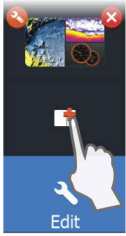
Use the **Edit overlay** option on the **System Controls** dialog to access edit menu options to:

- Add a new data overlay to the active panel.
- Delete a selected data overlay.
- Change a selected data overlay to display different data.
- Configure a selected data overlay appearance (digital or analog, size, etc).
- Re-locate an item by selecting and moving it.



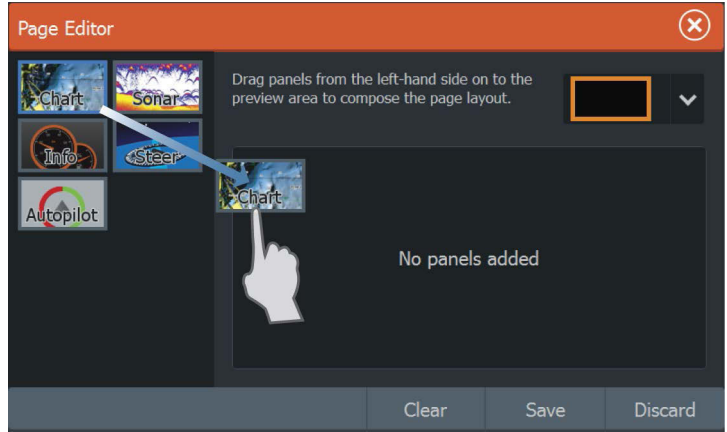
Adding new favorite pages

1. Select the **New** icon in the favorite panel on the **Home** page to open the page editor dialog

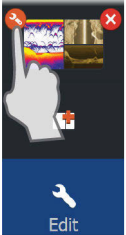


2. Drag and drop page icons to set up a new page
3. Change the panel arrangement (only possible for 2 or 3 panels), if required
4. Save the page layout.

The system displays the new favorite page, and the new page is included in the list of favorite pages on the **Home** page.



Edit favorite pages



1. Select the edit icon in the Favorite panel:
 - Select the X icon on a favorite icon to remove the page
 - Select the tool icon on a favorite icon to display the page editor dialog
2. Add or remove panels in the page editor dialog
3. Save or discard your changes to leave the favorite edit mode.

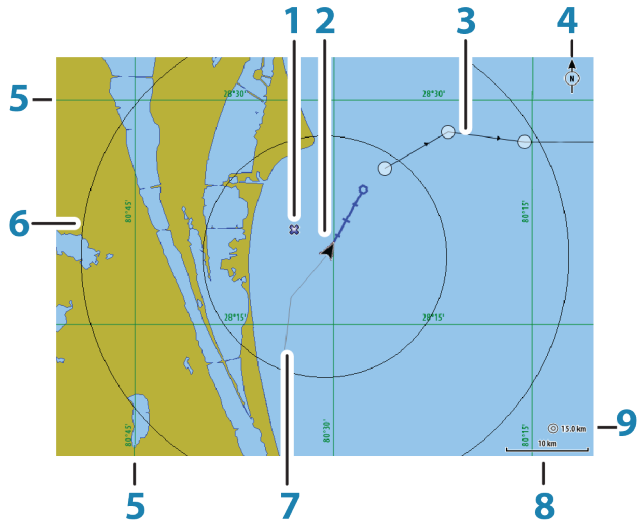
4

Charts

The chart function displays your vessel's position relative to land and other chart objects. On the chart panel you can plan and navigate routes, place waypoints, and display AIS targets.

You can overlay a radar image, a StructureScan image or weather information.

The Chart panel



- 1 Waypoint*
- 2 Vessel with extension line (extension line is optional)
- 3 Route*
- 4 North indicator
- 5 Grid lines*
- 6 Range rings*
- 7 Trail*
- 8 Chart range scale
- 9 Range rings interval (only displayed when Range rings are turned on)

* Optional chart items. You turn the optional chart items on/off individually from the Chart settings dialog.

Chart data

The system is delivered with different embedded cartography depending on region.

All units support Insight charts from Navico including Insight Genesis. The system also supports charts from Navionics and C-MAP as well as content created by a variety of third party mapping providers in the AT5 format. For a full selection of available charts, visit www.gofreeshop.com, www.c-map.com, or www.navionics.com.

- **Note:** In this manual, all possible chart menu options are described. These options vary depending on the chart you are using.
- **Note:** Insight charts are referred to as Lowrance in the menu.

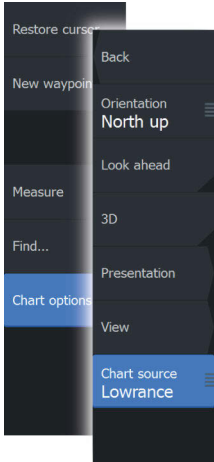
Charts on chart cards are shared over the Ethernet network, so only one chart card per vessel is required.

- **Note:** The system does not automatically switch to embedded cartography if the chart card is removed. A low-resolution chart will be displayed until you re-insert the card or manually switch back to the embedded cartography.

Showing dual chart types

If you have different chart types available - embedded, in the card slot, or on the Ethernet network - you can show two different chart types simultaneously on a page with two chart panels.

You can select a dual chart panel by pressing and holding the Chart application button on the **Home** page, or by creating a favorite page with two chart panels.



Selecting chart type

You specify the chart type in the Chart panel by selecting one of the available chart types in the chart source menu option.

If you have a multiple Chart panel, the chart type is set individually for each chart panel. Activate one of the chart panels, and then select one of the available chart types in the chart source menu option. Repeat the process for the second chart panel, and select an alternative chart type for this panel.

Panning the chart

You can move the chart in any direction by:

- Touch operation: dragging your finger on the screen
- Key operation: using the **Cursor** keys to move the cursor to the edge of the chart panel in the desired direction

Select the **Clear cursor** menu option or press the **X** key to remove the cursor and cursor window from the panel. This also centers the chart to the vessel position.

Vessel symbol

When the system has a valid GPS position lock, the vessel symbol indicates vessel position. If no GPS position is available, the vessel symbol includes a question mark.

→ **Note:** Without a heading sensor on the network, the vessel icon orientates itself using COG (Course over Ground).

Chart scale

You zoom in and out on the chart by using the zoom (+ or -) buttons, the + or - keys, or two fingers to pinch (zoom out) and spread (zoom in).

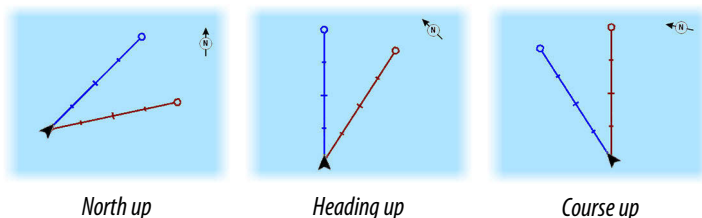
Chart range scale and range rings interval (when turned on) are shown in the lower right corner of the chart panel.



Positioning the vessel on the chart panel

Chart orientation

Several options are available for how the chart is rotated in the panel. The chart orientation symbol in the panel's upper right corner indicates the north direction.



North up

Displays the chart with north upward.

Heading up

Displays the chart with the vessel's heading directed upward. Heading information is received from a compass. If heading is not available, then the COG from the GPS is used.

Course up

Displays the chart with the direction the vessel is ACTUALLY traveling directed upward, which in some cases is not the direction the vessel is headed.

Look ahead

Moves the vessel icon closer to the bottom of the screen so that you can maximize your view ahead.

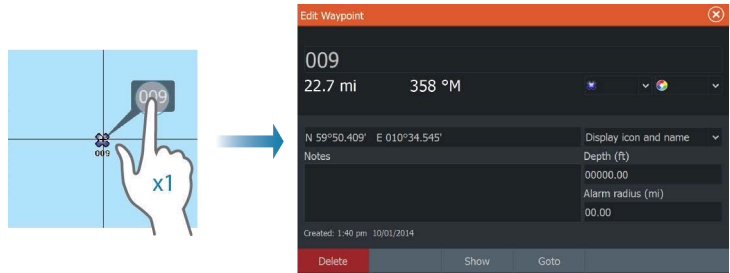
Displaying information about chart items

When you select a chart item, a waypoint, a route, or a target, basic information for the selected item is displayed. Select the chart item's pop-up to display all available information for that item. You can also activate the detailed information dialog from the menu.

→ **Note:** If you are viewing applicable C-MAP charts on your system, you can select marine objects to display information

about services and available multimedia (photos) associated with the location or object.

→ **Note:** Pop-up information has to be enabled in chart settings to see basic item information.



Using the cursor on the chart panel

By default, the cursor is not shown on the chart panel.

When you activate the cursor, the cursor position window is displayed. When the cursor is active, the chart does not pan or rotate to follow the vessel.

Press the **X** key or select the **Clear cursor** menu option to remove the cursor and the cursor window from the panel. This also centers the chart to the vessel position.

Select the **Restore cursor** menu option to display the cursor in its previous location. The **Clear cursor** and **Restore cursor** options are useful features for toggling between the vessel's current location and the cursor position.

Creating routes

You can create routes as follows on the chart panel.

1. Position the cursor on the chart panel
2. Select **New** followed by **New route** in the menu
3. Continue positioning the remaining routepoints
4. Save the route by selecting the save option in the menu.

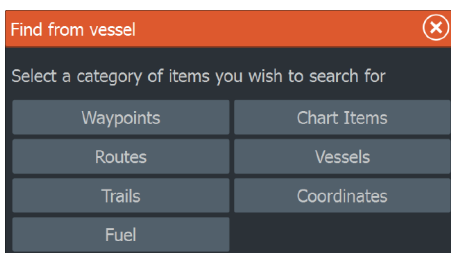
→ **Note:** For more information, refer to *"Waypoints, Routes, and Trails"* on page 54.

N 59°01.280'
E 13°37.148'
110.5 mi, 104 °M

Find objects on chart panels

You can search for other vessels or various chart items from a chart panel.

Activate the cursor on the panel to search from the cursor position. If the cursor is not active, the system searches for items from the vessel's position.



→ **Note:** You must have a SIRIUS data package subscription to search for fueling stations and an AIS receiver connected to search for vessels.

3D charts

The 3D option provides a three dimensional graphical view of land and sea contours.

→ **Note:** All chart types work in 3D mode, but without 3D cartography for the appropriate area the chart appears flat.

When the 3D chart option is selected, the Pan and the Rotate icons appear on the chart panel.

Panning the 3D chart



You can move the chart in any direction by selecting the Pan icon and then panning in the desired direction.

Select the **Return to vessel** menu option to stop panning, and to center the chart to vessel position.

Controlling the view angle



You can control the view angle by selecting the Rotate icon and then panning the chart panel.

- To change the direction you are viewing, pan horizontally
 - To change the tilt angle of the view, pan vertically
- **Note:** When centered on the vessel position, only the tilt angle can be adjusted. The view direction is controlled by the chart orientation setting. See "*Positioning the vessel on the chart panel*" on page 37.

Zooming a 3D chart

You zoom in and out on a 3D chart by using the zoom (+ or -) buttons, by using the + and - keys, or the touch method of pinching and spreading your fingers.

Chart overlay

Radar, structure, SonarChart Live (Navionics charts only) and weather data can be displayed as overlay on your chart panel.

- **Note:** Weather overlay is currently only available in the United States.

When an overlay is selected, the chart menu expands to include basic menu functions for the selected overlay.

Radar, structure and weather functions are described in separate sections in this manual. For more information about SonarChart Live, see section "*SonarChart Live*" on page 46.

Insight and C-MAP charts

All possible menu options for Insight and C-MAP charts are described below. The features and menu options available can vary depending on the charts you use. This section shows menus from an Insight chart.

- **Note:** A menu option is greyed out if it is not available on the chart displayed. For example, raster charts are not available with Insight, so the Raster charts menu option is greyed out when Insight charts are displayed.

Insight and C-MAP tides and currents

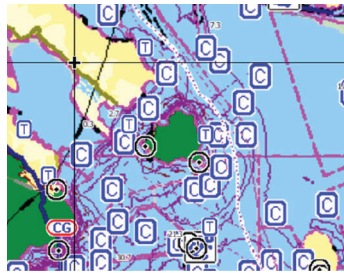
The system can display Insight and C-MAP tides and currents. With this information it is possible to predict the time, level, direction and

strength of currents and tides. This is an important tool when considering planning and navigation of a trip.

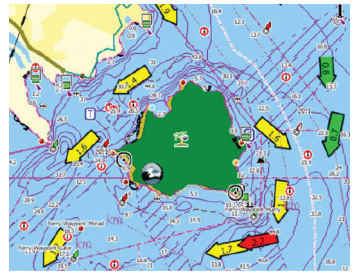
In large zoom ranges the tides and currents are displayed as a square icon including the letter **T** (Tides) or **C** (Current). When you select one of the icons, tidal or current information for that location are displayed.

Dynamic current data can be viewed by zooming inside a 1-nautical mile zoom range. At that range, the Current icon changes to an animated dynamic icon that shows the speed and direction of the current. Dynamic icons are colored in black (greater than 6 knots), red (greater than 2 knots and less than or equal to 6 knots), yellow (greater than 1 knot and less than or equal to 2 knots) or green (equal to or less than 1 knot), depending on the current in that location.

If there is no current (0 knots) this will be shown as a white, square icon.



Static Current and Tide icons



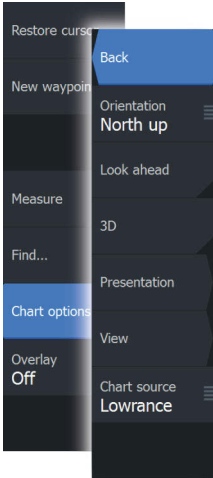
Dynamic Current icons

Insight and C-MAP specific chart options

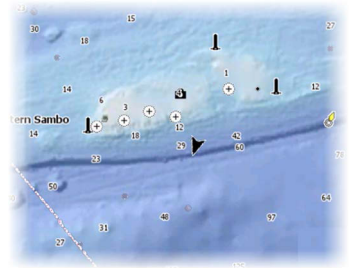
Orientation, Look ahead, 3D, and change Chart source (previously described in this section) are common for all chart types.

Presentation

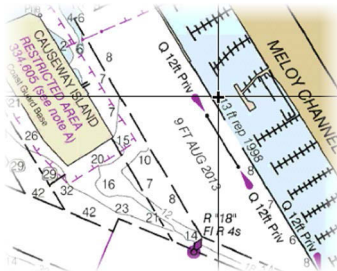
The charts can be displayed in different imagery styles.



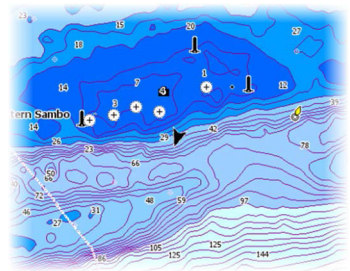
Shaded relief



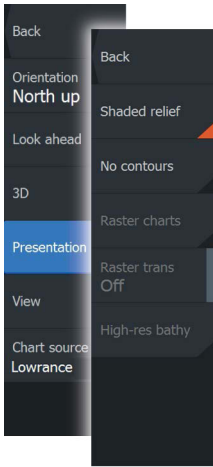
No contours



Raster imagery



High resolution bathymetry



Shaded relief

Shades seabed terrain.

No contours

Removes contour lines from the chart.

Raster charts

Changes the view to that of a traditional paper chart.

Raster transparency

Controls the transparency of raster imagery.

High resolution bathymetry

Enables and disables higher concentration of contour lines.

Insight and C-MAP view options

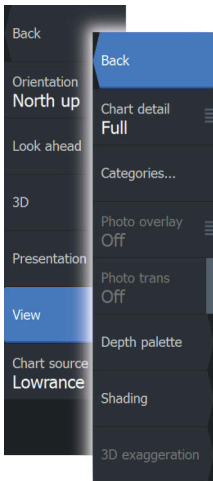


Chart detail

- **Full**
All available information for the chart in use.
- **Medium**
Minimum information sufficient for navigation.
- **Low**
Basic level of information that cannot be removed, and includes information that is required in all geographic areas. It is not intended to be sufficient for safe navigation.

Insight and C-MAP chart categories

Insight and C-MAP charts include several categories and sub-categories that you can turn on/off individually depending on which information you want to see.

Photo overlay

Photo overlay enables you to view satellite photo images of an area as an overlay on the chart. The availability of such photos is limited to certain regions, and cartography versions.

You can view photo overlays in either 2D or 3D modes.



No Photo overlay

Photo overlay, land only

Full Photo overlay

Photo transparency

The Photo transparency sets the opaqueness of the photo overlay. With minimum transparency settings the chart details are almost hidden by the photo.



Minimum transparency

Transparency at 80

Depth palette

Controls the Depth palette used on the map.

Paper chart

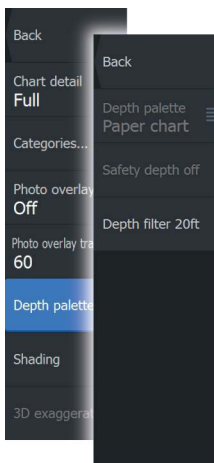
Changes the appearance of the map to a paper chart style.

Safety depth

Inspired and C-MAP charts use different shades of blue to distinguish between shallow (lighter shades) and deep (darker shades) water. After enabling Safety depth, specify the desired safety depth limit. The Safety depth sets the limit at which depths will be drawn without blue shading.

Depth filter

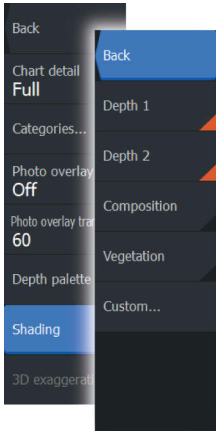
Filters out depth values shallower than the selected depth filter limit.



Shading

Shades different areas of the seabed, depending on the selected Shading category.

→ **Note:** Composition and Vegetation shading are not applicable to C-MAP charts.



Depth 1 and Depth 2

Depth presets that shade different depths in different colors.

Custom

You can adjust the depth threshold, color and opacity (transparency) of color shading for Depth 1 and Depth 2.

| Depth (m) | Color | Opacity (%) |
|-----------|------------|-------------|
| 0 | Blue | 100 |
| 12 | Dark Blue | 100 |
| 24 | Blue | 100 |
| 37 | Blue | 100 |
| 49 | Light Blue | 100 |
| 61 | Light Blue | 100 |
| 73 | Light Blue | 100 |

3D exaggeration

Graphical settings that are available in 3D mode only. Exaggeration is a multiplier applied to the drawn height of hills on land, and troughs in water to make them look taller or deeper.

→ **Note:** This option is grayed out if the data is not available in the map card inserted.

Navionics charts

Some Navionics features require the most current data from Navionics. For those features, a message is displayed stating that the

feature is unavailable if you do not have the appropriate Navionics charts or chart card inserted. For more information on what is required for these features, refer to www.navionics.com

Navionics specific chart options

Orientation, Look ahead, 3D and change Chart source (previously described in this section) are common for all chart types.

Community edits

Toggles on the chart layer including Navionics edits. These are user information or edits uploaded to Navionics Community by users, and made available in Navionics charts.

For more information, refer to Navionics information included with your chart, or to Navionics website: www.navionics.com.

SonarChart Live

SonarChart Live is a real-time feature where the device creates an overlay of depth contours based on your own live sonar soundings.

In the Navionics chart menu, select **Overlay** and then **SonarChart Live** to display it as an overlay on the chart.

When you select SonarChart Live overlay the menu expands to display SonarChart Live Options. Use the options to set the transparency and minimum depth.

Transparency

The SonarChart Live overlay is drawn on top of other chart data. The chart data is completely covered at minimum transparency. Adjust the transparency to allow the chart details to be seen.

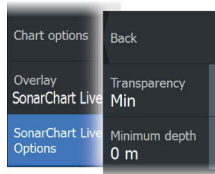
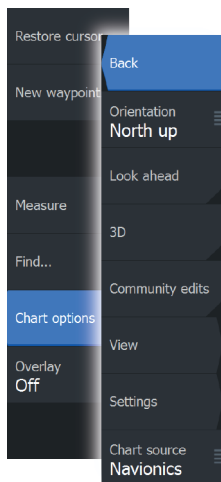
Minimum depth

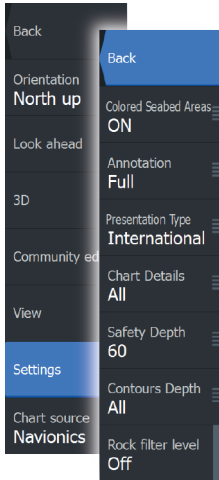
Adjusts what SonarChart Live rendering treats as the safety depth. This affects the coloring of the SonarChart Live area. As the vessel approaches the safety depth, the SonarChart Live area will gradually change from a simple grey/white to red.

Navionics chart settings

Colored seabed areas

Used for displaying different depth areas in different shades of blue.





Presentation type

Provides marine charting information such as symbols, colors of the navigation chart and wording for either International or U.S. presentation types.

Annotation

Determines what area information, such as names of locations and notes of areas, is available to display.

Chart details

Provides you with different levels of geographical layer information.

Safety depth

The Navionics charts use different shades of blue to distinguish between shallow and deep water.

Safety depth, based on a selected limit, is drawn without blue shading.

→ **Note:** The built in Navionics database features data down to 20 m, after which it is all white.

Contours depth

Determines which contours you see on the chart down to the selected safety depth value.

Rock filter level

Hides rock identification on the chart beneath a given depth.

This helps you to declutter charts in areas where there are many rocks located at depths well below your vessel's draught.

Navionics view options

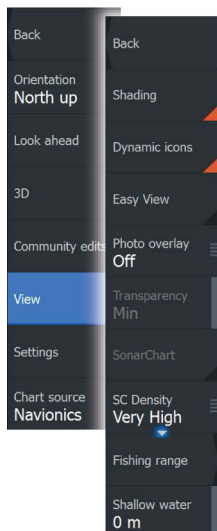


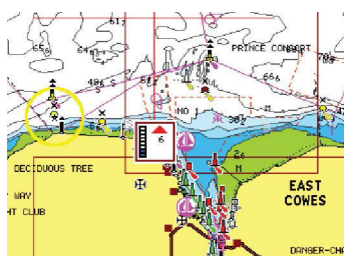
Chart shading

Shading adds terrain information to the chart.

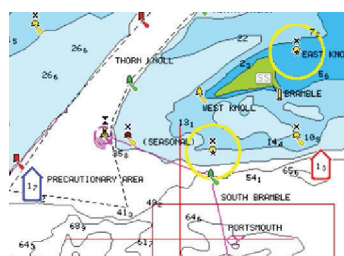
Navionics dynamic tide and current icons

Shows tides and currents with a gauge and an arrow instead of the diamond icons used for static tides and current information.

The tide and current data available in Navionics charts are related to a specific date and time. The system animates the arrows and/or gauges to show the tides and currents evolution over time.



Dynamic tide information



Dynamic current information

The following icons and symbology are used:



Current speed

The arrow length depends on the rate, and the symbol is rotated according to flow direction. Flow rate is shown inside the arrow symbol. The red symbol is used when current speed is increasing, and the blue symbol is used when current speed is decreasing.



Tide height

The gauge has 8 labels and is set according to absolute max/min value of the evaluated day. The red arrow is used when tide is rising, and the blue arrow is used when tide is falling.

→ **Note:** All numeric values are shown in the relevant system units (unit of measurement) set by user.

Easy View

Magnifying feature that increases the size of chart items and text.

→ **Note:** There is no indication on the chart showing that this feature is active.

Photo overlay

Photo overlay enables you to view satellite photo images of an area as an overlay on the chart. The availability of such photos is limited to certain regions, and cartography versions.

You can view photo overlays in either 2D or 3D modes.



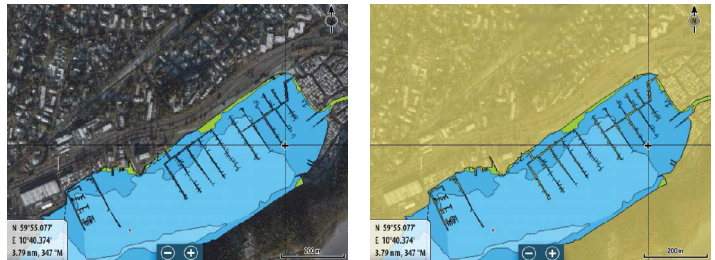
No Photo overlay

Photo overlay, land only

Full Photo overlay

Photo transparency

The Photo transparency sets the opaqueness of the photo overlay. With minimum transparency settings the chart details are almost hidden by the photo.



Minimum transparency

Maximum transparency

SonarChart

The system supports the Navionics SonarChart feature.

SonarChart displays a bathymetry map showing high resolution contour detail and standard navigational data. For more information, refer to www.navionics.com.

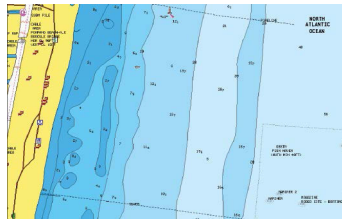
SC Density

Controls the density of the SonarChart and SonarChart Live contours.

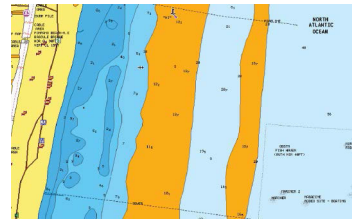
Fishing range

Select a range of depths between which Navionics fills with a different color.

This allows you to highlight a specific range of depths for fishing purposes. The range is only as accurate as the underlying chart data, meaning that if the chart only contains 5 meter intervals for contour lines, the shading is rounded to the nearest available contour line.



No Depth highlight range

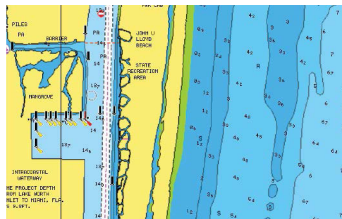


Depth highlight range: 6 m - 12 m

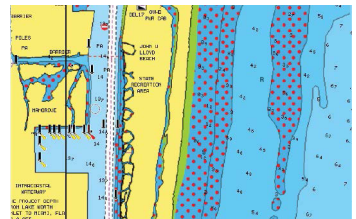
Shallow water highlight

Highlights areas of shallow water.

This allows you to highlight areas of water between 0 and the selected depth (up to 10 meters/30 feet).



No shallow water highlighted



Shallow water highlight: 0 m - 3 m

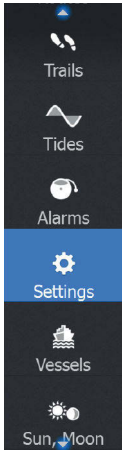
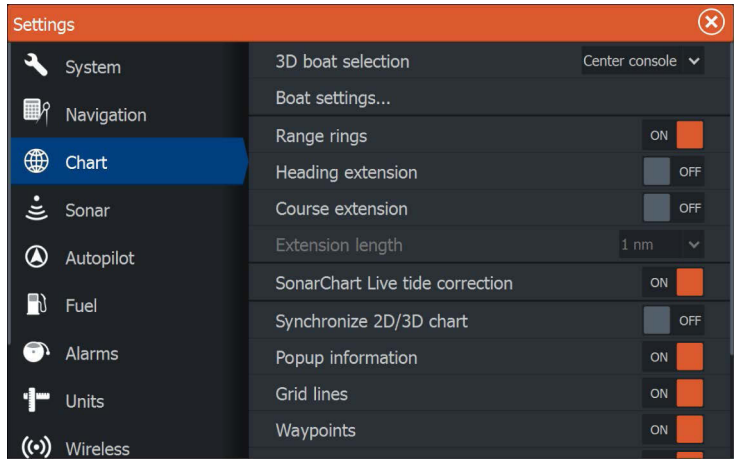


Chart settings

Settings and display options made in the Chart settings page are common for all chart panels.



3D boat selection

Determines which icon to use on 3D charts.

Boat settings

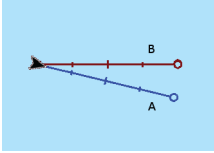
The boat settings are used when calculating an automatic route. The boat's draught, width and height must be input to use Navionics Dock-to-dock autorouting and easy routing features.

→ **Note:** Dock-to-dock Autorouting is not available in Insight units, or in any unit used in U.S. territorial waters.

Range Rings

The range rings can be used to present the distance from your vessel to other chart objects.

The range scale is set automatically by the system to suit the chart scale.



Extension lines

Sets the lengths of the heading and course extension lines for your vessel. For setting extension line lengths on other vessels shown as AIS targets, refer to AIS "*Course extension lines*" on page 150 lines.

A: Heading

B: Course Over Ground (COG)

The lengths of the extension lines are either set as a fixed distance, or to indicate the distance the vessel moves in the selected time period. If no options are turned on for the vessel then no extension lines are shown for your vessel.

Your vessel heading is based on information from the active heading sensor and the COG is based on information from the active GPS sensor.

SonarChart Live tide correction

When selected, the tide correction feature uses information from nearby tide stations (if available) to adjust the depth values used by SonarChart Live as the sonar is recorded.

Synchronize 2D/3D chart

Links the position shown on one chart with the position shown on the other chart when a 2D and a 3D chart are shown side by side.

Pop-up information

Selects whether basic information for chart items is displayed when you select the item.

Grid lines

Turns on/off viewing of longitude and latitude grid lines on the chart.

Hide chart

If the option is set to ON when viewing a Lowrance chart, the chart (background) is not displayed and only the vessel, extensions, waypoints, and routes are displayed on a white background.

Waypoints, Routes, Trails

Turns on/off displaying of these items on chart panels. Also opens the Waypoints, Routes and Trails dialogs you can use to manage them.

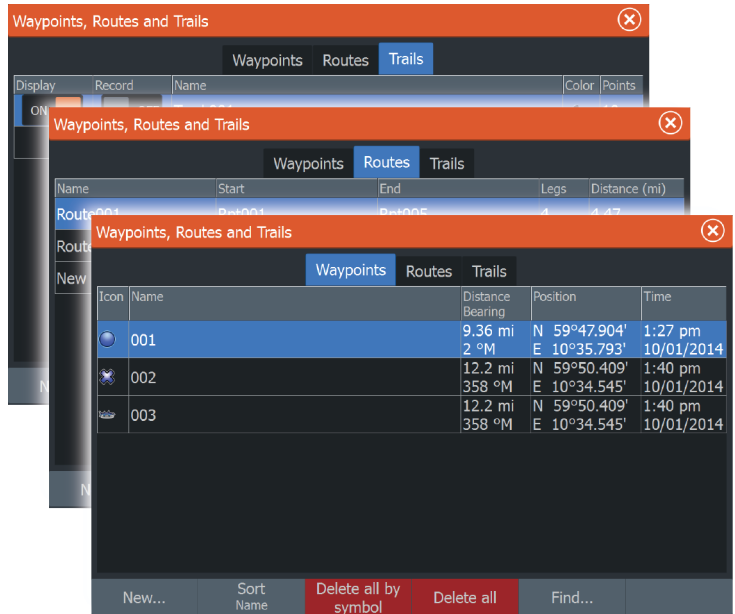
5

Waypoints, Routes, and Trails

Waypoints, Routes, and Trails dialogs

The Waypoints, Routes, and Trails dialogs give access to advanced edit functions and settings for these items.

The dialogs are accessed from the **Tools panel** on the **Home** page.

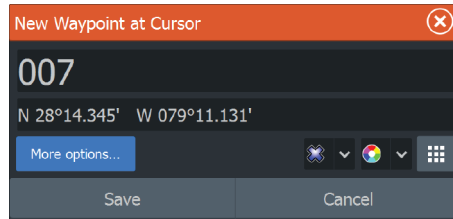
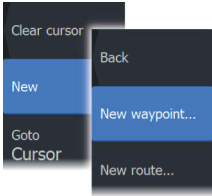


Waypoints

A waypoint is a user generated mark positioned on a chart, on a radar image or on the Sonar image. Each waypoint has an exact position with latitude and longitude coordinates. A waypoint positioned on the Sonar image has a depth value, in addition to position information. A waypoint is used to mark a position you later may want to return to. Two or more waypoints can also be combined to create a route.

Saving waypoints

You can save a waypoint at a selected location by positioning the cursor on the panel, and then selecting the new waypoint option in the menu.



You can also save a waypoint by pressing the Waypoint key:

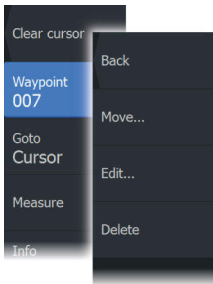
- Press once to display the New Waypoint dialog
- Press twice to quickly save a waypoint. If the cursor is active, the waypoint is saved at the cursor position. If the cursor is not active, the waypoint is saved at your vessel's position.

New Waypoint dialog

- **More options** button - Displays more details dialog where you can change the waypoint name and add notes, specify to display or hide the waypoint icon and name, select the waypoint symbol and waypoint symbol color, note the depth, and specify alarm radius.
- **Waypoint symbols** button - Displays waypoint symbol alternatives for selection.
- **Waypoint symbol colors** button - Displays waypoint symbol coloring alternatives for selection.
- **New waypoint** button - When selected, the dialog with waypoint symbol alternatives is displayed. Selecting a waypoint symbol creates the waypoint at cursor or vessel position with the selected symbol. This mode is persistent, the next time you create a new waypoint the same dialog opens and if you select a symbol a waypoint is created with the symbol. Instead of selecting a symbol, select the menu button in the bottom-right corner to return to the previous New Waypoint dialog. This selection becomes the persistent mode, the next

time you create a new waypoint the New Waypoint dialog is displayed.

- **Save** button - (Only available from the New Waypoint and more options dialogs.) Saves the waypoint and closes the New Waypoint dialog.
- **Cancel** button - (Only available from the New Waypoint dialog.) Cancels the waypoint creation and closes the New Waypoint dialog.



Moving a waypoint

1. Select the waypoint you want to move. The waypoint icon expands to indicate that it is active.
2. Activate the menu and select the waypoint in the menu
3. Select the move option
4. Select the new waypoint position
5. Press the **Enter** key to confirm the new position.

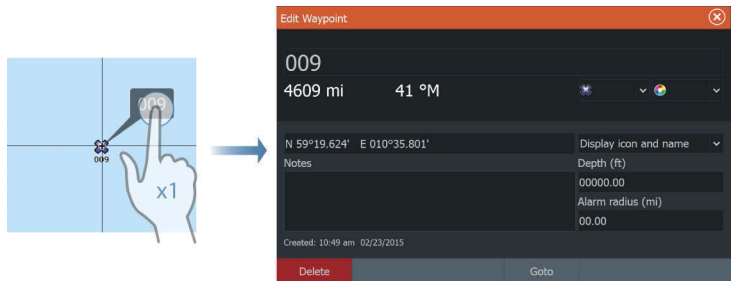
The waypoint is now automatically saved at the new position.

Edit a waypoint

You can edit all information about a waypoint from the **Edit Waypoint** dialog.

This dialog is activated by selecting the waypoint's pop-up, or from the menu when the waypoint is activated.

The dialog can also be accessed from the Waypoints tool on the **Home** page.



Delete a waypoint

You can delete a waypoint from the **Edit Waypoint** dialog or by selecting the **Delete** menu option when the waypoint is activated.

You can also delete waypoints from the Waypoints tool on the **Home** page.

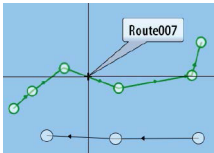
You can delete MOB waypoints the same way.

Waypoint alarm settings

You can set an alarm radius for each individual waypoint you create. The alarm is set in the **Edit Waypoint** dialog.

→ **Note:** The waypoint radius alarm must be toggled ON in the alarm dialog to activate an alarm when your vessel comes within the defined radius. For more information, refer to *"Alarms dialog"* on page 176.

Routes

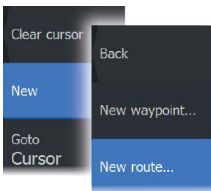


A route consists of a series of routepoints entered in the order that you want to navigate them.

When you select a route on the chart panel it turns green, and the route name is displayed.

The system includes support for Navionics Autorouting and C-MAP Easy Routing. This feature automatically suggests routepoints between the first and last routepoint of a route, or between selected routepoints in a complex route. You can use the feature when you create a new route, or you can use it to edit already saved routes.

Creating a new route on the chart panel



1. Activate the cursor on the chart panel
2. Select the new route option from the menu
3. Position the first waypoint on the chart panel
4. Continue positioning new routepoints on the chart panel until the route is completed
5. Save the route by selecting the save option in the menu.

Edit a route from the chart panel

1. Select the route to make it active
2. Select the route edit option in the menu
3. Position the new routepoint on the chart panel:
 - If you set the new routepoint on a leg, a new point is added between existing routepoints

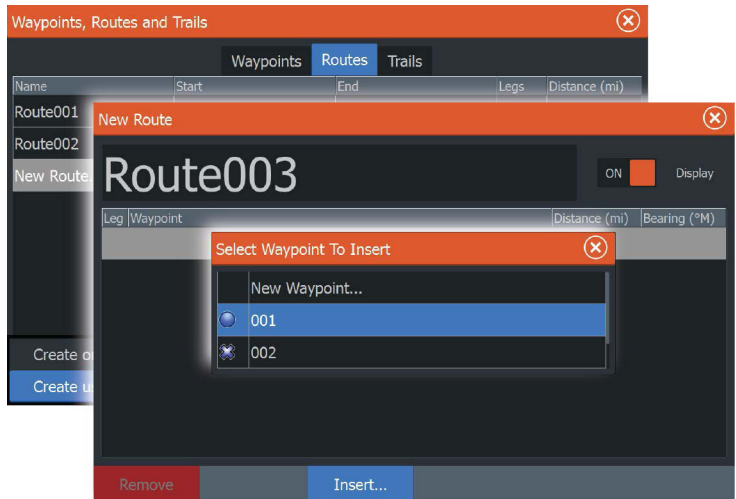
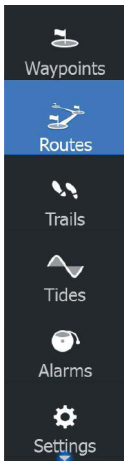
- If you set the new routepoint outside the route, the new routepoint is added after the last point in the route
 - 4. Drag a routepoint to move it to a new position
 - 5. Save the route by selecting the save option in the menu.
- **Note:** The menu changes depending on the selected edit option. All edits are confirmed or cancelled from the menu.

Delete a route

You can delete a route by selecting the **Delete** menu option when the route is activated. You can also delete routes from the Routes tool on the **Home** page.

Creating routes using existing waypoints

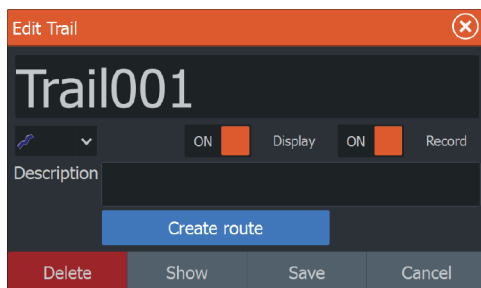
You can create a new route by combining existing waypoints from the **Routes** dialog. The dialog is activated by using the **Routes** tool on the **Home** page.



Converting Trails to Routes

You can convert a trail to a route from the Edit Trail dialog. The dialog is activated by activating the trail, then selecting the trail's pop-up, or the **Trail** menu option.

The Edit Trails dialog can also be accessed by selecting the Trails tool on the **Home** page.



Dock-to-dock Autorouting and Easy Routing

The Dock-to-dock Autorouting and Easy Routing suggest new routepoint positions based on information in the map and on your boat's size. Before you can start using this feature the boat draught, width and height must be entered into the system. The boat settings dialog is automatically displayed if the information is missing when you start the feature.

- **Note:** Units designed for sale in the U.S. region do not have Autorouting capabilities. Autorouting features are disabled on all non-U.S. units when they are used in U.S. territorial waters.
 - **Note:** It is not possible to start the Dock-to-dock Autorouting or Easy Routing if one of the selected routepoints is located in an unsafe area. A warning dialog is displayed, and you have to move the relevant routepoint(s) to a safe area to proceed.
 - **Note:** If no compatible cartography is available, the Dock-to-dock Autorouting or Easy Routing menu option is not available. Compatible cartography includes C-MAP MAX-N+, Navionics+ and Navionics Platinum. For a full selection of available charts, visit www.gofreemarine.com, www.c-map.com or www.navionics.com.
1. Position at least two routepoints on a new route, or open an existing route for editing.
 2. Select **Dock-to-dock Autorouting**, followed by:
 - **Entire Route** if you want the system to add new routepoints between the first and the last routepoint of the open route.

- **Selection** if you want to manually select the routepoints that define the limits for the autorouting, then select the relevant routepoints. Selected routepoints are colored red. Only two routepoints can be selected, and the system discards any routepoints between your selected start and end points.
- 3. Select **Accept** to start the automatic routing.
 - When the automatic routing is completed the route appears in preview mode, and the legs are color coded to indicate safe or unsafe areas. Navionics uses red (unsafe) and green (safe), while C-MAP uses red (unsafe), yellow (dangerous) and green (safe).
- 4. Move any routepoints if required when the route is in preview mode.
- 5. Select **Keep** to accept the routepoints positions.
- 6. Eventually repeat step 2 (**Selection**) and step 3 if you want the system to automatically position routepoints for other parts of the route.
- 7. Select **Save** to complete the automatic routing and save the route.

Dock-to-dock Autorouting and Easy Routing examples

- **Entire route** option used when first and last route points are selected.



First and last routepoint



Result after automatic routing

- **Selection** option used for autorouting part of a route.



Two routepoints selected



Result after automatic routing

The Edit Route dialog

You can add and remove routepoints from the **Edit Route** dialog. This dialog is activated by selecting an active route's pop-up or from the menu.

The dialog can also be accessed by using the **Routes** tool on the **Home** page.

Edit Route
✕

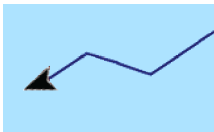
Route002

ON Display

| Leg | Waypoint | Distance (mi) | Bearing (°M) |
|-----|----------|---------------|--------------|
| 0 | Rpt006 | | |
| 1 | Rpt007 | 0.68 | 44 |
| 2 | Rpt008 | 1.32 | 126 |
| 3 | Rpt009 | 1.25 | 158 |

Remove
Insert...

Trails



Trails are a graphical presentation of the historical path of the vessel, allowing you to retrace where you have travelled. Trails can be converted to routes from the **Edit** dialog.

From the factory, the system is set to automatically track and draw the vessel's movement on the chart panel. The system continues to record the Trails until the length reaches the maximum points, and then automatically begins overwriting the oldest points.

The automatic tracking function can be turned off from the Trails dialog.

Creating new Trails

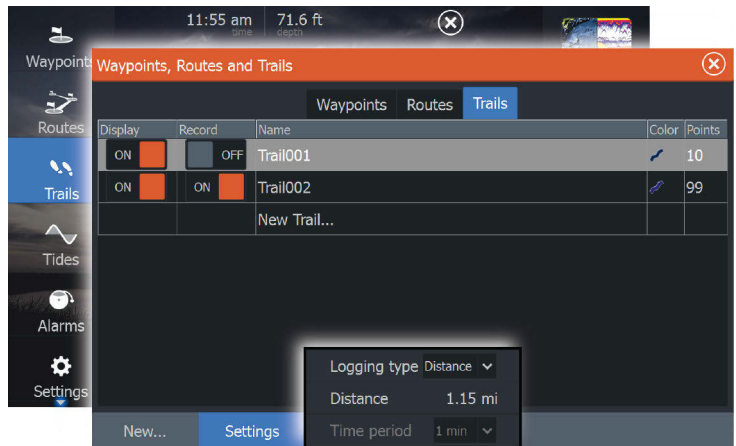
You can start a new trail from the **Trails** dialog, activated by using the **Trails** tool on the **Home** page.

Trails settings

Trails are made up of a series of points connected by line segments whose length depends on the frequency of the recording.

You can select to position trail points based on time settings, distance, or by letting the system position a waypoint automatically when a course change is registered.

→ **Note:** The Trails option must also be turned ON in the chart settings to be visible.



6

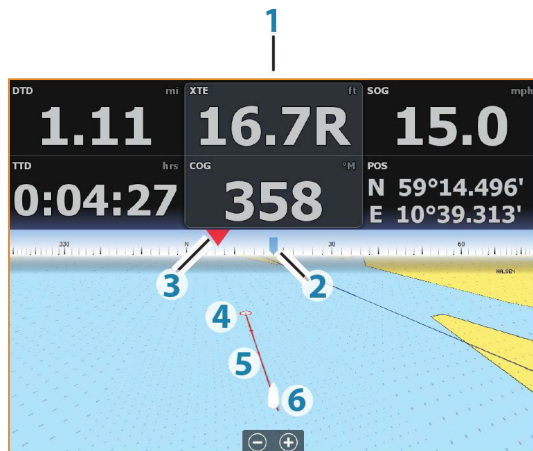
Navigating

The navigation function included in the system allows you to navigate to the cursor position, to a waypoint, or along a predefined route.

If autopilot functionality is included in your system, the autopilot can be set to automatically navigate the vessel.

For information about positioning waypoints and creating routes, refer to "*Waypoints, Routes, and Trails*" on page 54.

Steer panel



The Steer panel can be used to display information when you are navigating. It is activated from the **Home** page, either as a full page panel or as part of a multiple panel page.

- 1 Data fields
- 2 Vessel heading
- 3 Bearing to waypoint
- 4 Destination point

- 5** Bearing line with allowed off course limit
When travelling on a route the bearing line shows the intended course from one waypoint towards the next. When navigating towards a waypoint (cursor position, MOB, or an entered latitude and longitude position), the bearing line shows the intended course from the point at which navigation was started towards the waypoint.
- 6** Vessel symbol
Indicates distance and bearing relative to the intended course. If the XTE (Cross Track Error) exceeds the defined XTE limit, this is indicated with a red arrow including the distance from the track line.
Refer to "*XTE limit*" on page 66.

Data Fields

The Steer panel provides the following information:

| | |
|-----|-------------------------|
| XTE | Cross track error |
| SOG | Speed over ground |
| COG | Course over ground |
| POS | Position |
| DTD | Distance to destination |
| TTD | Time to destination |

Navigate to cursor position

You can start navigating to a cursor position on any chart, radar, or Sonar panel.

Position the cursor at the selected destination on the panel, and then select the **Goto Cursor** option in the menu.

→ **Note:** The **Goto Cursor** menu option is not available if you are already navigating.

Navigate a route

You can start navigating a route from the chart panel, steer panel, or from the Route dialog.

When route navigation is started, the menu expands and shows options for canceling the navigation, for skipping a waypoint, and for restarting the route from current vessel position.

Starting a route from the chart panel

Activate a route on the panel, and then select the route navigation option from the menu.

You can select a routepoint to start navigating from a selected position.

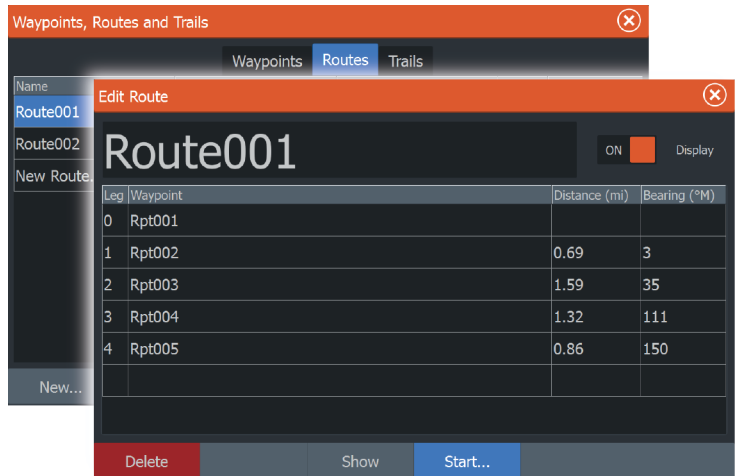
Starting a route from the steer panel

Select the start route option on the menu, and then details from the dialogs.

Start navigating a route from the Route dialog

You can start navigating from the **Route** dialog, activated by:

- Selecting the **Route** tool from the **Home** page
- Selecting the route details from the menu



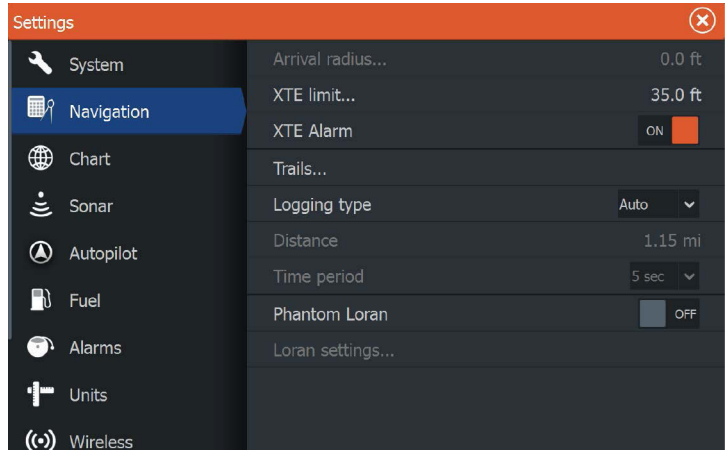
Navigating with the autopilot

When you start navigation on a system with autopilot functionality, you are prompted to set the autopilot to navigation mode.

If you choose not to engage the autopilot, the autopilot can be set to navigation mode from the Autopilot Controller later on.

For more information about autopilot functionality, refer to *"Autopilot"* on page 104.

Navigation settings



Arrival radius

Sets an invisible circle around the destination waypoint.

The vessel is considered arrived at the waypoint when it is within this radius.

XTE limit

This setting defines how far the vessel can deviate from the selected route, if the vessel goes beyond this limit, an alarm is activated.

XTE alarm (Cross track error)

Turns on/off the XTE alarm.

Trails

Opens the **Trails** dialog where trails settings can be adjusted and trails can be converted into routes for navigation. Refer to *"Converting Trails to Routes"* on page 58.

Logging type

You can select to record trail points based on time, distance, or by letting the unit position a point automatically when a course change is registered.

Specify one of the following logging types in the Navigating Settings dialog:

- **Auto** - the unit positions a point automatically when a course change is registered.
- **Distance** - select the Distance field and enter the distance you want to record.
- **Time** - select the Time field and enter the time you want to record.

Phantom Loran

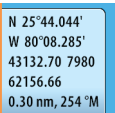
Enables use of Phantom Loran positioning system.

Loran settings

Defines Loran chains (GRI) and preferred station for waypoint entry, cursor position and position panel.

The graphic example shows a cursor position window with Loran position information.

For more information refer to your Loran system documentation.



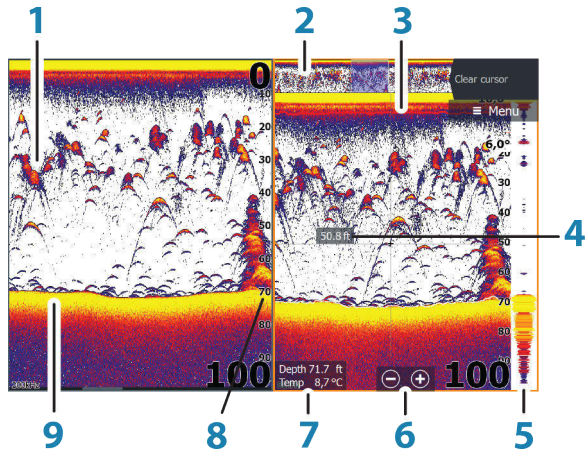
N 25°44.044'
W 80°08.285'
43132.70 7980
62156.66
0.30 nm, 254 °M

7

Sonar

The Sonar function provides a view of the water and bottom beneath your vessel, allowing you to detect fish and examine the structure of the bottom.

The Sonar image



- 1 Fish arches
- 2 History preview*
- 3 Temperature graph*
- 4 Depth at cursor
- 5 Amplitude scope*
- 6 Zoom (range) buttons
- 7 Water depth and Water temperature at cursor location
- 8 Range scale
- 9 Bottom

* Optional Sonar items.

→ **Note:** You turn the optional Sonar items on/off individually. Refer to "*view options*" on page 76.

Multiple Sonar

You can specify the Sonar source for the image in the Sonar panel. You can display two different sources simultaneously, using a split panel configuration. For more information how to select the source for a panel, refer to "*Source*" on page 71.

Zooming the image

You can zoom the image by:

- using the zoom (+ or -) buttons
- pinching or spreading on the screen
- using the +/- keys

Zoom level is shown on the bottom left side of the image.

When zooming in, the sea floor is kept near the bottom of the screen, irrespective of whether it is in auto-range or manual range.

If the range is set considerably less than the actual depth, the unit is not able to find the bottom when zooming.

If the cursor is active, the unit zooms in where the cursor is pointed.

Zoom bar

The zoom bar is displayed when you zoom the image.

Drag the zoom bar vertically to view different parts of the water column.

Using the cursor on the image

The cursor can be used to measure a distance to a target, to mark a position, and to select targets.

By default, the cursor is not shown on the image.

When you position the cursor on the image; the screen pauses, the depth at the cursor position is shown, and the information window and the history bar are activated.

To remove the cursor and cursor elements from the panel, select **Clear cursor** or press the **X** key.

Viewing history

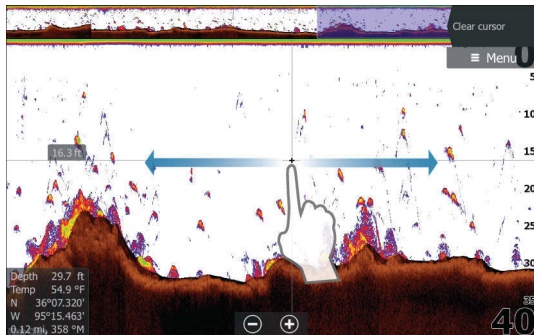
Whenever the cursor is shown on the Sonar panel, the scroll bar is shown at the top of the panel. The scroll bar shows the image you

are currently viewing in relation to the total Sonar image history stored.

If the scroll bar is on the far right side, it indicates that you are viewing the latest soundings. If you position the cursor to the left side of the screen, the history bar starts scrolling towards the left, and the automatic scrolling as new soundings are received is turned off.

You can view sonar history by panning the image. You can also use the preview feature to pan history, refer to *"Preview"* on page 77.

To resume normal scrolling, select **Clear cursor** or press the **X** key.



Setting up the image

Use the Sonar menu options to set up the image. When the cursor is active, some options on the Sonar menu are replaced with cursor mode features. Select **Clear cursor** to return to the normal Sonar menu.

The range

The range setting determines the water depth that is visible on the screen.

Frequency

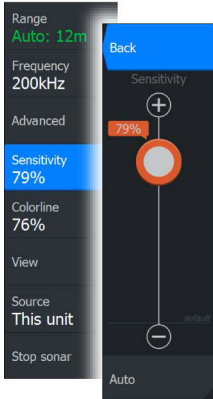
The unit supports several transducer frequencies. Available frequencies depend on the transducer model that is connected.

You can view two frequencies at the same time by selecting dual Sonar panels from the **Home** page.

Sensitivity

Increasing Sensitivity shows more detail on the screen. Decreasing Sensitivity displays less. Too much detail clutters the screen. Conversely, desired echoes may not be displayed if Sensitivity is set too low.

→ **Note:** Auto Sensitivity is the preferred mode for most conditions.



Auto sensitivity

Auto sensitivity automatically adjusts the sonar return to the optimal levels. Auto sensitivity can be adjusted (+/-) to your preference while still maintaining the auto sensitivity functionality.

Colorline

Allows the user to adjust the colors of the display to help differentiate softer targets from harder ones. Adjusting the Colorline can help separate fish and important structures on or near the bottom from the actual bottom.

Adjusting Sensitivity and Colorline

Select the Sensitivity or Colorline menu options in the Sonar menu and adjust them by dragging the bar vertically or by using the **Cursor** keys.

→ **Note:** Minor adjustments can be made by tapping above or below the slider bar or pressing the **Cursor** keys.

→ **Note:** When the Sensitivity or Colorline slider bar is displayed, it is automatically selected and adjustments can be made up/down with the **Cursor** keys.

Source

Select to specify the source for the image in the selected panel.

You can display two different sources simultaneously, using a split panel configuration. Menu controls for each panel are independent.

The source can be the internal Sonar, another MFD on the Ethernet network, or a Sonar module. To define sources, refer to the separate HDS Gen3 Installation manual.

→ **Note:** Using two transducers at the same frequency ranges can cause interference between the two, and they can show up on

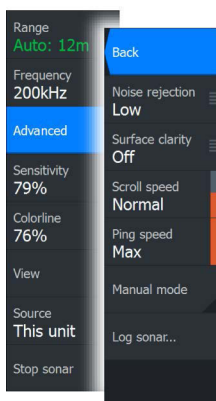
the image as vertical lines. To avoid this, set one transducer at one frequency range (such as Medium CHIRP) and the other transducer at a different frequency range (such as High CHIRP) using the Frequency menu option.

Stop sonar

Select the **Stop sonar** menu option to stop the sonar from pinging. Use the stop sonar option anytime you want to disable the sonar but not power off the unit.

Advanced options

The Advanced option is only available when the cursor is not active.



Noise rejection

Signal interference from bilge pumps, engine vibration and air bubbles can clutter the image.

The noise rejection option filters the signal interference and reduces the on-screen clutter.

Surface clarity

Wave action, boat wakes, and temperature inversion can cause onscreen clutter near the surface. The surface clarity option reduces surface clutter by decreasing the sensitivity of the receiver near the surface.

Scroll speed

You can select the scrolling speed of the image on the screen. A high scroll speed updates the image fast, while a low scroll speed presents a longer history.

→ **Note:** In certain conditions it may be necessary to adjust the scroll speed to get a more useful image. Such as adjusting the image to a faster speed when vertically fishing without moving.

Ping speed

Ping speed controls the rate the transducer transmits the signal into the water. By default, the ping speed is set to max. It may be necessary to adjust the ping speed to limit interference or to adjust for specific fishing conditions.

Manual mode

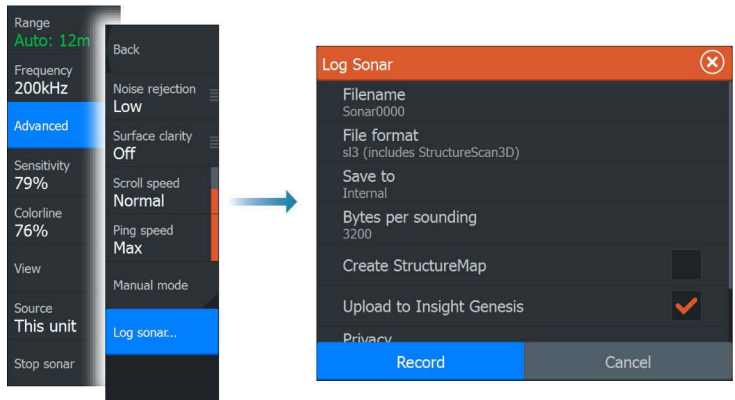
Manual mode is an advanced user mode that restricts digital depth capability, so the unit only processes sonar signals in the selected range. This allows the display to continue smooth scrolling if the bottom depth is out of transducer range. When the unit is in manual mode, you might not receive any depth readings, or you might receive incorrect depth information.

Start recording log data

You can start recording log data and save the file internally in the unit, or save it onto a card inserted into the unit's card reader.

The **Log sonar** dialog is activated from the **Advanced** menu option, or from the **Sonar Settings** dialog.

When the data is being recorded, there is a flashing red symbol in the top left corner and a message appears periodically at the bottom of the screen.



Filename

Specify the name of the recording (log).

File format

Select a file format from the drop-down, slg (Sonar only), xtf (Structure only*), sl2 (Sonar and Structure) or sl3 (includes StructureScan 3D).

→ **Note:** XTF format is for use only with select 3rd party Sonar viewing tools.

Save to

Select whether the recording is to be saved internally or to a memory card in the card reader.

Bytes per sounding

Select how many bytes per seconds that are to be used when saving the log file. More bytes yield better resolution, but cause the record file to increase in size compared to using lower byte settings.

Create StructureMap

If StructureScan is available on the network, you can convert the .sl2 or .sl3 logs to StructureMap format (.smf) when recording completes. The log file can also be converted to StructureMap format from the Files option.

Upload to Insight Genesis

Files are transmitted to Insight Genesis when recording completes, if you are connected to a wireless hotspot. For information about wireless hotspots, refer to "*Wireless connection*" on page 123.

Privacy

If allowed by your selected Insight Genesis account, you can choose between setting the recorded log files as Private or Public at Insight Genesis.

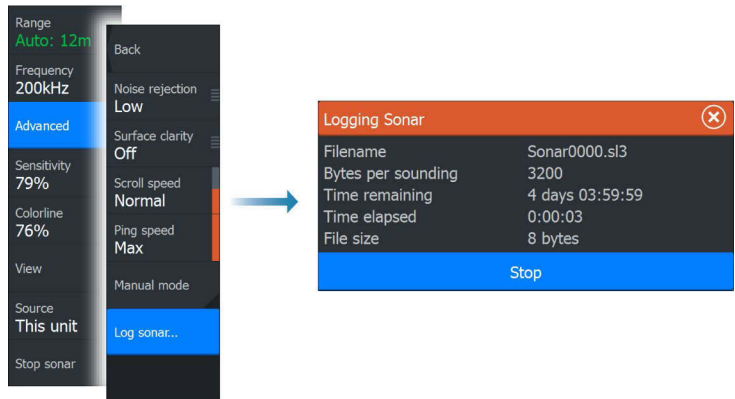
Time remaining

Shows the remaining allocated space available for recordings.

Stop recording log data

Select **Stop** in the Logging Sonar dialog to fully stop the recording of all sonar log data.

→ **Note:** If you have selected the **Upload to Insight Genesis** option and are connected to a wireless hotspot, your recorded files are transmitted to Insight Genesis when you select **Stop**.



Viewing the recorded sounder data

Both internally and externally stored sounder records may be reviewed when the view sonar log option is selected in the Sonar settings dialog. Refer to *"Sonar settings"* on page 78.

The log file is displayed as a paused image, and you control the scrolling and display from the replay menu option.

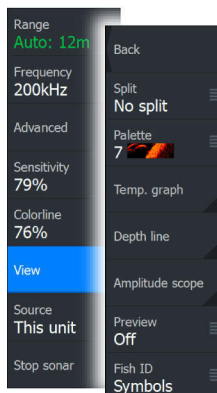
You can use the cursor on the replay image, and pan the image as on a normal echo image.

If more than one channel was recorded in the selected echo file, you can select which channel to display.

You exit the replay mode by pressing the **X** key or by selecting the **X** symbol in the upper right corner of the replay image.

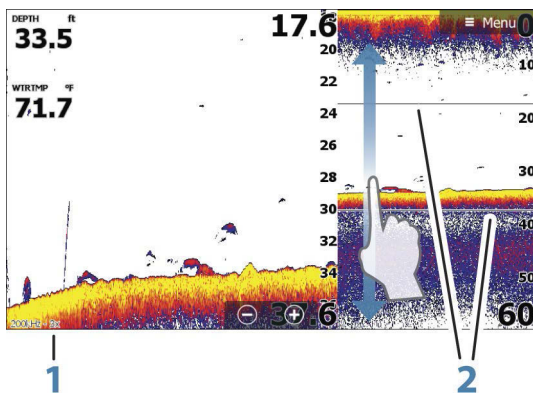
Sonar view options

Select the View option in the Sonar menu to see View options.



Split screen options

Zoom



- 1 Zoom level
- 2 Zoom bars

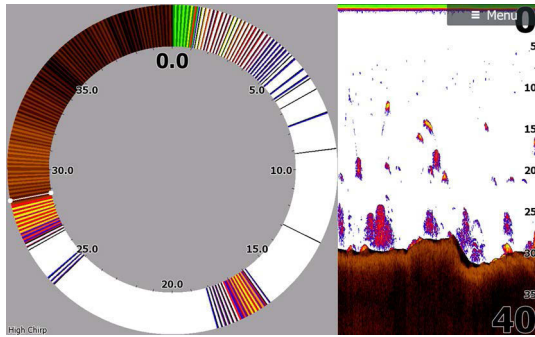
The Zoom mode presents a magnified view of the sounder image on the left side of the panel. By default, the zoom level is set to 2x. You can select up to 8x zoom from the drop-down menu, using the +/- keys, or the zoom (+ or -) buttons. The range zoom bars on the right side of the display shows the range that is magnified. If you increase the zooming factor the range is reduced. You see this as reduced distance between the zoom bars.

Bottom lock

The bottom lock mode is useful when you want to view echoes close to the bottom. In this mode, the left side of the panel shows an image where the bottom is flattened. The range scale is changed to measure from the seabed (0) and upwards. The bottom and the zero line are always shown on the left image, independent of the range scale. The scaling factor for the image on the left side of the panel is adjusted as described for the Zoom option.

Flasher

The Flasher mode shows a flasher-style sonar view in the left panel and a normal sonar view in the right panel.



Palettes

You can select between several display palettes optimized for a variety of fishing conditions.

Temperature graph

The temperature graph is used to illustrate changes in water temperature.

When toggled on, a colored line and temperature digits are shown on the Sonar image.

Depth line

A depth line can be added to the bottom surface to make it easier to distinguish the bottom from fish and structures.

Amplitude scope

The Amplitude scope is a display of real-time echoes as they appear on the panel. The strength of the actual echo is indicated by both width and color intensity.

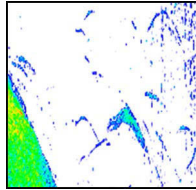
Preview

You can have all available sonar history shown at the top of the sonar screen. The Preview bar is a snapshot of available sonar history. You can scroll through sonar history by dragging the

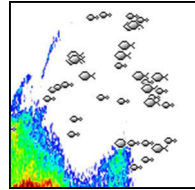
preview slider horizontally. By default, Preview is turned on when the cursor is active.

Fish ID

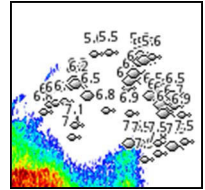
You can select how you want the echoes to appear on the screen. You can also select if you want to be notified by a beep when a fish ID appears on the panel.



Traditional fish echoes



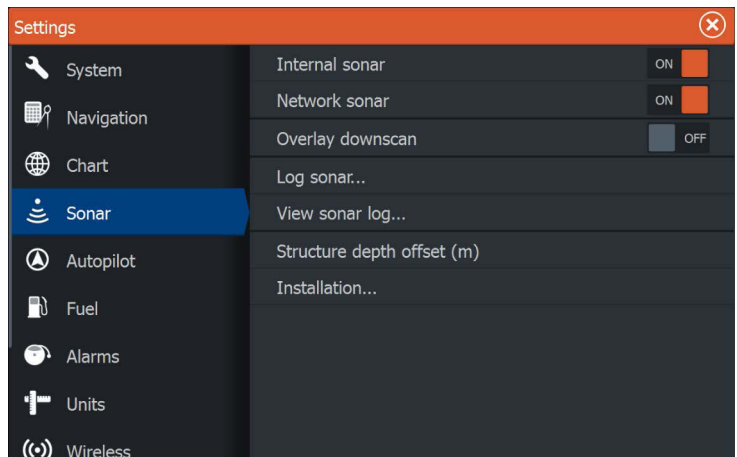
Fish symbols



Fish symbols and depth indication

→ **Note:** Not all fish symbols are actual fish.

Sonar settings



Internal Sonar

Select to make the internal Sonar available for selection in the Sonar menu. For more information about panel source selection, refer to "Source" on page 71.

When set to off, this option disables the internal Sonar in the unit. It will not be listed as a Sonar source for any unit on the network. Select this option on a unit in your network which does not have a transducer connected.

Network Sonar

You can share the Sonar images from this unit with other units connected on the Ethernet network.

For more information about how to setup Sonar, refer to the separate HDS Gen3 Installation manual.

Overlay downscan

When a DownScan source is connected to your system, you can overlay DownScan images on the regular Sonar image.

When activated, the Sonar menu expands to include basic DownScan options.

Select Overlay on the Structure options menu to adjust the level of structure overlay shown on the screen. You can make adjustments using the Overlay slider bar.

Fishing mode

This feature consists of preset packages of sonar settings designed for specific fishing conditions.

→ **Note:** Selecting the proper fishing mode is critical to optimal sonar performance. If you completed configuration setup at initial startup, the proper fishing mode has already been selected.

| Fishing mode | Depth | Palette |
|---------------|------------|------------------|
| General Use | ≤ 1,000 ft | White background |
| Shallow Water | ≤ 60 ft | White background |
| Fresh Water | ≤ 400 ft | White background |

| Fishing mode | Depth | Palette |
|---------------|------------|------------------|
| Deep Water | ≤ 5,000 ft | Deep Blue |
| Slow Trolling | ≤ 400 ft | White background |
| Fast Trolling | ≤ 400 ft | White background |
| Clear Water | ≤ 400 ft | White background |
| Ice Fishing | ≤ 400 ft | White background |

Reset fishing mode

Resets selected fishing mode to default settings, allowing you to clear settings adjustments made while using a fishing mode.

Log sonar

Select to start and stop recording of Sonar data. For more information, refer to *"Start recording log data"* on page 73.

This option is also available from the Advanced option in the Sonar menu.

View Sonar log

Used to view Sonar recordings. The log file is displayed as a paused image, and you control the scrolling and display from the menu.

You can use the cursor on the image, measure distance, and set view options as on a live Sonar image. If more than one channel was recorded in the selected Sonar file, you can select which channel to display.

You exit the view function by selecting the **X** in the upper right corner or by pressing the **X** key.

Structure depth offset

Setting for Structure transducers.

All transducers measure water depth from the transducer to the bottom. As a result, water depth readings do not account for the distance from the transducer to the lowest point of the boat in the water or from the transducer to the water surface.

To show the depth from the lowest point of the boat to the bottom, do the following. Before setting the Structure offset, measure the distance from the structure transducer to the lowest point of the

boat in the water. If, for example, the distance is 0.3 m (1 ft), it will be input as (minus) - 0.3 m (-1 ft).

To show the depth from the water surface to the bottom, do the following. Before setting the Structure offset, measure the distance from the structure transducer to the water surface. If, for example, the distance is 0.3 m (1 ft), it will be input as (plus) 0.3 m (1 ft).

A setting of 0 (zero) causes the depth displayed to be the distance from the transducer to the bottom.

Installation

Used for defining Sonar sources available for selection in the Source menu option. For information about defining sources, refer to the separate HDS Gen3 Installation manual. For information about Source selection, refer to "*Source*" on page 71.

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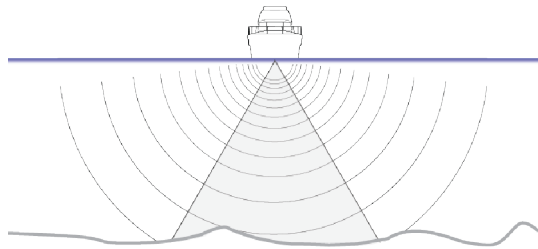
StructureScan

StructureScan uses high frequencies to provide a high resolution, picture-like image of the seabed.

→ **Note:** You must have a StructureScan HD, TotalScan or StructureScan 3D transducer installed to use StructureScan features.

StructureScan provides a wide coverage in high detail with SideScan, while DownScan provides detailed images of structure and fish directly below your boat. The StructureScan page is accessed from the **Home** page when the transducer is connected.

→ **Note:** StructureScan 3D is also supported. StructureScan 3D is a multi-beam sonar technology that allows anglers to see underwater structure and bottom contours in customizable, three-dimensional views. For more information about StructureScan 3D, refer to the separate StructureScan 3D documentation.

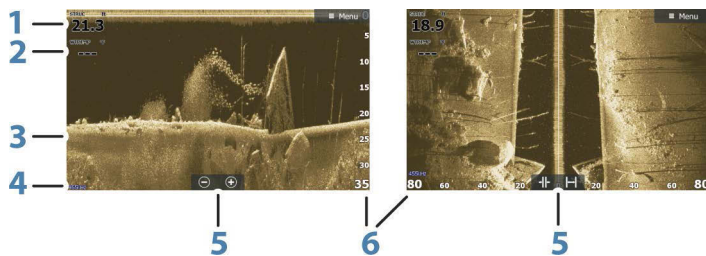


The StructureScan image

The view

The StructureScan panel can be set up as a DownScan image, or showing left/right side scanning.

The DownScan image can also be added as an overlay to the traditional Sonar image.



- 1 Depth
 - **Note:** The depth reading depends on the **Structure depth offset** setting, refer to "*Structure depth offset*" on page 80
- 2 Temperature
- 3 Bottom
- 4 Frequency
- 5 Zoom (downscan) / Range (sidescan) icons
- 6 Range scale

Zooming the StructureScan image

You can zoom a StructureScan image by:

- using the zoom (+ or -) buttons
- pinching or spreading on the screen
- using the +/- keys

Zoom level is shown on the bottom left side of the panel.

Using the cursor on the StructureScan panel

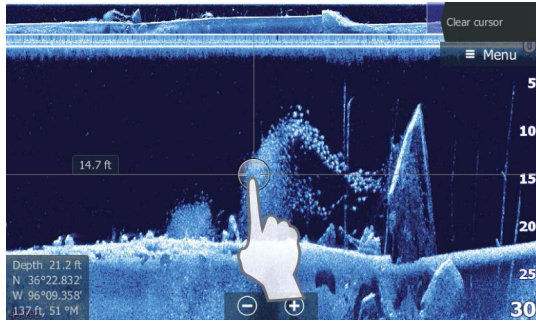
By default, the cursor is not shown on the StructureScan image.

When you position the cursor on a DownScan image, the screen pauses, the cursor information window and the history bar are activated. On a DownScan image, the depth is shown at cursor position.

When you position the cursor on a SideScan image, the screen pauses, and the cursor information window is activated. On a

SideScan image, the left/right distance from the vessel to the cursor are shown at the cursor position.

To remove the cursor and the cursor elements from the panel, press the **X** key or select the **Clear cursor** option.



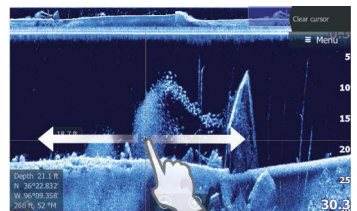
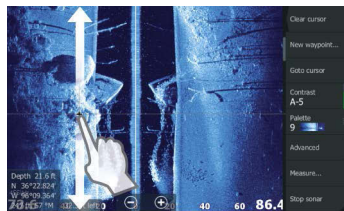
Viewing StructureScan history

When the cursor is active in a DownScan view, the history bar is shown at the top of the panel.

The highlighted part of the history bar shows the image you are currently viewing in relation to the total StructureScan image history stored. You can pan the history by dragging the image or the highlighted part of the history bar, to the left or right.

In a SideScan view, you can pan the image to see sides and history by dragging the image left, right, and up.

To resume normal StructureScan scrolling, select **Clear cursor** or press the **X** key.



Setting up the StructureScan image

Use the StructureScan menu to set up the image. When the cursor is active, some options in the menu are replaced with cursor mode features. Select **Clear cursor** to return to the normal menu.

Range

The range setting determines the water depth and SideScan range that is visible on the screen.

Auto range

When the range is set to Auto the system automatically sets the range depending on the water depth.

Preset range levels

You can select between several preset range levels.

StructureScan frequencies

StructureScan supports two frequencies. 455 kHz provides ideal range and image quality in most situations, while 800kHz is used to provide higher detail in shallow water.

Contrast

Determines the brightness ratio between light and dark areas of the screen.

To adjust the contrast setting:

1. Select the contrast icon or activate the contrast option in the menu to display the color adjustment bar
2. Drag the bar up or down to get the desired contrast setting or select **Auto contrast**.

→ **Note:** We recommend that you use **Auto contrast**.

Palettes

You can select between several display palettes optimized for a variety of fishing conditions.

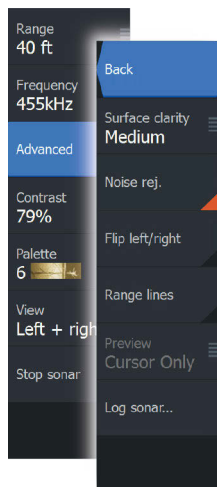
View

You can set up the StructureScan page as a DownScan image, left only, right only, or left/right side scanning.

Stop sonar

Use the **Stop sonar** menu option when you want to turn off the StructureScan transducer, but not turn off the unit.

Advanced StructureScan settings



Surface clarity

Wave action, boat wakes and temperature inversions can cause on-screen clutter near the surface.

The surface clarity option reduces surface clutter by decreasing the sensitivity of the receiver near the surface.

→ **Note:** By default, surface clarity is set to Low, for optimal image return and clarity.

Noise rejection

Signal interference from bilge pumps, engine vibration and air bubbles can clutter the sonar screen. The noise rejection option filters the signal interference and reduces on-screen clutter.

→ **Note:** By default, Noise rejection is set to **on**, for optimal signal returns and clarity.

Flipping the Structure image left/right

If required, the left/right SideScanning images can be flipped to match the direction of the transducer installation.

Range Lines

Range lines can be added to the image to make it easier to estimate depth (Downscan) and distance (SideScan).

Preview

You can turn off sonar history preview, have it always shown at the top of the screen, or have it appear only when the cursor is active. By default, the sonar history preview appears when the cursor is active.

Recording StructureScan data

You can record StructureScan data and save the file internally in the unit, or onto a memory card as described in "*Start recording sonar data*" on page 73.

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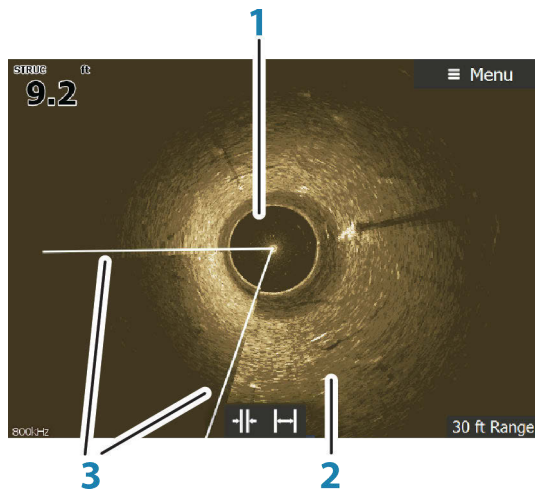
SpotlightScan

To use the SpotlightScan feature, the SpotlightScan transducer must be mounted on your trolling motor and its trolling motor position sensor mounted on the trolling motor foot pedal. The SpotlightScan feature can show structure and fish targets ahead and around the boat without disturbing these areas before you have a chance to fish them. Its trolling motor position sensor ensures that the SpotlightScan returns match up correctly with the orientation of your trolling motor. For installation instructions, refer to the SpotlightScan Installation Manual.

The SpotlightScan transducer can be used for SpotlightScan imaging, Downscan imaging, or as a conventional broadband/CHIRP transducer.

The SpotlightScan transducer works with most MotorGuide and Minn Kota cable steer trolling motors. Its scanning speed is controlled by how fast the trolling motor is rotated with the foot pedal.

The SpotlightScan image



- 1 Water column

- 2 Bottom
- 3 Twin scanning beams

SpotlightScan setup

Configuring the heading sensor to the trolling motor

You must configure the heading sensor with the trolling motor foot pedal.

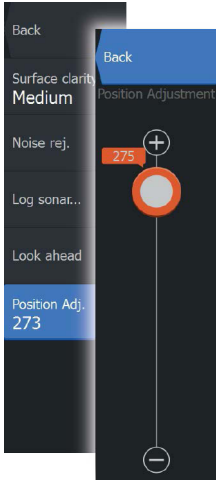
1. Select **Network** from the **Settings** dialog
2. Select **Device list**
3. Select the position sensor (**SLS-100**)
4. Select **Calibrate** on the device information dialog
5. Select your trolling motor foot pedal
6. Select **Calibrate**
7. Select **OK** on the confirmation dialog.

Displaying SpotlightScan images

To display SpotlightScan images, the SpotlightScan feature must first be turned on in the **Advanced Settings** dialog. For more information, refer to "*Tools*" on page 169.

1. Select the Structure application in the **Home** page.
2. Select the View menu option.
3. Select the Spotlight menu option.

You can set up multiple panel pages to view SpotlightScan, broadband sonar, and Downscan images at the same time. You cannot view SpotlightScan and SideScan images at the same time.



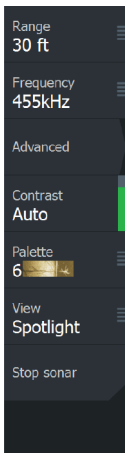
Aligning the SpotlightScan image

You must align the SpotlightScan image with the direction the trolling motor is pointing. If the image is not correctly aligned with the trolling motor, the orientation of the image does not match the underwater environment around your boat.

1. Position your trolling motor so it is pointing straight ahead
 2. Access the **Advanced** option in the Structure menu
 3. Select **Position adjustment**
 4. Move the Position adjustment scroll bar so the top of the **V** is centered at the top of the display.
- **Note:** The **V** on the Structure display represents the beams of the SpotlightScan transducer. The wide end of the **V** should be aligned in the direction the trolling motor is pointing.
- **Note:** Do not use the arrow indicator on the trolling motor head as a heading reference as it might not be aligned correctly with the trolling motor.

SpotlightScan options

SpotlightScan menu options are available in the Structure menu.



Range

You can control how much of the area around your boat appears on the display by increasing or decreasing the range.

Frequency

SpotlightScan can be used at 800 kHz or 455 kHz. 800 kHz provides the highest resolution with less range. 455 kHz has the best range, but with lower resolution.

Advanced SpotlightScan settings

Surface clarity

Wave action, boat wakes and temperature inversions can cause onscreen clutter near the surface. The surface clarity option reduces surface clutter by decreasing the sensitivity of the receiver near the surface.

Noise rejection

Signal interference from bilge pumps, engine vibration and air bubbles can clutter the sonar screen. The noise rejection option filters the signal interference and reduces on-screen clutter.

Log sonar

You can Log sonar data and save the file internally in the HDS Gen3 unit, or onto a microSD card as described in "*Recording Sonar data*" on page 73.

Position adjustment

You must align the SpotlightScan image with the direction the motor is pointing. Refer to "*Aligning the SpotlightScan image*" on page 90.

Look Ahead

You can make the top half of the image predominant on the display, for a better view of what is in front of you. Select Advanced and then Look Ahead menu options in the Structure menu to toggle it on and off.

Contrast

The contrast determines the brightness ratio between light and dark areas of the screen. This makes it easier to distinguish object from the background.

Palettes

You can select between several display palettes optimized for a variety of fishing conditions.

View

You can select between SpotlightScan and DownScan.

Stop sonar

Pauses the sonar. Re-select to restart the sonar.

SpotlightScan operation tips

- Remove slack in the trolling motor cable to prevent image distortion.

- Rotate the trolling motor at a slow, constant speed to achieve the best results.
- Reducing the range increases the size of the water column, providing the best view of fish activity beneath the boat.

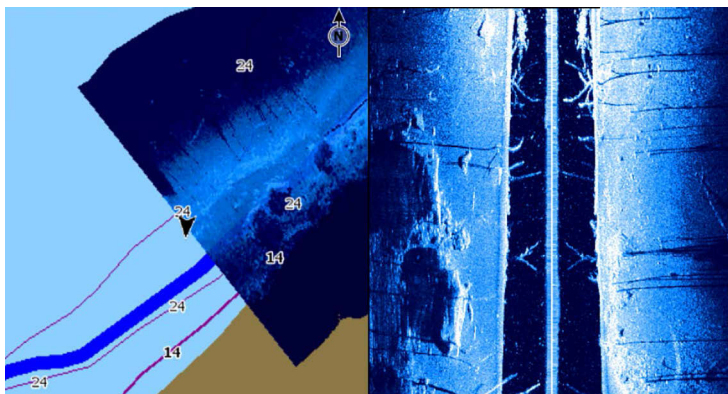
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StructureMap

The StructureMap feature overlays SideScan images from a StructureScan source on the map. This makes it easier to visualize the underwater environment in relation to your position, and aids in interpreting SideScan images.

The StructureMap image

The example below shows a chart panel with Structure overlay, combined with a traditional SideScan panel.



You move around in the chart as usual when you have a Structure overlay:

- Touch operation: zoom the chart and the scanned image by using the zoom (+ or -) buttons, or by pinching or spreading on the screen. Drag on the panel to view the scanned image.
- Key operation: zoom the chart and the scanned image by using the +/- keys.

Selecting the **Clear cursor** option removes the cursor from the panel, and the chart center is positioned at the vessel.

Activating Structure overlay

1. Turn on Structure overlay from the chart menu
 - The chart menu is increased to show Structure options
 - Structure data starts to appear on the chart screen as soon as Structure overlay is enabled

2. Select Structure source

- Live data is default

→ **Note:** Structure overlay can also be activated by selecting a saved StructureMap file in the files browser.

StructureMap sources

Two sources can be used to overlay Structure logs on the charts, but only one can be viewed at a time:

- Live data - Used when StructureScan data is available on the system.
- Saved files - These are recorded StructureScan (*.sl2 or *.sl3) data that are converted to StructureMap (*.smf) format. Saved *.smf files can be used even if no StructureScan sources are connected.

Live source

When live data is selected, the SideScan imaging history is displayed as a trail behind the vessel icon. The length of this trail varies depending on available memory in the unit and range settings. As the memory fills up, the oldest data is automatically deleted as new data is added. When increasing the search range, the ping speed of the StructureScan transducer is reduced, but the width and the length of the image history is increased.

→ **Note:** Live mode does not save any data. If the unit is turned off, all recent data is lost.

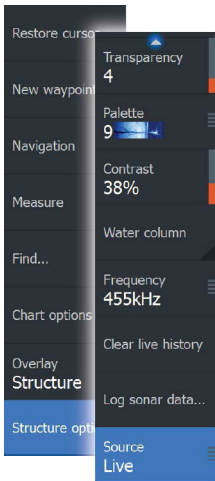
Saved files

When Saved files are selected, the StructureMap file is overlaid on the map based on position information in the file.

If the chart scale is large, the StructureMap area is indicated with a boundary box until the scale is large enough to show Structure details.

Saved mode is used to review and examine StructureMap files, and to position the vessel on specific points of interest on a previous scanned area.

→ **Note:** When saved files are used as the source, all StructureMap files found on the memory card and in the system's internal memory are displayed. If there is more than one StructureMap of the same area, the images overlap and clutter the chart. If several logs of the same area are required, the maps should be put on separate memory cards.



StructureMap tips

- To get a picture of taller structures (a wreck, etc.) — do not drive over it, instead, steer the boat so the structure is on the left or right side of your vessel.
- Do not use Autorange when using StructureScan. Set your structure range to a significantly greater level (two-to-three times) than the water depth to ensure a complete scan and to maximize conversion accuracy.
- Do not overlap history trails when conducting a side-by-side scan of an area.

Recording StructureScan data

StructureScan data can be recorded from a chart panel with Structure overlay enabled.

StructureScan recordings can also be started from a StructureScan panel.

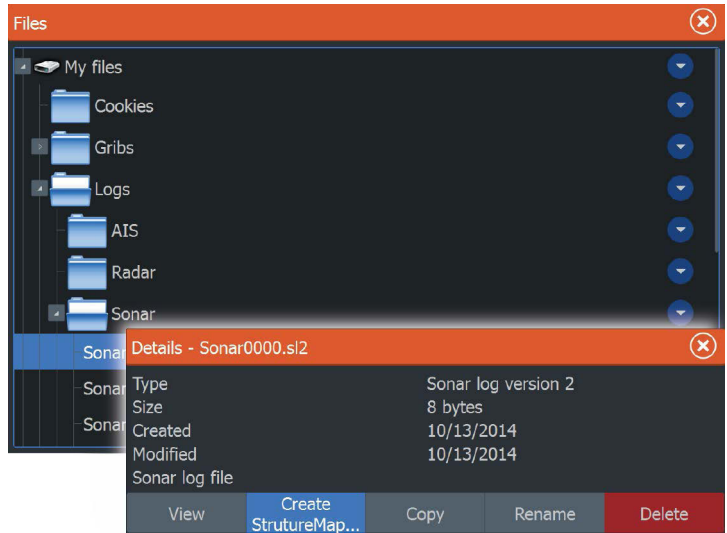
When StructureScan data is being recorded, there is a flashing red symbol and a message appears periodically at the bottom of the screen.

- **Note:** The message includes information about file size. Keep the size of your logs to 100MB or less to allow for faster file conversion.

The recording is stopped by re-selecting the record function.

Converting StructureScan data to StructureMap format

A StructureScan log file (.sl2) is converted to StructureMap format (.smf) after recording from the recording dialog, or from the files browser.



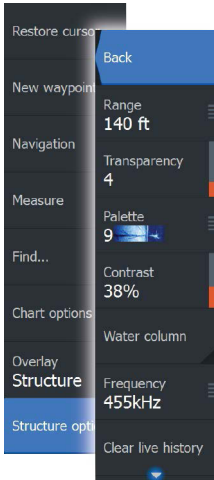
You can create standard or high resolution files. High resolution .smf files capture more detail, but take longer to convert and are larger than standard resolution files.

To save disc space it is recommended to remove the StructureScan (.sl2) files after conversion.

Using StructureMap with mapping cards

StructureMap allows you to maintain full chart capability and can be used with embedded cartography as well as Navionics, Insight and other third-party charting cards compatible with the system.

When using StructureMap with mapping cards, copy the StructureMap (.smf) files to the unit's internal memory. We recommend keeping copies of StructureMap files on external mapping cards.



Structure options

You adjust the StructureMap settings from the Structure options menu. The menu is available when Structure overlay is enabled. Not all options are available when saved StructureMap files are used as the source. Unavailable options are greyed.

Range

Sets the search range.

Transparency

Sets the opaqueness of the Structure overlay. With minimum transparency settings, the chart details are almost hidden by the StructureMap overlay.

Palette

Selects Structure palette.

Contrast

Determines the brightness ratio between light and dark areas of the screen.

Water column

Shows/hides the water column in Live mode.

If turned OFF schools of bait fish might not be seen on the SideScan image.

If turned ON the accuracy of the SideScan image on the map might be affected by the water depth.

Frequency

Sets the transducer frequency used by the unit. 800 kHz offers the best resolution, while 455 kHz has greater depth and range coverage.

Clear live history

Clears existing live history data from the screen and begins showing only the most current data.

Log Sonar data

Records StructureScan data.

Source

Selects StructureMap source.

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Info panels

The **Info** panels consist of multiple gauges - analog, digital, and bar - that can be customized to display selected data. The panel displays data on dashboards, and you can define up to ten dashboards within the panel.

Dashboards

A set of dashboard styles are predefined to display vessel, navigation, and angler information.

You switch between the panel's dashboards by selecting the left and right arrow buttons on the panel. You can also select the dashboard from the menu.



Vessel dashboard



Navigation dashboard



Angler dashboard

→ **Note:** Additional dashboards can be activated from the menu if other systems (e.g. CZone) are present on the network.

Customizing the Info panel

You can customize the Info panel by changing the data for each of the gauges in the dashboard, by changing the dashboard layout, and by adding new dashboards. You can also set limits for analog gauges.

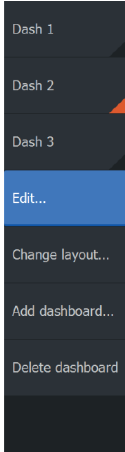
All edit options are available from the Info panel menu.

Available editing options depend on which data sources are connected to your system.

Edit a dashboard

Activate the dashboard you want to edit, then:

1. Activate the menu
2. Select the edit option
3. Select the gauge you want to change. Selected gauge is indicated with a colored background
4. Select information to be displayed, configure limits, and eventually change the source for the information
5. Save your changes by selecting the save option in the menu



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Video

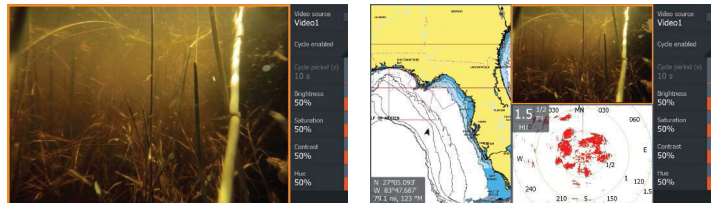
The video function allows you to view videos or camera sources on your system.

→ **Note:** The video images are not shared from the Ethernet network. You can only view the video on the unit connected to the video source.

The Video panel

A video panel can be set up as a single panel, or as one of the panels on a multiple panel page.

The video image is proportionally scaled to fit into the video panel. Areas not covered by the image are colored black.



Setting up the video panel

Video source

HDS Gen3 supports one video input channel.

Video standard

HDS Gen3 supports NTSC and PAL video. Check the local video standard or the standard of your cameras.

Adjusting the video image

You can optimize the video display by adjusting the video image settings. Default for all settings: 50%.