Raymarine®

LIGHTHOUSE SPORT

VERSION 3.9.98

Basic operation instructions

Important information about this document

This document provides an introduction to using your Raymarine multifunction display, covering only basic operations.

To obtain the complete *"LightHouse Sport Advanced operations"* document, visit the Raymarine website. The document is available in 2 different formats:

1. Free download (PDF format)
2. Purchase a printed manual (paperback book format)

www.raymarine.com/manuals

Download complete manual (free)   Purchase complete printed manual

Tip: If you own a smartphone or tablet with a camera you can use the QR code shown above to visit the "LightHouse Sport Manuals and documents" area of the website directly. To use this code, download a free "QR barcode scanner" app from the Apple or Android appstore and then point the camera at the QR code on this page.

English (en-US)

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Warranty registration

To register your Raymarine product ownership, please visit www.raymarine.com and register online.

It is important that you register your product to receive full warranty benefits. Your unit package includes a bar code label indicating the serial number of the unit. You will need this serial number when registering your product online. You should retain the label for future reference.

Technical accuracy

To the best of our knowledge, the information in this document was correct at the time it was produced. However, Raymarine cannot accept liability for any inaccuracies or omissions it may contain. In addition, our policy of continuous product improvement may change specifications without notice. As a result, Raymarine cannot accept liability for any differences between the product and this document. Please check the Raymarine website (www.raymarine.com) to ensure you have the most up-to-date version(s) of the documentation for your product.

Software updates

Check the Raymarine website for the latest software releases for your product.
www.raymarine.com/software

Publication copyright

Contents

Chapter 1: Important information

> ⚠️ **Warning: Ensure safe navigation**
>
> This product is intended only as an aid to navigation and must never be used in preference to sound navigational judgment. Only official government charts and notices to mariners contain all the current information needed for safe navigation, and the captain is responsible for their prudent use. It is the user's responsibility to use official government charts, notices to mariners, caution and proper navigational skill when operating this or any other Raymarine product.

Disclaimers

Raymarine does not warrant that this product is error-free or that it is compatible with products manufactured by any person or entity other than Raymarine.

This product uses digital chart data, and electronic information from Global Navigation Satellite Systems (GNSS) which may contain errors. Raymarine does not warrant the accuracy of such information and you are advised that errors in such information may cause the product to malfunction. Raymarine is not responsible for damages or injuries caused by your use or inability to use the product, by the interaction of the product with products manufactured by others, or by errors in chart data or information utilized by the product and supplied by third parties.

This product supports electronic charts provided by third party suppliers which may be embedded or stored on memory card. Use of such charts is subject to the supplier's End-User Licence Agreement.

Chapter 2: Set up

2.1 Getting started

Display controls

The buttons available on Element™ displays and their function are detailed below.
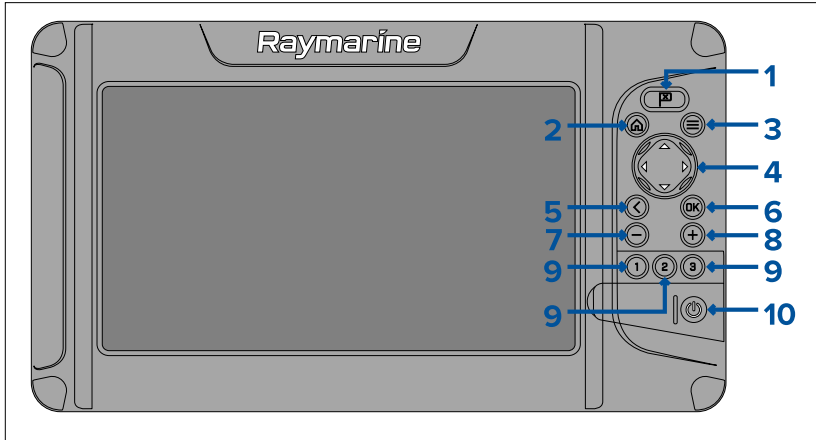
1. **Waypoint**

   • Press to place a waypoint at your vessel's position (unless cursor mode is active in the Chart or Fishfinder app).

   • Press to place a waypoint at the cursor's position in the Chart and Fishfinder apps (when in cursor mode).

2. **Home**

   • Press to display the Homescreen.

3. **Menu**

   • Press to open Homescreen menus and app menus.

   • Press and hold for approximately 2 seconds to switch which app has focus in a multi app page.

   • Press to close Homescreen menus and app menus.

4. **Directional pad** (8–axis directional controls)

   • Use to navigate Homescreen and menus.

   • Press any direction to activate cursor mode in the Chart and Fishfinder apps.

   • Use to position the cursor in the Chart and Fishfinder apps.

5. **Back**

- Return to previous menu or dialog.

6. **OK** — Confirms menu selections, opens context menus

- Press to confirm a currently highlighted option.
- Press to open context sensitive menus in the Chart and Fishfinder apps.

7. **Minus** (Zoom / Range out)

- Press to increase the area displayed onscreen in the Chart app.
- Press to decrease the zoom level in the Fishfinder app, when in Zoom mode.
- Press to revert to scrolling mode from lowest zoom level in the Fishfinder app.

8. **Plus** (Zoom / Range in)

- Press to decrease the area displayed onscreen in the Chart app.
- Press once to initiate Zoom mode in the Fishfinder app, subsequent presses will increase the zoom level.

9. **Quicklaunch 1** / **Quicklaunch 2** / **Quicklaunch 3**

- Press to open the assigned app page.
- Press and hold to assign the quick launch button to the app page currently highlighted on the Homescreen.

10. **Power**

- Power on — Press and hold until the display beeps (approximately 2 seconds).
- Shortcuts menu — Press once to open the shortcuts menu.
- Power off — Press and hold until the display turns off (approximately 5 seconds).
- Power off — Press to open the Shortcuts menu and then select **Power down display**.

Startup wizard

The first time the display is powered up, or after a **Factory reset** the Startup wizard is displayed.

The Startup wizard helps you to configure the following display settings:

- User interface language
- Boating activity
- Boat details including:
  - Safety clearances
  - Number of engines

- Number of tanks
- Number of batteries
- Sonar transducer selection
- Radar selection

Follow the onscreen instructions to configure the relevant settings.

> **Important:**
> - Ensure you select the correct type of transducer, an incorrect selection will require a factory reset to correct.
> - Ensure that Radar installed option is enabled if you intend to connect a Quantum radar scanner to the display.

First power up Limitation on Use acknowledgement

After you have completed the Startup wizard the Limitation on Use (LoU) disclaimer is displayed.


You must read and agree to the terms in order to use your display.

Selecting **OK** means you have accepted the terms of use.

Configuring transducer settings

For systems with a transducer connected, as part of setting up your system for the first time it is important that you correctly configure your transducer.

Transducer configuration settings are available from the **Fishfinder app**.
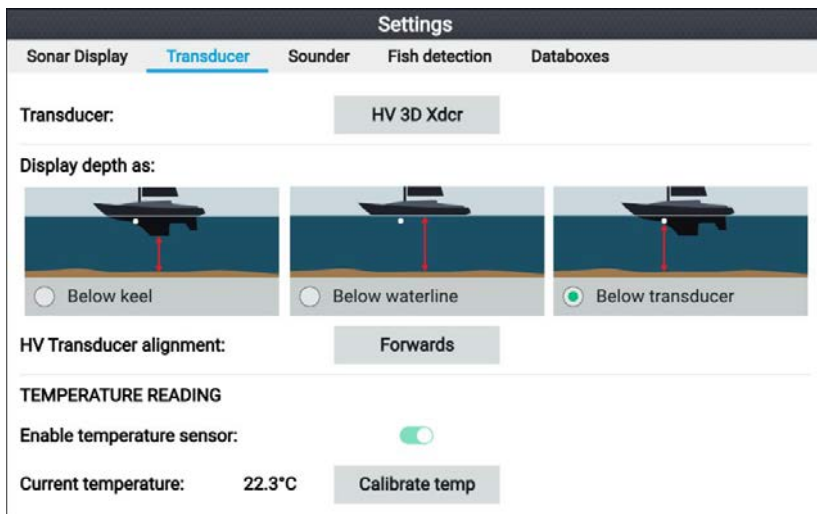
1. Select **Transducer** from the Fishfinder app's **Settings** menu: **Menu > Settings > Transducer**
2. If your installation required you to install an all-in-one transducer backwards (e.g.: this may occur when connecting the transducer to a trolling motor), then select **Backwards** from the **HV transducer alignment** option. This ensures that the port and starboard channels appear correctly orientated onscreen, otherwise keep the default setting: **Forwards**.
3. Select where you want your depth measurements taken from:
   i.   Below transducer (default) — No offset required
   ii. Below keel — Enter the distance between the transducer face and the bottom of the keel.
   iii. Below waterline —Enter the distance between the bottom of your keel and the waterline.
4. You can configure temperature settings as follows:
   i.   Enable or disable temperature readings as required.
   ii. If enabled, check the temperature reading against the actual water temperature.
   iii. If the current reading requires adjustment, select **Calibrate temp** and enter the difference between your 2 readings.

Identifying engines

Engine data can be shown on your display, if your engines are transmitting the relevant supported data on the same network as your display. If your system has mislabelled your engines then you can correct this using the Engine identification wizard.

The Engine identification wizard can be accessed from the Boat details menu: **Homescreen > Settings > Boat details > Identify engines**.

1. Ensure the correct number of engines is selected in the **Num of Engines:** box.
2. Select **Identify engines**.
3. Follow the onscreen prompts to complete the engine identification wizard.

Performing a settings or factory reset

Performing a **Factory reset** will erase ALL user data and reset the display's settings to their Factory default values. Performing a **Settings reset** will restore your display's settings to factory defaults, whilst retaining user data.

1. Select **Settings reset**, from the **This display** menu: **Homescreen > Settings > This display > Settings reset** to perform a settings reset.
2. Select **Factory reset**, from the **This display** menu: **Homescreen > Settings > This display > Factory reset** to perform a factory reset.

2.2 Shortcuts

The Shortcuts menu can be accessed by pressing the **Power** button.
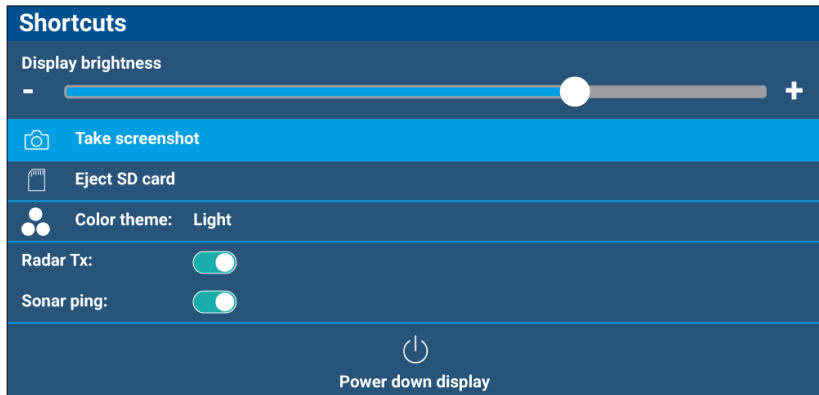
The following shortcuts are available:

• **Display brightness**

• **Take Screenshot**

• **Eject SD card**

• **Color theme:**

• [1]**Radar Tx:**

• **Sonar ping:**

• **Power down display**

Note:

- If no controls are pressed, the **Shortcuts** menu will automatically close after approximately 5 seconds.

- (1)Radar transmission controls are only available when the display is paired with a compatible radar scanner.

2.3 Switching active app

On app pages that contain more than 1 app you can select which app has the current focus (i.e.: which app responds to your control).

Press and hold the **Menu** button to move focus to the next app.
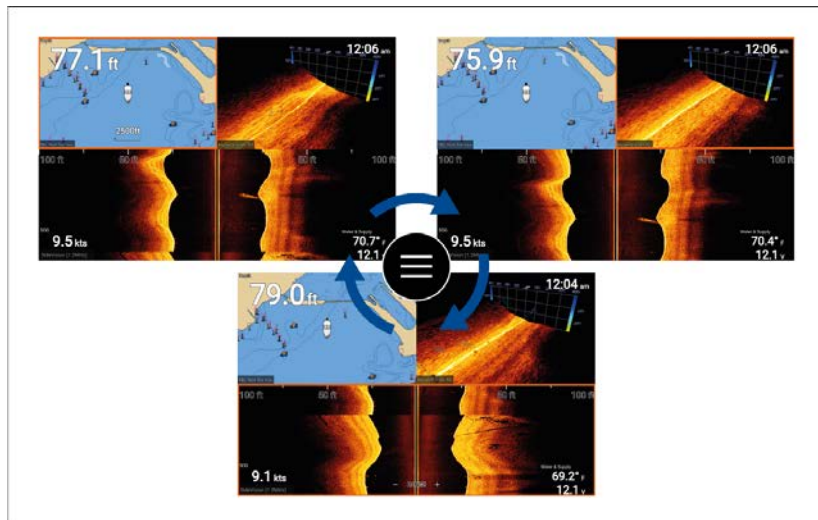
In addition to pressing and holding on the **Menu** button you can also switch app focus from the app menu. With a multi app page displayed:

1. Press the **Menu** button.
2. Highlight the **Switch to** option.
3. In app pages with more than 2 apps, use the **Right** and **Left** buttons to highlight the app you want to make active.
4. Press the **OK** button.
5. Press the **Back** button to close the menu.

2.4 Memory card compatibility

MicroSD memory cards can be used to backup / archive data (e.g. Waypoints, Routes and Tracks). Once data is backed up to a memory card, old data can be deleted from the system. The archived data can be retrieved at any time. It is recommended that your data is backed up to a memory card on a regular basis.

Compatible cards

The following types of MicroSD cards are compatible with your MFD:

Type	Size	Native card format	MFD supported Format
MicroSDSC (Micro Secure Digital Standard Capacity)	Up to 4GB	FAT12, FAT16 or FAT16B	NTFS, FAT32
MicroSDHC (Micro Secure Digital High Capacity)	4GB to 32GB	FAT32	NTFS, FAT32
MicroSDXC (Micro Secure Digital eXtended Capacity)	32GB to 2TB	exFAT	NTFS, FAT32

- **Speed class rating** — For best performance it is recommended that you use Class 10 or UHS (Ultra High Speed) class memory cards, or better.
- **Use branded memory cards** — When archiving data it is recommended that you use good quality branded memory cards.

Removing MicroSD card from its adaptor

MicroSD memory and cartography chart cards are usually supplied inserted into an SD card adaptor. The card will need to be removed from the adaptor before inserting into your display.
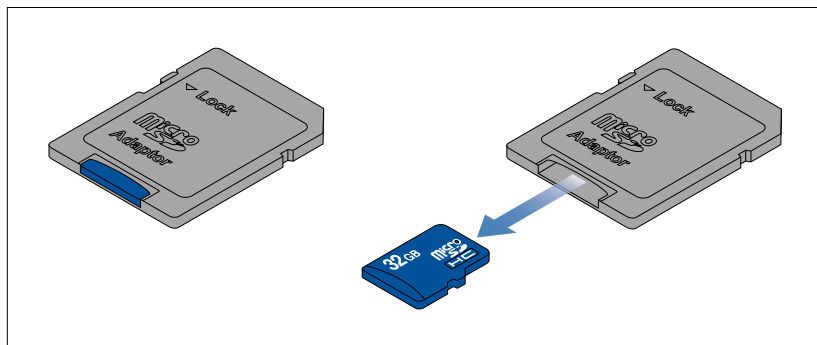
Inserting a MicroSD card
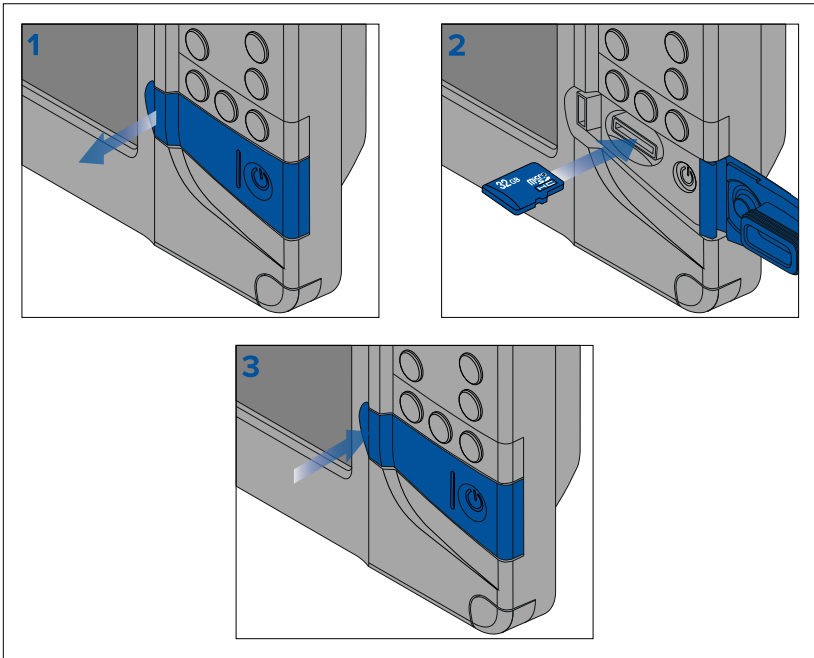
1. Open the card reader door.
2. Ensuring correct orientation (contacts facing down), insert the MicroSD card into the card reader slot.
3. Close the card reader door, ensuring that the edges of the door are flush.

Removing the MicroSD card

1. Press the **Power** button.

   The **Shortcuts** menu is displayed.
2. Select **Eject SD card**.
3. Open the card reader door.
4. Remove the MicroSD card from the Rear of the MFD.
5. Close the card reader door.
6. Select **OK** on the confirmation dialog.

> ## Caution: Ensure card reader cover or door is securely closed
>
> To prevent water ingress and consequent damage to the product, ensure that the card reader door or cover is firmly closed.

2.5 Data sources menu

When a network / system includes multiple sources of the same data type, such as GPS / GNSS position data, the display will choose the most appropriate source for the data. If you prefer, you can manually select your own source for the data.

The **Data sources** menu can be accessed from the **Settings** menu: **Homescreen > Settings > This display > Data sources**.

Data sources					
Depth	Speed through water	GPS	GPS datum	Wind	
Preferred	Source device	Value in use	Serial num	Port ID	
☐	Raymarine Element 9 HV		0190048	Internal	**Manual selection** ⬤
☑	Raymarine RS-150	+/- 0.35nm	1260393	Internal	To select a preferred source for this type of data, activate "manual selection" and tick your preferred source.
☐	Internal GPS		0190026	Unknown	

Each tab in the data sources menu enables you to view and select your preferred data source for that type of data. The currently active data source will display its current 'value in use'. By default data sources are selected automatically and the source for the data may change depending on conditions.

With the **Manual selection** toggle enabled, you can manually assign your preferred source for the data. Manually selected data sources will not change.

Manually assigning a data source

To manually assign a data source follow the steps below.

From the Homescreen:
1. Select **Settings**.
2. Select the **This display** tab.
3. Select the **Data sources** button.
4. Select the tab for the type of data you want to assign a source for.
    Once a tab is selected the display will search the network and list all compatible devices that provide that data type.
5. Use the **Up** and **Down** buttons to highlight a device.
6. Press the **OK** button to select the device as the source for that data type.

The selected device will become the only source used for that data.

> **Note:**
>
> Unless manual selection is required for a specific reason, it is recommended that **Manual selection** remains disabled, so that the display can determine the best source for the data.

2.6 EV-1 heading sensor

You can connect an EV-1 heading sensor to your display, this will ensure that accurate heading data is available, regardless of vessel movement.

The EV-1 heading sensor will automatically calibrate (linearize) itself while the following conditions are met:

- vessel speed is between 3 to 15 knots, and
- at least a 270° turn has been made.

> **Note:**
>
> The time it takes for automatic calibration can be reduced by completing a full 360° turn at between 3 to 15 knots.

After the initial calibration has been completed a notification will be displayed and a Max deviation value will be reported in the **EVO COMPASS** section of the **This display** menu. If dashes are displayed then the calibration has not been successful.

If the Maximum deviation is 45° or greater, it is recommended that either the EV-1 is relocated, in a location with less magnetic interference, or that any devices causing magnetic interference are moved farther away from the EV-1.

2.7 Software updates

Raymarine® regularly issues software updates for its products which provide new and enhanced features and improved performance and usability.

It is important to ensure that you have the latest software for your products by regularly checking the Raymarine® website for new software releases.

www.raymarine.com/software

> **Note:**
>
> - It is recommended that you always backup your User data before performing a software update.
>
> - The "Check online" feature is only available on display variants that include built-in Wi-Fi that have been configured with an active Internet connection.
>
> - In order to perform a software update any connected radar scanner must be switched to standby.

In addition to updating your display's software, your display can also be used to update the software of devices connected to the same SeaTalkng ® backbone.

Updating display software using a memory card

Follow the steps below to update the software on your display.

1. Check the product hardware variant and the software version of the products you want to update.
2. Go to the Raymarine website: (**www.raymarine.com > Support > Software Updates**).
3. Browse for your product.
4. Check if an updated software version is available for your product.
5. Download the relevant software package(s) (ISO files).
6. Copy the files to MicroSD card.
7. With your display powered on, insert the MicroSD card into the card reader slot.
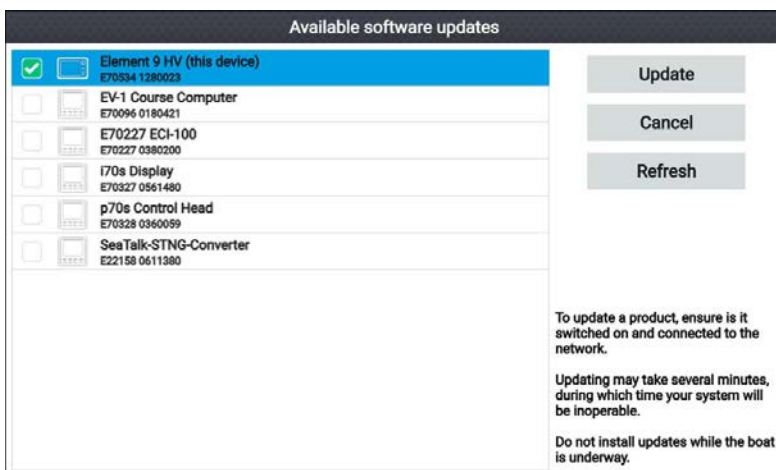
   The software update files will be recognized automatically.

8. Select **Yes** to update the software.

   A list of available products is displayed. The list will include your display and products that are connected to the SeaTalkng ® backbone.

Software update list example

Available software updates	
☑ Element 9 HV (this device) E70534 1280023	Update
☐ EV-1 Course Computer E70096 0180421	Cancel
☐ E70227 ECI-100 E70227 0380200	Refresh
☐ i70s Display E70327 0561480	
☐ p70s Control Head E70328 0360059	
☐ SeaTalk-STNG-Converter E22158 0611380	

To update a product, ensure is it switched on and connected to the network.

Updating may take several minutes, during which time your system will be inoperable.

Do not install updates while the boat is underway.

9. Select each device that you want to update.

   *If a notification is displayed asking if you want to reinstall the current software version, unless you are experiencing problems with the product select **No**, otherwise select **Yes** and the current version of software will be reinstalled.*

10. When all relevant products have been chosen, select **Update selected** to commence the software update process.

11. Wait for the update process to complete.

12. Select **Exit**.

Note:

- Your products may reboot automatically as part of the update process.

- You can also select **Check SD card** from the **Update software** pop-over options (**Homescreen** > **Settings** > **Getting started** > **Update software**.

Updating software using an internet connection

When using an Element™ display that includes built-in Wi-Fi, follow the steps below to update your display's software and software on approved devices connected to the same SeaTalkng ®backbone, using an internet connection.

1. Select **Update software** from the Getting started menu: (**Homescreen** > **Settings** > **Getting started**).

2. Select **Check online** from the pop-over menu.

   If you do not have an active internet connection then you will be requested to create one.

3. To set up a Wi-Fi connection select **Wi-Fi settings** and connect to the required Wi-Fi access point/hotspot.

4. Select **Start**.

   A list of available products is displayed. The list will include your display and products that are connected to the SeaTalkng ® backbone.

   Software update list example
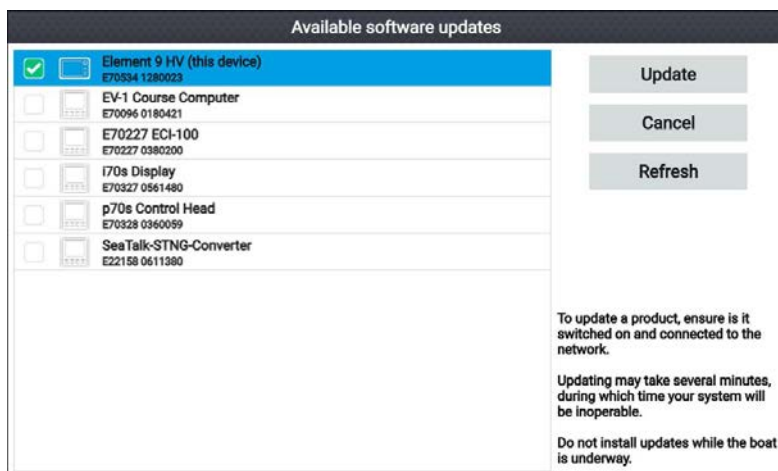
5. Select each device that you want to update.

   If a notification is displayed asking if you want to reinstall the current software version, unless you are experiencing problems with the product select **No***, otherwise select* **Yes** *and the current version of software will be reinstalled.*

6. When all relevant products have been chosen, select **Update selected** to commence the software update process.

7. Wait for the update process to complete.

8. Select **Exit**.

Note:

Your products may reboot automatically as part of the update process.

2.8 User data import and export

User data (i.e.: Waypoint, Routes and Tracks) can be imported and exported from your display. User data is saved in the common .gpx file format.

The Import/export menu can be accessed from the homescreen settings menu **Homescreen > Settings > Import/export**.
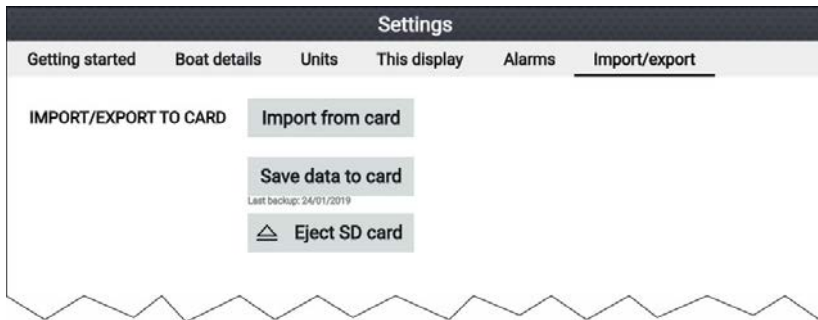
Saving user data

You can backup your user data (waypoints, routes and tracks) to a MicroSD card.

1. Insert a memory card into your display's card reader.
2. Select **Save data to card** from the Import/export menu: **Homescreen > My data > Import/export**.

   A pop-over menu is displayed.
3. Select the desired option:

   - **Save all data** to save (export) all waypoints, routes and tracks.

   - **Save waypoints** to save (export) all waypoints.

   - **Save routes** to save (export) all routes.

   - **Save tracks** to save (export) all tracks.

4. Select **Save** to save the user data using the default filename. Alternatively:
   i. Use the onscreen keyboard to enter your own filename and then select **Save**.
5. Select **OK** to return to the Import/export menu, or select **Eject card** to safely remove the memory card.

The user data file is saved to the '\Raymarine\My Data\' directory of your memory card in gpx format.

Importing user data

You can import user data (i.e.: GPX format Waypoints, Routes and Tracks) to your display.

1. Insert the MicroSD card that contains your user data files into the memory card reader on your display.
2. Select **Import from card** from the Import/export menu: (**Homescreen** > **Settings** > **Import/export** > **Import from card**).
3. Navigate to your User data file (.gpx).
4. Select the relevant GPX file.

   Your user data has now been imported.
5. Select **OK**.

Chapter 3: Homescreen

3.1 Homescreen overview

All settings and apps can be accessed from the Homescreen.
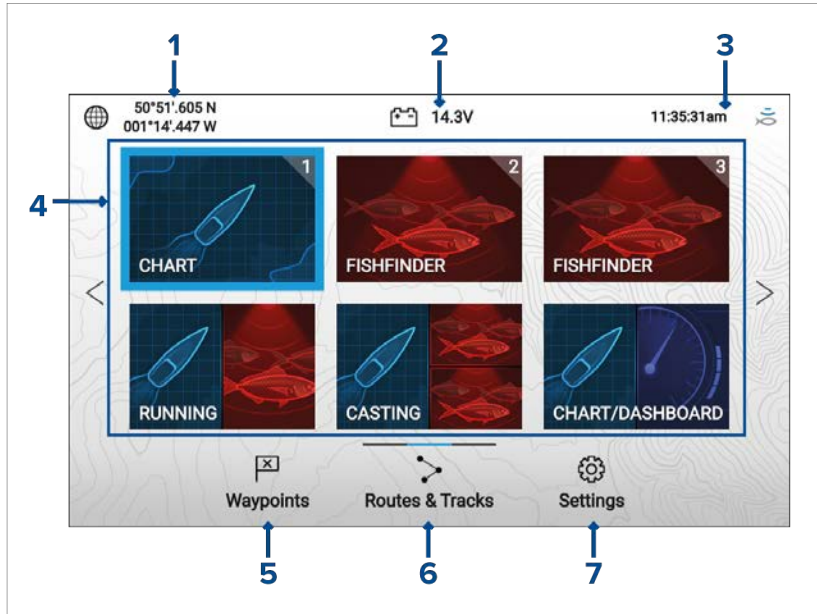
1. **Position/fix details** — Shows your vessel's current position coordinates. Select the area to view fix accuracy and to access position settings.

2. **Supply voltage** — Shows the display's supply voltage. The Voltage reading is colored Red if the current supply voltage is lower than the value specified in the **Low voltage threshold** alarm setting: **Homescreen** > **Settings** > **Alarms** > **Low voltage threshold**.

3. **Status area** — Displays system time, count down/up timer and sonar ping status. Select the area to set count down / up timer, time zone and to set daylight savings.

4. **App page icons** — The Homescreen is made up of 3 pages that can each contain up to 6 app page icons. Selecting an app page icon opens the relevant app page.To view a different Homescreen page, keep pressing the Directional pad's **Left** or **Right** buttons until the Homescreen page changes. You can identify which Homescreen page is being shown using the indicator bar, located above the **Routes & Tracks** icon.

5. **Waypoints** — Select to view the **Waypoints** list.

6. **Routes & Tracks** — Select to view the **Routes and Tracks** lists.

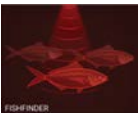7. **Settings** — Select to view the display's **Settings** menu.

> **Note:**
>
> The combination of the selected **Activity** and **Transducer selection** during the Start up wizard determines the default app page icons displayed on the Homescreen.

Available apps

Apps are used in App pages. Each app page is represented on the Homescreen by an app page icon.

Each app page can include up to 4 apps. The individual apps available are:

	Chart — The Chart app displays electronic cartographic information from your Chart cards and when used in conjunction with a GNSS (GPS) receiver, plots your vessel's position. The Chart app can be used to: mark specific locations using Waypoints; build and navigate Routes; or, keep a record of where you have been by recording a Track. For detailed information about the Chart app refer to: **Chart app** (p.42)
	Fishfinder — The Fishfinder app uses a connected transducer to help you find fish by creating an underwater view of bottom structure and targets in the water column that is covered by your transducer. > **Note:** > The channels available in the Fishfinder app are determined by the display variant and connected transducer. For detailed information about the Fishfinder app refer to: **Fishfinder app** (p. 51)

	Dashboard — The Dashboard app provides data readings from connected sensors and equipment.
	Note: The Dashboard app is only available in splitscreen app pages.
	For detailed information about the Dashboard app refer to: **Dashboard app** (p. 57)
	Radar — The Radar app is a situational awareness aid that displays a graphical representation of your surroundings in relation to your vessel using the echo/target returns from a connected Quantum radar scanner. The Radar app allows you to track targets and measure distances and bearings
	Note: The Radar app is included in homescreen app page icons when the **Radar installed** option is enabled in the initial start up wizard, otherwise and must be added manually.
	For detailed information about the Radar app refer to: **Radar app** (p. 61)

Assigning app pages to Quicklaunch buttons

App pages assigned to the Quicklaunch buttons are identified using the associated Quicklaunch button number in the top right corner of the app page icon.
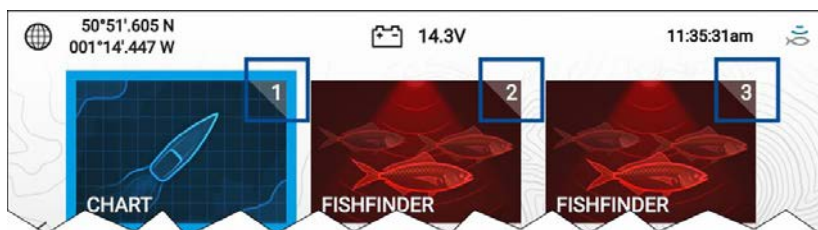
You can change which app page is assigned to the Quicklaunch buttons by following the steps below:

1. Using the **Directional pad**, highlight the app page icon that you want to assign to a Quicklaunch button.

2. Press and hold the relevant **Quicklaunch** button until the 'Quicklaunch button configured' message is displayed.

   The app page icon is updated to show the associated **Quicklaunch** button number in the top right corner of the icon.

3. Repeat steps 1 and 2 for the remaining **Quicklaunch** buttons, if required.

3.2 Customizing app pages

You can customize the homescreen app pages.

1. Highlight the app page icon you want to change.
2. Press and hold the **OK** button.

   The pop-over menu is displayed.

3. Select the relevant option:

   - **Customize** — select customize to change the app page to one of the available configurations.

   - **Delete** — select delete to delete the app page icon from the homescreen.

   - **Rename** — select rename to change the name of the app page icon using the onscreen keyboard.

   - **Assign as Quicklaunch 1/2/3** — select to assign the app page to a Quicklaunch button.

3.3 Settings menu

The display's settings can be accessed by selecting the **Settings** icon on the Homescreen.

The following settings and details are available for your display.

Tab	Settings
Getting started	• Hardware and software information about your display. • Update display software. • Change the user interface language. • Enable/disable Retail/demo mode (Simulator mode). • Choose a **Demo type**. • Enable/disable Demo movie. • View the Terms of Use disclaimer.
Boat details	• Configure Minimum safe depth, height and width. • Configure engines. • Configure tanks. • Configure batteries.
Units	• Configure preferred units of measurement. • Configure date and time settings. • Configure Bearing mode. • Configure system datum. • Configure variation.
This display	• Switching between **Light** and **Dark** user interface color themes. • Calibrate an EV-1 heading sensor. • Select data sources. • Diagnostics: View display product information, view product information for connected products, save / erase system logs. • Pair Quantum™ radar scanner. • Perform a Settings or Factory reset.
Alarms	• Configure alarm settings.
Import/export	• Import and export user data (Waypoints, Routes and Tracks) from MicroSD card. • Eject SD card.

3.4 Alarms

Alarms are used to alert you to a hazard or situation requiring your attention. Alarms are triggered based on their specified thresholds.

The following alarms can be configured on your display:

- Dangerous AIS targets
- Shallow depth
- Waypoint arrival
- Low voltage
- Off track
- Anchor drift
- Water temperature
- Fish detection
- Engine alarms
- Satellite lost fix

Alarms are color coded to signify their severity:

Dangerous alarm example

⚠ Alarm			
Waypoint arrival	180 ft	Edit	OK

Red — is used to signify a dangerous alarm condition, immediate action is required due to a potential or immediate danger to life or vessel. Dangerous alarms are accompanied by an audible tone. The Dangerous alarm notification and audible tone will continue to be displayed until acknowledged or the conditions that triggered the alarm are no longer present.

Warning alarm example

💬 Warning			
Low voltage	8.7 v	Edit	OK
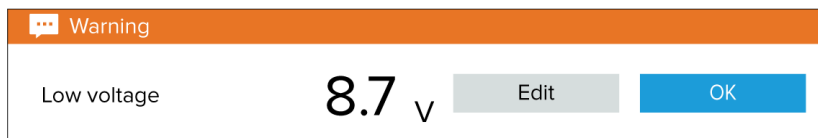
Orange — is used to signify a warning alarm condition. Warning alarms are used to signify that there has been a change in situation that you need to be aware of. Warnings alarms are accompanied by an audible tone. The warning alarm notification and audible tone will continue to be displayed until acknowledged or the conditions that triggered the alarm are no longer present.

Notification example

ⓘ Software update		
Software update found. Install the update now?	Yes	No

Blue — is used to signify information requiring user acknowledgement. Information notifications may self dismiss after 3 seconds, unless they require user interaction. Information notifications are not accompanied by an audible tone.

3.5 Position settings

The details and settings for your display's internal GNSS (GPS) receiver can be accessed from the Homescreen.

From the **Settings** tab you can:

- activate and deactivate Differential positioning (SBAS).

- set the COG/SOG filter according to the amount of vessel oscillation.

- enable and disable your display's internal GNSS (GPS) receiver. (Only disable if you do not want to use positioning data on your display).

- restart the internal GNSS (GPS) receiver.

3.6 Timer
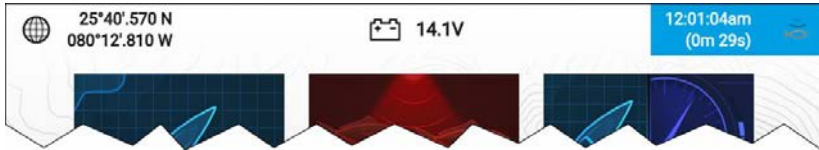
A timer is provided in the homescreen status area. The timer can be used as a countdown timer or as a count-up (stopwatch).

Whilst the countdown or count-up timer is in use it is displayed in the status area, below the current time.

Chapter 4: Waypoints, Routes and Tracks

4.1 Waypoints

Waypoints are used to mark specific locations or points of interest.

Waypoints can be used in the Chart and Fishfinder apps. Your display can store up to 5,000 waypoints, which can be sorted in up to 200 waypoint groups.

In the Chart app you can navigate to a waypoint by selecting **Goto** from the Waypoint context menu.

Waypoints can be imported and exported from the display. For more information, refer to: **User data import and export** (p.22)

Placing a waypoint (Quick method)

To place a waypoint at a specific location in the Chart or Fishfinder apps, follow the steps below.

1. Use the **Directional pad** to place the cursor over the desired location and press the **Waypoint** button.

    The app will be in cursor mode and the waypoint saved notification is displayed.
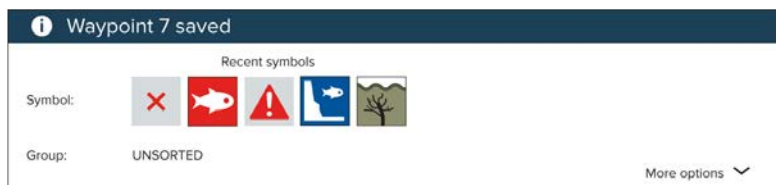
| Note: |
| --- |
| If there is no interaction with the notification within 5 seconds the notification will automatically close, saving the waypoint with the default values. |

2. If required, select a recent waypoint symbol that you want to assign to the waypoint.
3. Press the **OK** button.

The waypoint will be saved with the chosen symbol, in the waypoint group shown against **Group:**.

Waypoint management

Waypoints are sorted and displayed in waypoint groups menu.

Waypoint groups menu
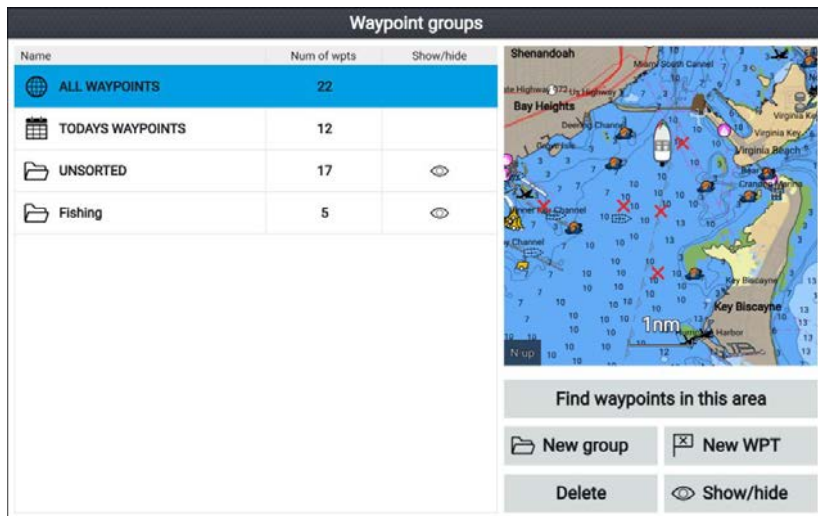
Waypoints can be viewed from the waypoint menu which can be accessed from the Homescreen (**Homescreen > Waypoints**) and from the Chart app (**Chart app > Menu > Waypoints**).

Waypoints will be saved to the same group as the last waypoint you created. All waypoints can also be viewed by selecting **ALL WAYPOINTS** and waypoints created the same day can be viewed by selecting **TODAYS WAYPOINTS**.

You can use the waypoint groups menu options to:

• Find nearby waypoints.

• Create a new waypoint group.

> **Note:** Waypoint group names can be any combination of letters, numbers, symbols and special characters and can include up to 16 characters. Waypoint group names must be unique.

• Create a new waypoint.

• Delete a waypoint or waypoint group.

Waypoint groups

Selecting **ALL WAYPOINTS**, **TODAYS WAYPOINTS**, **UNSORTED** or a user created waypoint group will display a list of all the waypoints in that group / category.

With a list of waypoint displayed you can:

• Find waypoints located in the area covered by the LiveView pane.

• Edit multiple waypoints (i.e.: you can change the symbol used for multiple waypoints, move multiple waypoints to a different group or delete multiple waypoints).

• Create a new waypoint in the current waypoint group.

• View and customize waypoint details.

Waypoint details

Selecting a waypoint from the list displays customizable details for that waypoint. The waypoint's location is also displayed in the LiveView pane on the right side of the screen

With the waypoint details displayed you can:

• Edit the waypoint's Name.

> **Note:** Waypoint names can be any combination of letters, numbers, symbols and special characters and can include up to 16 characters. Waypoint names must be unique.

• Change the waypoint's symbol.

• Assign or change the waypoint group.

• Enter new position coordinates for the waypoint.

• Add or edit the waypoint comment.

> **Note:** Waypoint comments can be any combination of letters, numbers, symbols and special characters and can include up to 32 characters.

• Delete the waypoint.

• Perform a Go to.

• View the waypoint in the Chart app.

4.2 Routes

Routes are used to plan your journey in advance. You can plan your journey directly on your display, or at home using software capable of exporting waypoints and routes in standard .gpx format.

Routes consist of a number of waypoints. Your display can store up to 50 routes, each route consisting of up to 250 waypoints. When creating routes the route capacity is subject to the display's 5,000 waypoint limit (e.g.: your display could store 20 routes each containing 250 waypoints).

To navigate a saved route, place the cursor over the route and press the **OK** button, then select **Follow route** from the context menu.

Routes can be imported and exported from the display. For more information, refer to: **User data import and export** (p.22)
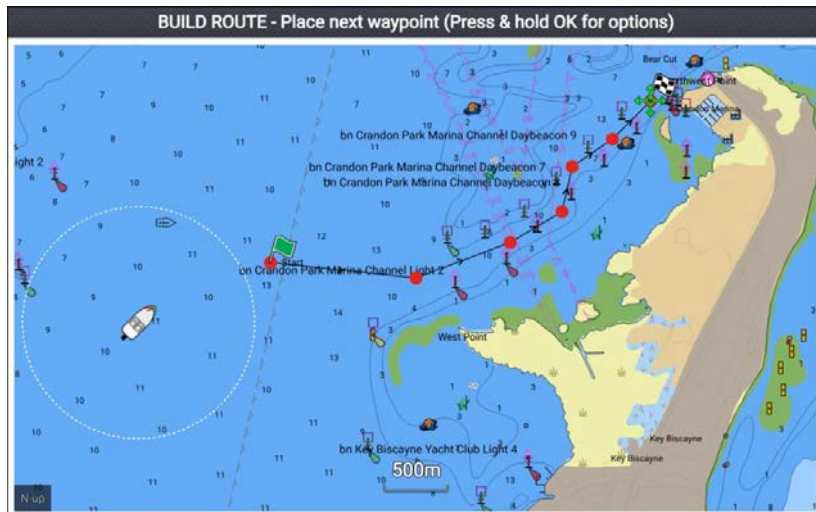
Creating a Route

Follow the steps below to build a new route

Routes can be created in the Chart app.

> **Important:**
>
> Before following a route, you must ensure that each waypoint and leg of your route is safe for your vessel to navigate.

1. Select the location for the first waypoint.
2. Select **Build route** from the context menu.

3. Select the location for the second waypoint.

   The 2 waypoints will be joined by a line, creating the first leg of your route.

4. Select the location for the subsequent waypoints, required to complete your route.

5. When your route is complete press and hold the **OK** button and then select **Finish build** from the context menu.

   The finish route build notification is displayed.

6. From the notification you can either:

   - Select **Follow** to immediately start following the route, or

   - Select **Follow in reverse** to follow the route in reverse waypoint order, or

   - Select **Route plan** to view the route plan menu, or

   - Select **Exit** to return to the Chart app.

Note:

You can press the **Back** button at anytime during route building to remove the last waypoint you placed.

Route management

Routes are managed using the routes and tracks menu.

The **Routes & Tracks** menu can be accessed from the Homescreen and from the Chart app: **Homescreen > Routes & Tracks**, or **Chart app > Menu > Routes & Tracks** .

When the routes and tracks menu is opened the routes menu is displayed by default.

Routes menu

From the route menu you can **Delete** routes, create a **New route** using existing waypoints or **Show/hide** routes.

To view the route plan, select a route and choose **View route plan** from the pop-over menu.

Route plan

The route plan displays a list of all waypoints in the route and includes a LiveView pane showing the route's location.

From the route plan you can:

• navigate the route by selecting **Follow**

- change the route direction by selecting **Reverse**
- add an existing waypoint to the route by selecting **Add waypoint**
- change route options, such as route name, route color, route hide or delete the route by selecting the relevant option from the **Route options** pop-over menu.

> **Note:** Route names can be any combination of letters, numbers, symbols and special characters and can include up to 16 characters. Route names must be unique.

By selecting a waypoint from the route plan you can use the pop-over menu to:

- change the position of the waypoint in the route by selecting **Move up** or **Move down**.
- remove the waypoint from the route by selecting **Remove from route**.
- delete the waypoint by selecting **Delete waypoint**.
- edit the waypoint details by selecting **Edit waypoint**.
- start to follow the route from the selected waypoints by selecting **Follow from here**.

4.3 Tracks

Tracks are used to record where you have been. Tracks are made up of track points that are created at regular time or distance intervals.
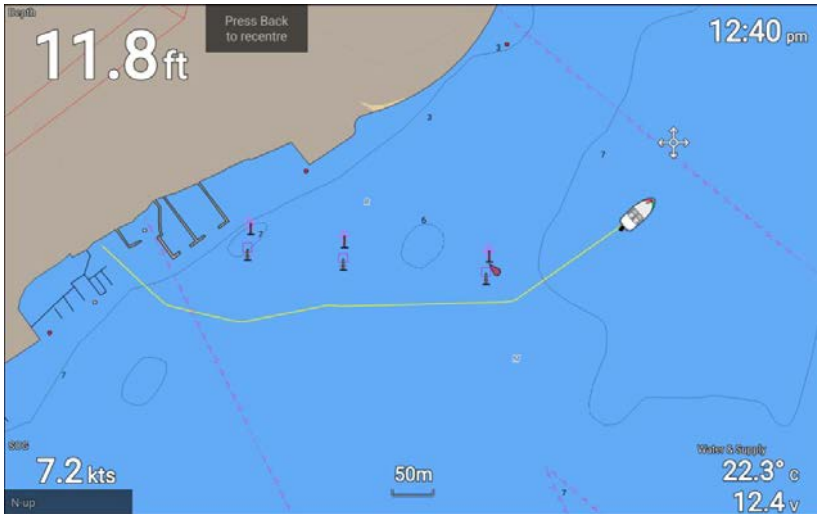
You can store up to 15 tracks on your display, each track can contain up to 10,000 points.

Tracks can be converted into routes so that they can be followed.

Tracks can be imported and exported from the display. For more information, refer to: **User data import and export**

Creating a track

You can record your vessel's voyage using Tracks. Once a Track is saved it can be converted to a route so that the same passage may be followed again at a later date.

With the Chart app displayed:

1. If required, press the **Back** button to enter motion mode.
2. Press the **OK** button.

   The boat details pop-over menu is displayed.
3. Select **Start track**.

   Your vessel's voyage will now be recorded.
4. When your voyage is complete, select **Stop track** from the boat details pop-over menu.

You can also start a new track recording at anytime from the Routes & Tracks menu: accessible from the homescreen: **Homescreen > Route & Tracks** and from the Chart app menu:**Menu > Routes & Tracks**.

Track management

Tracks are managed using the tracks menu.

The **Routes & Tracks** menu can be accessed from the Homescreen and from the Chart app: **Homescreen > Routes & Tracks**, or **Chart app > Menu > Routes & Tracks** .

When the routes and tracks menu is opened the routes menu is displayed by default. Select the **Tracks** tab to display the tracks menu.

Track menu

From the tracks menu you can:

- Start or Stop tracks recording.
- Change track recording settings.
- Delete tracks.
- Show or hide tracks.

By selecting a track from the list you can use the pop-over menu to:

- edit the track name.

Note: Track names can be any combination of letters, numbers, symbols and special characters and can include up to 16 characters. Track names must be unique.

- change the line color the track uses.
- Convert the track into a route.
- Delete the track.

Chapter 5: Chart app

5.1 Chart app overview

The Chart app displays a representation of your vessel in relation to land masses and other charted objects, which enables you to plan and navigate to your desired destination. The Chart app requires a GNSS (GPS) position fix in order to display your vessel at the correct location on a world map.

For each instance of the Chart app you can select which electronic cartography you want to use. The selection will persist over a power cycle.
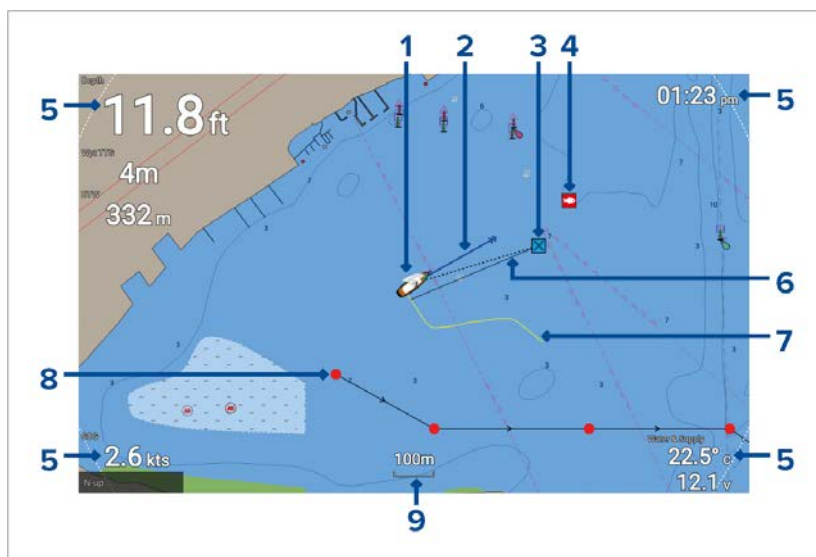
1	**Vessel icon** This icon represents your vessel, only displayed when a GNSS (GPS) position fix is available. The icon is replaced with a Black dot if no heading or COG data is available).
2	**COG line** If Course Over Ground (COG) data is available, you can display a COG vector for your vessel.
3	**Destination waypoint** During a go to, this is the current destination waypoint.
4	**Waypoint** Use waypoints to mark specific locations or points of interest.

5	**Databoxes** Databoxes display key information that is available on your system. You can configure which data is shown in each databox or the databoxes can be hidden.
6	**Destination line** During a go to, a dashed line connects your vessel to the destination point.
7	**Track** You can record the passage your vessel takes using Tracks.
8	**Route** You can plan your route in advance by creating a Route using waypoints to mark each route leg.
9	**Chart range** Identifies the scale for the displayed chart range.

Chart app controls

The Chart app has 2 control modes, motion mode and cursor mode. The behavior of some controls are dependent upon control mode.

Motion mode

Motion mode is the default mode when the Chart app is opened. In motion mode the vessel icon remains centered onscreen and the chart area automatically pans as progress is made.

Controls behavior:

- Pressing the **OK** button opens the vessel context menu.

- Pressing any button on the **Directional pad** will switch to Cursor mode.

- Pressing the **Waypoint** button will place a waypoint at your vessel's current location.

- Pressing the **Plus** or **Minus** buttons will range in and range out respectively, centered around your vessel .

Cursor mode

In cursor mode the chart area remains static and the vessel icon moves in the direction of travel.

Controls behavior:

- Pressing the **OK** button opens the context menu for the area or charted object directly under the cursor's position.

- Pressing any button on the **Directional pad** moves the cursor in the respective direction, when the cursor reaches the edge of the app window the chart area will pan in that direction.

- Pressing the **Waypoint** button will place a waypoint at the cursor's location.

- Pressing the **Plus** or **Minus** buttons will range in and range out respectively, centered around the cursor position.

- Pressing the **Back** button will re-center the vessel icon and switch back to Motion mode.

Selecting a chart card

You can use LightHouse™ charts and compatible Navionics and C-MAP electronic charts. The electronic chart cards must be inserted into your display's MicroSD card reader.
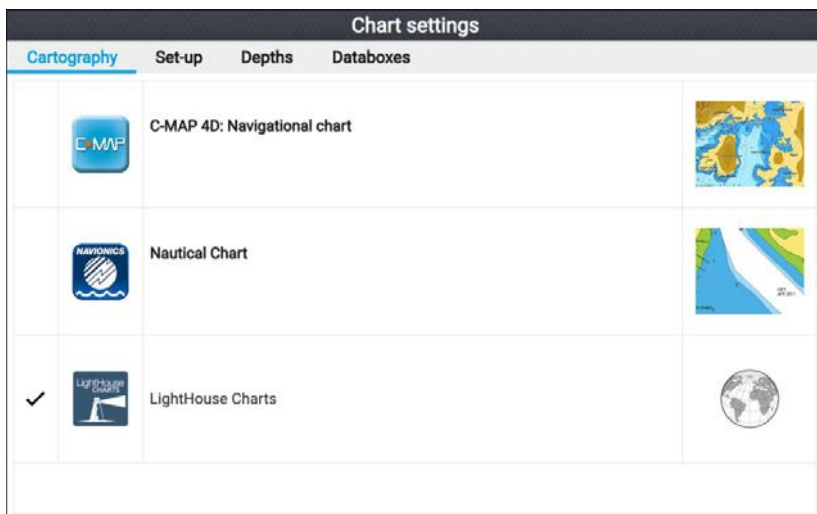
From the Chart app:

1. Press the **Menu** button.
2. Select the **Settings** icon.

   *Pressing the Directional pad's **Up** button once the menu opens will move the selection to the bottom of the menu and highlight the settings icon.*

3. Select the cartography that you want to use from the Cartography tab.

The menu will close and the Chart app will display your chosen cartography.

Chart modes

The Chart app provides preset modes that can be used to quickly set up the Chart app for your intended use.

To change chart mode select the required mode from the app menu.

SIMPLE
Simple mode suppresses chart detail to provide a clearer, simpler view for general orientation. In simple mode only navigation-related menu options are available. Changes made to settings are not saved in simple mode.

DETAILED
Detailed mode is the default mode. Full chart details and menu options are available. Changes made to settings are saved.

FISHING
Fishing mode optimizes the Chart app for fishing. If supported by your cartography, fishing mode also displays more detailed contour lines. Full menu options are available. Changes made to settings are saved.

RUNNING
Running mode optimizes the Chart app for fast running. In running mode, chart detail is suppressed and full vessel offset is applied providing a clearer view ahead, ideal for faster running conditions. Full menu options are available. The Chart app can be configured to enter running mode automatically when vessel speed exceeds 10 knots. Changes made to settings are saved.

TIDES
In Tides mode, tide and current station icons are replaced with graphics representing tide and current conditions. Animation controls are displayed that enable playback of Tide and Current predictions over a 24 hour period.
Tides mode also suppresses chart detail, to enhance the tide and current graphics and enables set and drift vector graphics around your own vessel.

Navigation

Navigating to a waypoint or point of interest

You can perform a "Goto" to a Waypoint or to a specific location.
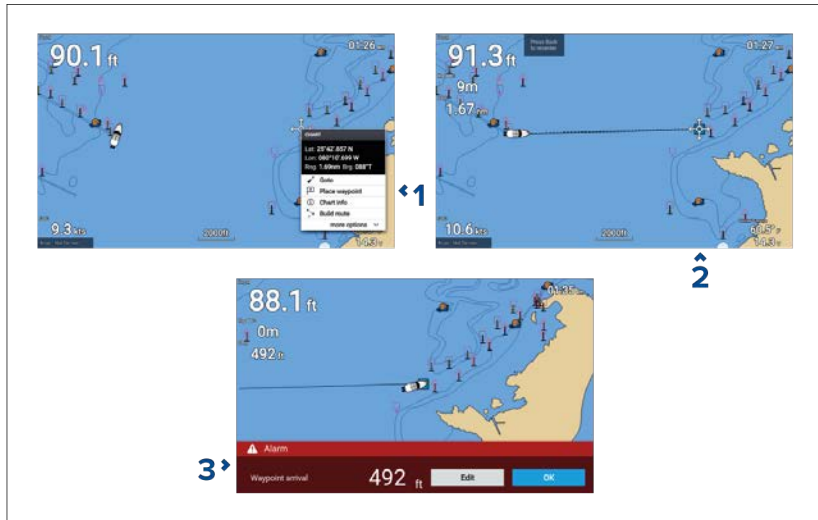
1. Select the waypoint or point of interest and select **Goto** from the context menu.

   *You can stop the **Goto** at any time by selecting Stop from the context menu, or by selecting another **Goto**.*

   The Chart app will begin active navigation.
2. Navigate your vessel to the destination point, using the Chart app as a guide.
3. Select **OK** to accept the waypoint arrival alarm, which is triggered when you reach a specified distance from the waypoint.

You can also perform a Goto from the **Go** menu: **Menu > Go** .

> **Note:**
>
> In a network that contains 2 Element™ displays, with one display performing active navigation (i.e.: performing a **Goto** or a **Follow**) navigation options will not be available on the networked display.

Adjusting the waypoint arrival alarm

The waypoint arrival alarm is enabled by default. The waypoint arrival alarm creates a virtual circle, of the specified radius, around the destination point. When your vessel reaches the virtual circle the alarm is triggered.

From the homescreen:

1. Select **Settings**.
2. Select the **Alarms** tab.
3. Select the **Arrival radius:** setting field.
4. Adjust the distance to the desired value.
5. Press the **Back** button to return to the alarms menu.

> **Note:**
>
> The waypoint arrival alarm can be disabled or enabled using the **Waypoint arrival:** toggle switch.

Restarting cross track error (XTE)

A cross track error (XTE) occurs when your actual route diverges from your original planned route. Restarting XTE plots a new course directly from your current position to your destination, rather than continuing to follow the original planned route.

1. Select **Restart XTE** from the **Navigation** menu: **Menu > Navigation > Restart XTE**.

Following a Route

Follow the steps below to navigate a saved route.
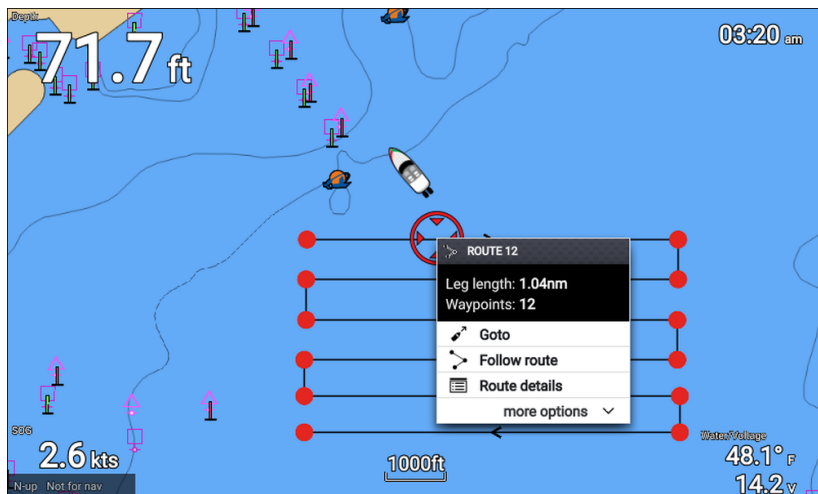
From the Chart app, with the route displayed onscreen:

1. Select a route leg.

   The route context menu is displayed.
2. Select **Follow route** to follow the route from start to finish.

Alternatively you can select Follow route from the route pop-over menu, accessed from the Routes menu. **Menu > Routes & Tracks > Routes > <Route name> > Follow**.

For more information on routes and route management refer to:

Following a route from a specified waypoint

You can start following a route from any waypoint in that route.

From the Chart app, with the route displayed onscreen:

1. Select the waypoint that you want to start following your route from.

   The route context menu is displayed.
2. Select **more options**
3. Select **Follow from here**.

Creating a track

You can record your vessel's voyage using Tracks. Once a Track is saved it can be converted to a route so that the same passage may be followed again at a later date.

With the Chart app displayed:

1. If required, press the **Back** button to enter motion mode.
2. Press the **OK** button.

   The boat details pop-over menu is displayed.
3. Select **Start track**.

   Your vessel's voyage will now be recorded.
4. When your voyage is complete, select **Stop track** from the boat details pop-over menu.

You can also start a new track recording at anytime from the Routes & Tracks menu: accessible from the homescreen: **Homescreen > Route & Tracks** and from the Chart app menu:**Menu > Routes & Tracks**.

Autopilot command

Element™ displays can send navigation data to a connected Evolution™ autopilot systems..

> **Note:**
>
> - Your autopilot system must have a compatible dedicated autopilot controller connected.
>
> - For information on Evolution™ autopilot systems and required system components refer to the Evolution installation instructions document number: 87180 which is available to download from the Raymarine website: www.raymarine.com

Goto, **Follow** and **Stop** commands initiated on the Element™ display are sent to the autopilot controller for acknowledgement.

Automatic Identification System (AIS) support

With compatible AIS hardware connected to your display, AIS targets can be tracked.

AIS equipped vessels that are transmitting their position, and are within range of your vessel, can be represented in the Chart app using AIS target icons.

> **Note:**
>
> A maximum of 100 AIS targets can be tracked simultaneously. If there are more than 100 AIS targets within range of your vessel the closest 100 targets will be displayed.
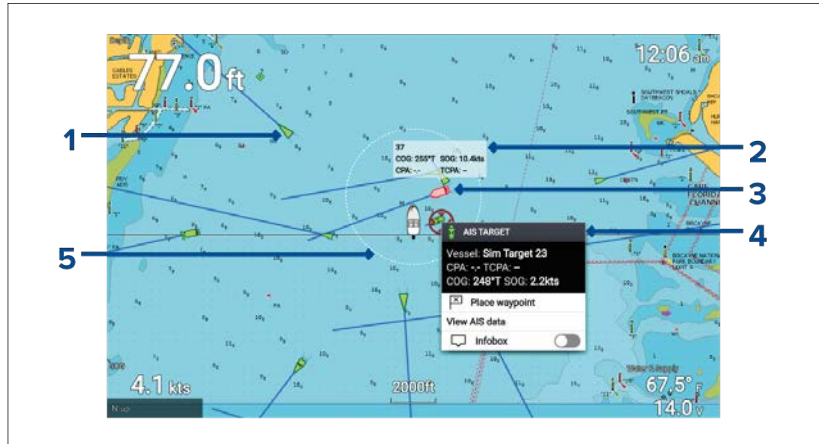
1. **AIS target icon** — Example of an AIS target icon.

2. **AIS Infobox** — Information can be displayed for each target individually.

3. **Dangerous AIS target icon** — Example of an AIS target icon that is dangerous.

4. **AIS context menu** — The AIS context menu is displayed when an AIS target is selected.

5. **Safe distance ring** — A ring can be displayed which represents the dangerous target **Safe distance**.

RealBathy™

You can create precise personal bathymetric charts in real time using Raymarine's RealBathy™ feature.
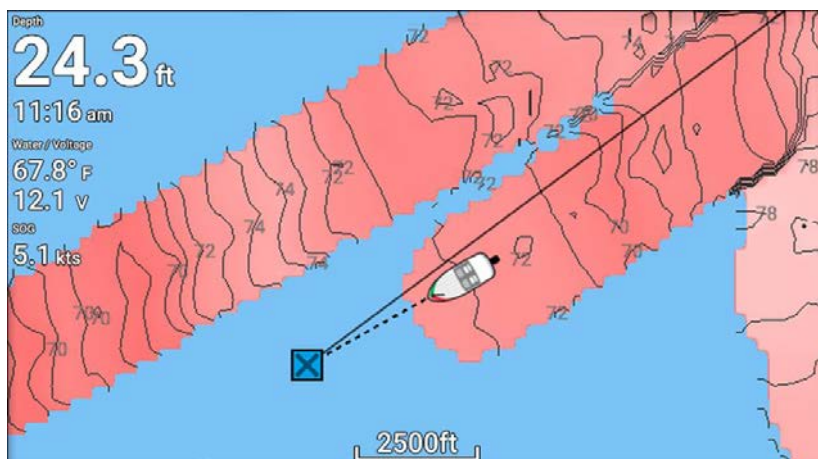
> **Note:**
>
> RealBathy™ requires compatible LightHouse™ NC2 charts and a MicroSD card with sufficient free space to record depth and bathymetry data.

When using RealBathy™, new contour lines are drawn in real time on the screen based on your transducer's depth readings. Color shading is used to reflect depth, with darkest shade signifying the shallowest area. The sonar data is recorded to the inserted memory card.

Chapter 6: Fishfinder app

6.1 Fishfinder app overview

The Fishfinder app displays a visualization of the echoes received from the transducer connected to your display and builds an underwater scrolling view of bottom structure and targets that pass under your transducer. Fishfinder channels are available that represent the different sonar technologies that are available depending on your display variant and connected transducer.

Example — Element HV display
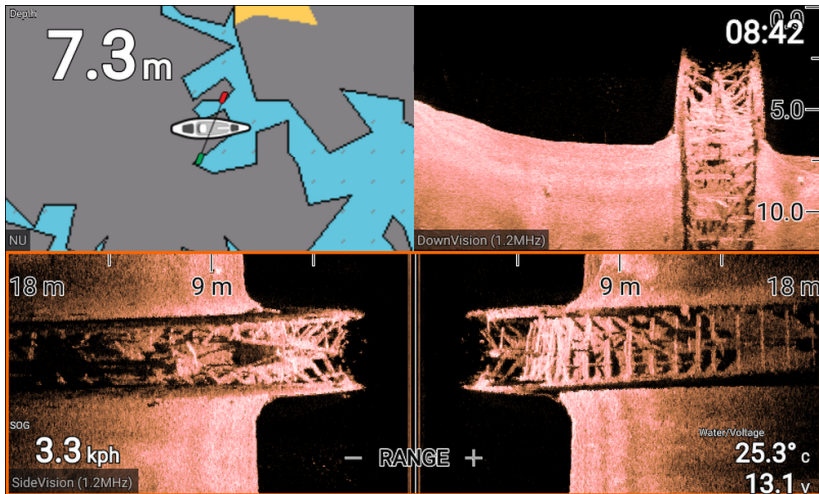
Example — Element S display
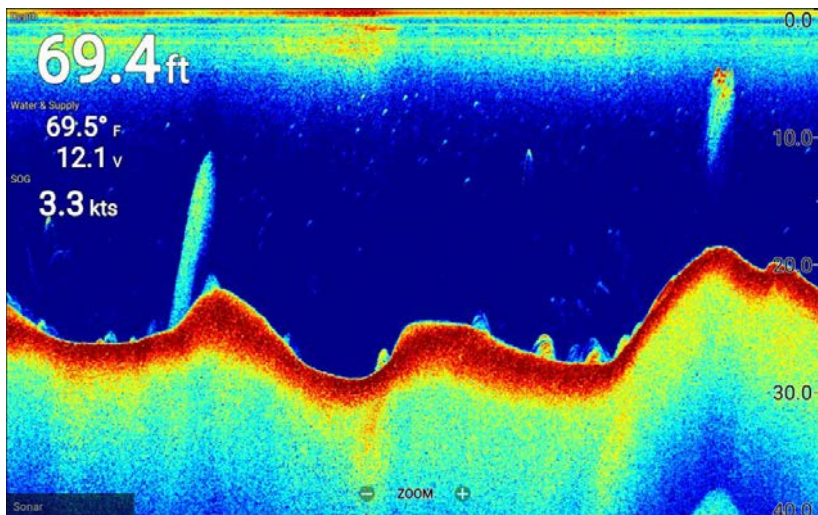
For each instance of the Fishfinder app that is available on the homescreen you can select which fishfinder channel that you want to use. The channel selection will persist over a power cycle.

Fishfinder channels — Element™ HV displays

The following fishfinder channels are available on Element™ HV displays, depending on your connected transducer.

RealVision™ 3D channel (350 kHz / 1.2 MHz)
The RealVision™ 3D channel is available when connected to a HyperVision™ transducer.
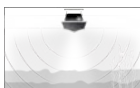
SideVision™ channel (350 kHz / 1.2 MHz)
The SideVision™ 3D channel is available when connected to a HyperVision™ transducer.
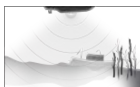
DownVision™ channel(350 kHz / 1.2 MHz)
The DownVision™ channel is available when connected to a HyperVision™ or DownVision™ transducer.

Sonar channel (Conical high CHIRP (200 kHz))
The sonar channel is available when connected to any compatible transducer.

Switching fishfinder channel frequency

On Element™ HV variant displays DownVision™, SideVision™ and RealVision™ 3D channels are available in both 350 kHz (Standard) and 1.2 MHz (Hyper) frequencies.

With either DownVision™, SideVision™ or RealVision™ 3D channel displayed:

1. Press the **Menu** button.
2. Select the **Freq:** option.
3. Select either **Standard (350 kHz)** or **HyperVision (1.2 MHz)** as required.

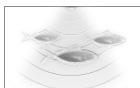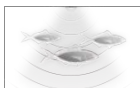   *HyperVision™ channels provide higher resolution than standard channels with reduced range.*

Fishfinder channels — Element™ S displays

The following fishfinder channels are available on Element™ S variant displays.

Sonar channel (Conical high CHIRP (200 kHz)) The sonar channel is available when connected to any compatible transducer.

Fishfinder app controls

The Fishfinder app has 2 control modes, scrolling mode and pause / playback mode. The behavior of some controls are dependent upon control mode and also the fishfinder channel in use. The following controls apply to DownVision™, SideVision™ and sonar channels. The controls below do not apply to RealVision™ 3D channels.

Scrolling mode

Scrolling mode is the default mode when the Fishfinder app is opened. In scrolling mode an image is displayed which scrolls from right to left across the screen.

Control behavior:

- Pressing the **Plus** button will switch to zoom mode.
- When in zoom mode pressing the **Plus** or **Minus** buttons will increase and decrease the zoom level.
- Pressing the **OK** button displays the onscreen gain controls on the left side of the screen.
- Pressing the **Waypoint** button will place a waypoint at your vessels's current location.
- Pressing the **Menu** button will open the app menu.

- Pressing any button on the **Directional pad** will switch to pause / playback mode.

Pause / Playback mode

In pause / playback mode the image is temporarily paused and the cursor can be moved around the screen.

Control behavior:

- Pressing the **Plus** button will switch to zoom mode and the scrolling image remains paused.

- When in Zoom mode pressing the **Plus** or **Minus** buttons will increase and decrease the zoom level.

- Pressing the **OK** button displays the fishfinder context menu.

- Pressing the **Waypoint** button will place a waypoint at the cursor's location.

- Pressing any button on the **Directional pad** will move the cursor in that direction.

- With the cursor at the far left of the screen, continuing to press the **Left** button will display the scrolling image history, which enables you to view structure and targets you have already passed.

- Pressing the **Menu** or **Back** button will return the Fishfinder app to scrolling mode.

RealVision™ 3D app controls

When viewing RealVision™ 3D channels the controls behave differently to other fishfinder channels.

Scrolling mode

Scrolling mode is the default mode when the Fishfinder app is opened. In scrolling mode an image is displayed which scrolls across the screen.

Control behavior:

- Pressing the **Plus** or **Minus** buttons will increase and decrease the zoom level.
- Pressing any button on the **Directional pad** will rotate the image in the respective direction.
- Pressing the **Waypoint** button will place a waypoint at your vessels's current location.
- Pressing the **Menu** button will open the app menu.
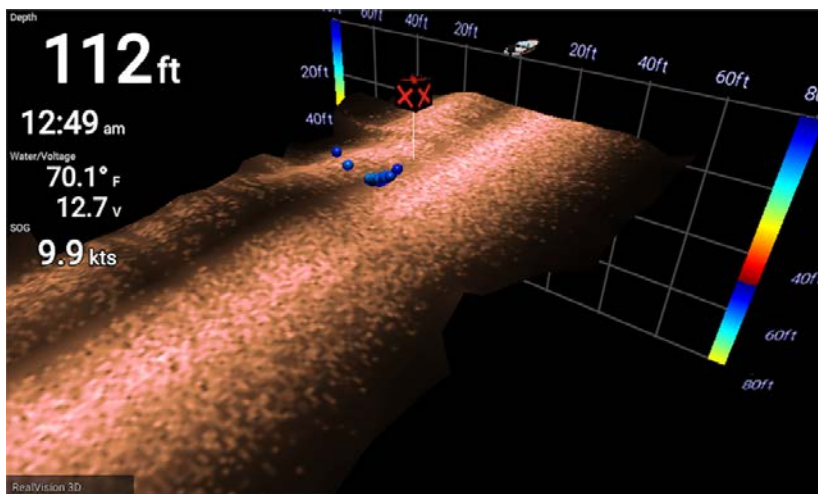- Pressing the **OK** button pauses scrolling and switches to pause / playback mode.

Pause / Playback mode

In pause / playback mode the image is paused and the cursor can be moved around the screen.

Control behavior:

- Pressing the **Plus** or **Minus** buttons will increase and decrease the zoom level.
- Pressing the **OK** button displays the fishfinder context menu.
- Pressing the **Waypoint** button will place a waypoint at the cursor's location.
- Pressing any button on the **Directional pad** will move the cursor in that direction.
- With the cursor positioned at the opposite edge of the screen to the vessel icon, continuing to move the cursor in the same direction will display the scrolling image history, which enables you to view structure and targets you have already passed.
- Pressing the **Menu** button will return the Fishfinder app to scrolling mode and open the app menu.
- Pressing the **Back** button will return the Fishfinder app to scrolling mode.

Placing a Waypoint in the Fishfinder app

When you observe something of interest in the Fishfinder app you can place a waypoint at its location so that you can find the area again.

1. Use the **Directional pad** to highlight a point of interest onscreen.

   Scrolling is paused, temporarily.

2. Press the **Waypoint** button and, if required enter relevant waypoint details.

   Scrolling will resume automatically if no buttons are pressed for approximately 15 seconds.

Chapter 7: Dashboard app

7.1 Dashboard app overview

The Dashboard app enables you to view system data. System data may be generated by your display or by devices connected to your display via SeaTalkng ® / NMEA 2000.

> **Note:**
>
> For data to be available in the Dashboard app it must be transmitted to your display from compatible hardware using supported protocols and messages.

You can configure which data pages you want visible in the Dashboard app, the Data page selection will persist over a power cycle.

The Dashboard app is pre-configured, based on start up wizard selections, with a number of customizable data pages.

Switching data page

When the Dashboard app is the active app you can cycle through the available data pages.

1. Use the **Left** and **Right** buttons to cycle through the available data pages.

Alternatively, you can select a page you want to display using the page icons found in the app menu.

## Hiding and showing data pages

With the Dashboard app displayed and active:

1. Press the **Menu** button.
2. Select the **Settings** icon.

   The menu is opened on the **Pages** tab.
3. Using the **Up** button and **Down** button, highlight the page you want to hide or show.
4. Press the **OK** button.
5. Select either **Hide page** or **Show page**.
6. Press the **Menu** button to close the menu.

Navigation and sailing dials

Dials are available for the navigation and sailing pages which provide a compass dial that includes various data indicators.
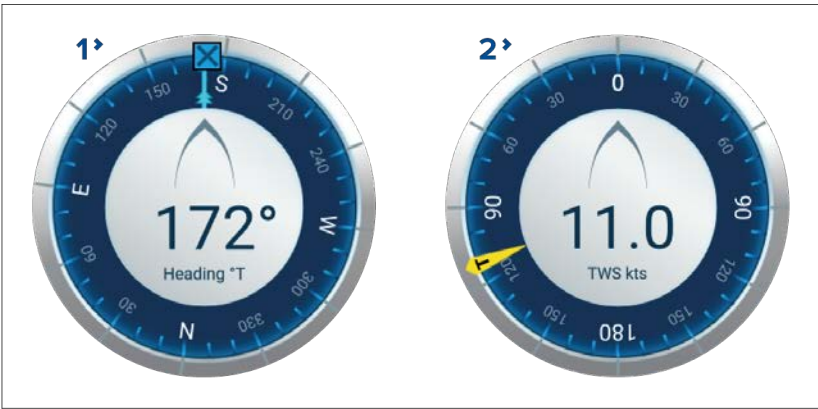
1. **Navigation dial** — The navigation dial provides a full compass with Heading read out, COG indicator and destination waypoint indicator.

2. **Sailing dial** — The sailing dial provides a full compass with wind speed read out and wind angle indicator. The sailing dial can be switched between displaying True wind and Apparent wind.
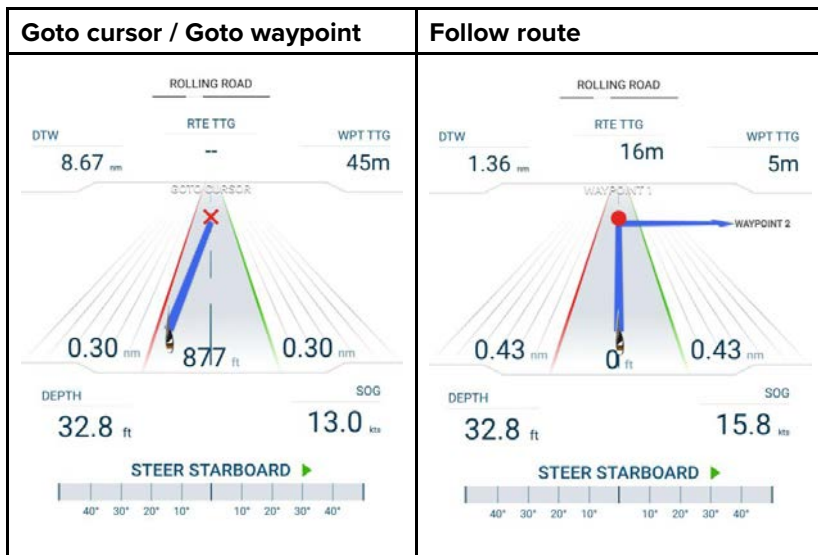
Dial indicators:

	COG indicator Visual identification of your course over the ground. The COG indicator is available on the navigation dial when COG data is available.
	Destination waypoint indicator Visual identification of the course to your current destination. The Destination waypoint indicator is available during active navigation (i.e.: Navigating to a waypoint, performing a goto or following a route).
	True wind angle indicator Visual identification of the true wind angle. The indicator is available on the sailing dial when wind data is available and the dial is set to TWS.
	Apparent wind angle indicator Visual identification of the apparent wind angle. The indicator is available on the sailing dial when wind data is available and the dial is set to AWS.

Rolling road

The rolling road dashboard page provides a graphical representation of your vessel's course and indicates if your vessel has deviated from its course.

With your display receiving accurate heading and position data, you can use the rolling road page to monitor your course and accurately steer to a target destination.

Goto cursor / Goto waypoint	Follow route
ROLLING ROAD DTW **8.67** nm RTE TTG **--** WPT TTG **45m** GOTO CURSOR **0.30** nm **877** ft **0.30** nm DEPTH **32.8** ft SOG **13.0** kts STEER STARBOARD ▶ 40° 30° 20° 10° 10° 20° 30° 40°	ROLLING ROAD DTW **1.36** nm RTE TTG **16m** WPT TTG **5m** WAYPOINT 1 WAYPOINT 2 **0.43** nm **0** ft **0.43** nm DEPTH **32.8** ft SOG **15.8** kts STEER STARBOARD ▶ 40° 30° 20° 10° 10° 20° 30° 40°

The rolling road graphic represents a width of water, equal to the limit specified in the cross track error (XTE) alarm, on each side of your vessel. The Cross track error alarm can be configured from the alarms menu: **Homescreen > Settings > Alarms > Cross-track error:**.

During active navigation (performing a **Goto** or **Follow**) , navigational data and steering advise are provided on the page.

Follow the steering advise to correct any course deviation that occurs and maintain your course to the target destination.

Chapter 8: Radar app

8.1 Adding the Radar app icon to the homescreen

If the Radar app icon is not displayed on the homescreen it can be added manually following the steps below.
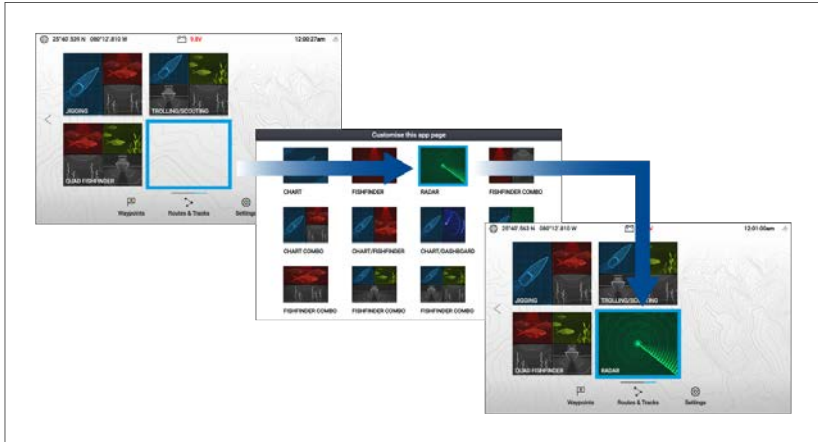
From the homescreen:

1. Using the **Directional pad**, highlight a blank space on the homescreen.
2. Press and hold the **OK** button.
3. Highlight the Radar app icon and press the **OK** button.

The Radar app icon is now displayed on the homescreen.

Pairing a Quantum™ radar scanner

You can connect a Quantum™ radar scanner to your display using the Wi-Fi connection.

Pre-requisites:

- Ensure you have installed and connected your Quantum™ radar scanner to a power supply following the instructions supplied with the radar scanner.
- Ensure you know your Quantum™ radar scanner's SSID and passcode.
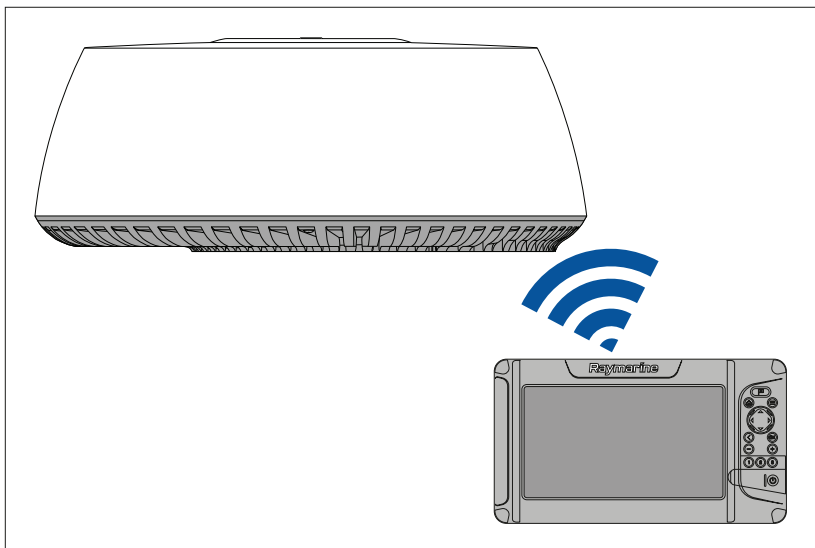
1. Select **Pair with Quantum** from the **This display** tab: **Homescreen > Settings** > **This display** > **Quantum Radar:** > **Pair with Quantum**.

2. Enter the SSID and passcode for your Quantum™ radar.

3. Select **Connect**.

4. Follow any onscreen instructions to continue pairing with your Quantum™ radar.

   The pairing process may take several minutes to complete.

   For more information on the Quantum™ radar pairing process (including troubleshooting information), refer to your Quantum™ radar documentation.

8.2 Opening the Radar app

The Radar app is opened by selecting a page icon from the homescreen that includes the Radar app.

Pre-requisites:

1. Ensure your radar scanner is compatible, check the latest details available on the Raymarine website, if in doubt please contact an authorized Raymarine dealer for advice.

2. Ensure you have installed your radar scanner in accordance with the documentation that was supplied with your Radar.

The Radar app will open in one of the following states:

**Off/Not Connected**

Off/Not connected

⏻
On
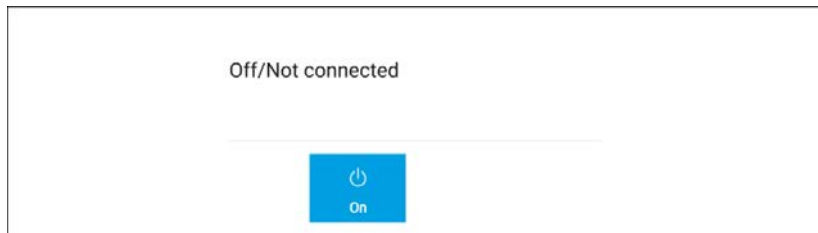
If the '**Off/Not Connected**' message is displayed then the display cannot establish a connection with your radar scanner:

Ensure that your display and radar scanner are paired correctly and then select **On** to power up your radar.
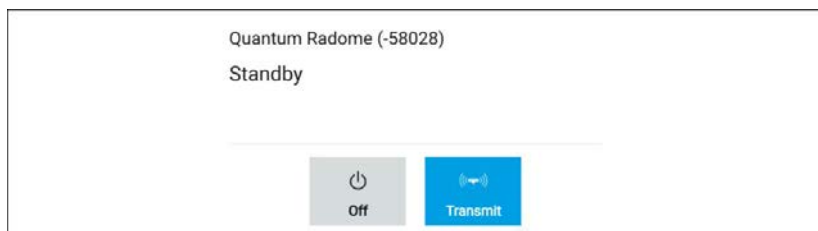
If the '**Radar not found**' message is displayed then power cycle your system and perform the pairing procedure again. If the radar scanner still cannot be found refer to your Radar's installation documentation for further troubleshooting information.
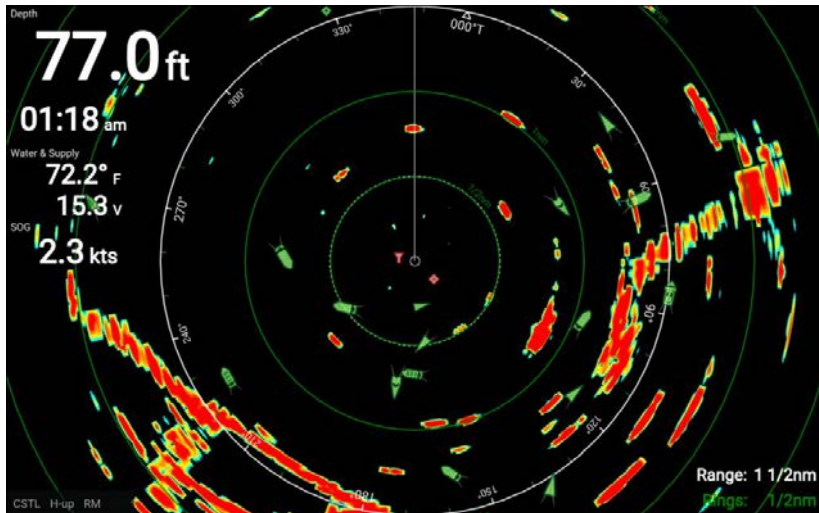
Off

Quantum Radome (-58028)
Off

⏻
On
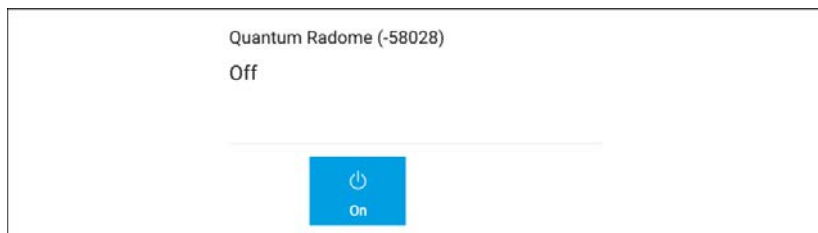
If the '**Off**' message is displayed then your radar scanner is powered off, select **On** to power up your Radar

Standby (Not transmitting)

Quantum Radome (-58028)
Standby

⏻
Off

(•👁•)
Transmit

If the '**Standby**' message is displayed then select **Transmit** to begin transmitting.

Transmitting

If your radar scanner is connected, powered up and transmitting then the radar image is displayed and echoes returns are displayed onscreen.

Putting the radar into standby

With your selected radar displayed onscreen:

1. Select **Transmit** from the main menu.

   The radar scanner will stop transmitting and is put into standby mode.

Powering down your radar scanner

With your radar scanner in standby mode:

1. Select the **Off** icon.
2. Select **Yes** to confirm power down.

   The radar scanner will still consume a small amount of power whilst it is powered off, this is to ensure the radar can be powered back up quickly.

8.3 Radar modes

The Radar app provides preset modes that can be used to quickly achieve the best picture depending on your current situation. Only Radar modes supported by your Radar scanner are shown.

To change radar mode select the required mode from the Radar app menu.

HARBOR
Harbor mode takes into account land clutter that is typically encountered in a Harbor, so that smaller targets are still visible. This mode is useful when navigating in a Harbor.
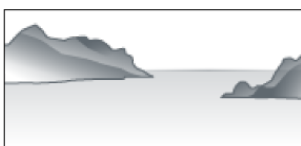
COASTAL
Coastal mode takes into account slightly higher levels of Sea clutter that are encountered out of Harbor areas. This mode is useful when in open water but keeping to coastal areas.

OFFSHORE
Offshore mode takes into account high levels of Sea clutter so that targets are still visible, useful when navigating in open water away from the coast.

WEATHER
Weather mode optimizes the display to help identify precipitation, useful for helping determine weather fronts.

8.4 Automatic Identification System (AIS) support

With compatible AIS hardware connected to your display, AIS targets can be tracked.

AIS equipped vessels that are transmitting their position, and are within range of your vessel, can be represented in the Radar app using AIS target icons.

> **Note:**
>
> A maximum of 100 AIS targets can be tracked simultaneously. If there are more than 100 AIS targets within range of your vessel the closest 100 targets will be displayed.
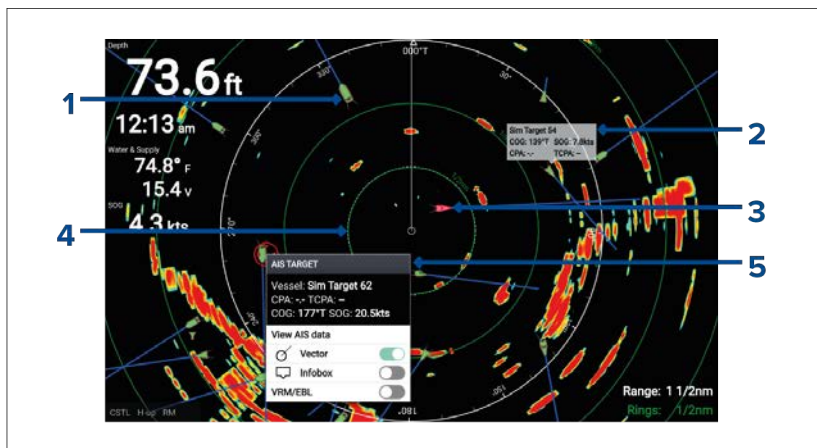
1. **AIS target icon** — Example of an AIS target icon.

2. **AIS Infobox** — Information can be displayed for each AIS target.

3. **Dangerous AIS target icon** — Example of an AIS target icon that is dangerous.

4. **Safe distance ring** — A ring can be displayed which represents the dangerous AIS target alarm's **Safe distance**.

5. **AIS context menu** — The AIS context menu is displayed when an AIS target is selected.

8.5 Range and bearing

The Radar app helps you identify a target's range (distance) and bearing from your vessel.
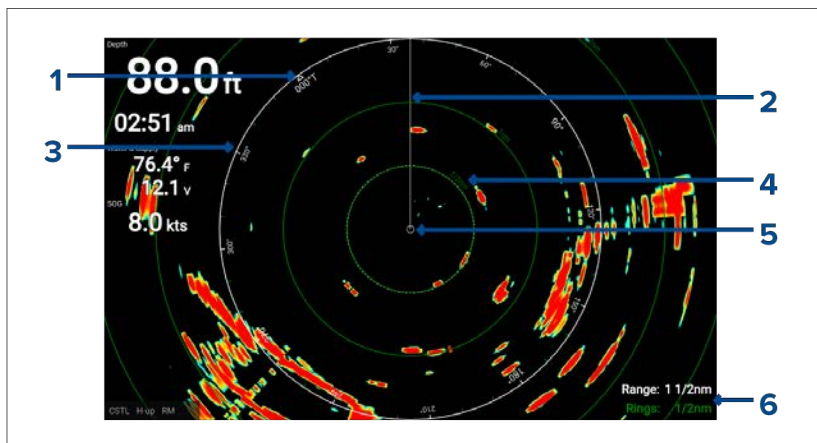
1. North indicator (Always points north).

2. SHM (Ships Heading Marker).

3. Bearing indicator ring (White).

4. Range rings with range indicator (Green).

5. Vessel position.

6. Current displayed bearing and range ring separation distance (Range: identifies the distance from your vessel to the bearing indicator ring. Rings: identifies the distance between each range ring).

The displayed range can be adjusted at anytime using the **Plus** and **Minus** buttons.

Range rings can be switched off from the Presentation tab: **Menu > Settings** > **Presentation** > **Range rings:**

You can also choose whether to display a numerical range indicator against each ring using the **Range ring labels:** option.

8.6 Guard zone alarm

The guard zone alerts you if radar returns (objects) are detected within the specified guard zone area.

The guard zone can be configured from the Guard zone menu:

The guard zone can be configured from the **Guard zone alarm** menu: **Menu > Guard zone alarm**.

The guard zone can be configured as a sector or as a circle around your vessel.

If required, the sensitivity of the guard zone can be adjusted using the **Sensitivity:** field. Sensitivity determines the size at which objects will trigger the alarm. A Higher sensitivity setting will detected smaller objects than a lower sensitivity setting.

Chapter 9: Technical support

9.1 Raymarine product support and servicing

Raymarine provides a comprehensive product support service, as well as warranty, service, and repairs. You can access these services through the Raymarine website, telephone, and e-mail.

Product information

If you need to request service or support, please have the following information to hand:

- Product name.
- Product identity.
- Serial number.
- Software application version.
- System diagrams.

You can obtain this product information using diagnostic pages of the connected MFD.

Servicing and warranty

Raymarine offers dedicated service departments for warranty, service, and repairs.

Don't forget to visit the Raymarine website to register your product for extended warranty benefits: http://www.raymarine.co.uk/display/?id=788.

Region	Contact
United Kingdom (UK), EMEA, and Asia Pacific	• E-Mail: emea.service@raymarine.com • Tel: +44 (0)1329 246 932
United States (US)	• E-Mail: rm-usrepair@flir.com • Tel: +1 (603) 324 7900

Web support

Please visit the "Support" area of the Raymarine website for:

- **Manuals and Documents** — http://www.raymarine.com/manuals
- **Technical support forum** — http://forum.raymarine.com
- **Software updates** — http://www.raymarine.com/software

Worldwide support

Region	Contact
United Kingdom (UK), EMEA, and Asia Pacific	• E-Mail: support.uk@raymarine.com • Tel: +44 (0)1329 246 777
United States (US)	• E-Mail: support@raymarine.com • Tel: +1 (603) 324 7900 (Toll-free: +800 539 5539)
Australia and New Zealand (Raymarine subsidiary)	• E-Mail: aus.support@raymarine.com • Tel: +61 2 8977 0300
France (Raymarine subsidiary)	• E-Mail: support.fr@raymarine.com • Tel: +33 (0)1 46 49 72 30
Germany (Raymarine subsidiary)	• E-Mail: support.de@raymarine.com • Tel: +49 (0)40 237 808 0
Italy (Raymarine subsidiary)	• E-Mail: support.it@raymarine.com • Tel: +39 02 9945 1001
Spain (Authorized Raymarine distributor)	• E-Mail: sat@azimut.es • Tel: +34 96 2965 102
Netherlands (Raymarine subsidiary)	• E-Mail: support.nl@raymarine.com • Tel: +31 (0)26 3614 905
Sweden (Raymarine subsidiary)	• E-Mail: support.se@raymarine.com • Tel: +46 (0)317 633 670
Finland (Raymarine subsidiary)	• E-Mail: support.fi@raymarine.com • Tel: +358 (0)207 619 937
Norway (Raymarine subsidiary)	• E-Mail: support.no@raymarine.com • Tel: +47 692 64 600
Denmark (Raymarine subsidiary)	• E-Mail: support.dk@raymarine.com • Tel: +45 437 164 64
Russia (Authorized Raymarine distributor)	• E-Mail: info@mikstmarine.ru • Tel: +7 495 788 0508

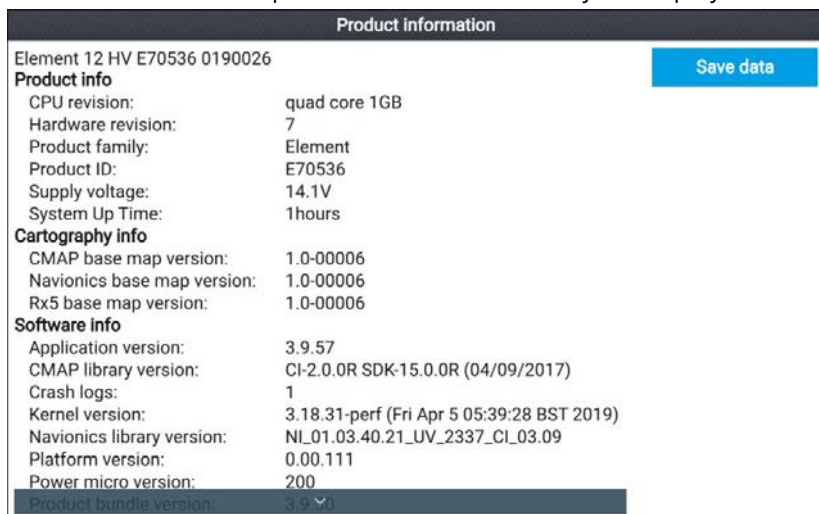# Identify display variant and software version

Refer to the Getting started menu: **Homescreen > Settings > Getting started** on your display to identify product variant and current software version.
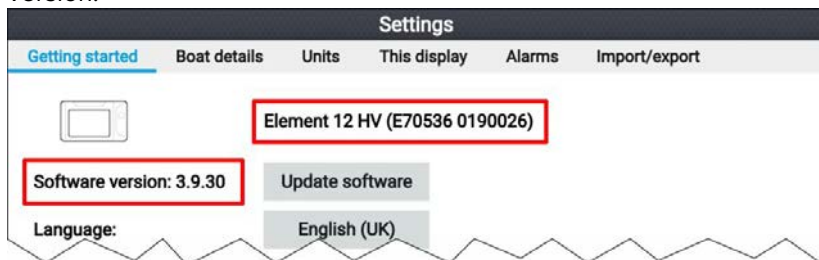
Viewing product information

You can view detailed product information about your display.

1. Select the **Settings** icon from the **Homescreen**.
2. Select the **This display** tab.
3. Select **About this product** from the **DIAGNOSTICS** section.
4. If the **Save data** button is highlighted press the **Left** button.
5. Use the **Up** button and **Down** button to scroll through the available information.

Saving product information

The information displayed on the Product information page can be saved to memory card.

With the Product info page displayed:

1. Use the **Right** button to select **Save data**.

2. Enter a filename for the data using the onscreen keyboard, or keep the default filename.
3. Select **Save**.
4. Select **Eject card** to safely remove the memory card, or select **OK** to return to the **Product information** page.

Viewing information about networked products

Product information for networked products can be viewed from the Networked devices list.

From the Homescreen:
1. Select **Settings**.
2. Select **This display**.
3. Select **Networked devices**.

    Product information for compatible connected products is displayed.
4. If required, use the **Up** and **Down** buttons to scroll through the list of product information.
5. Press the Right button to highlight the **Save data** button, to save product information to a memory card.

Saving system logs

You can save system logs to memory card for diagnostic purposes.

From the Homescreen settings menu: **Homescreen > Settings**.
1. Select **This display**.
2. Select **Logs**.

    The Logs pop-over menu is displayed. The pop-over menu will identify whether there are any logs that can be saved.
3. Select **Save system logs**.

9.2 Learning resources

Raymarine has produced a range of learning resources to help you get the most out of your products.

Video tutorials

▶ YouTube	Raymarine official channel on YouTube: • YouTube LightHouse™ 3 tips and tricks: • Raymarine website
RAYMARINE VIDEO GALLERY	Video Gallery: • Raymarine website

Note:
• Viewing the videos requires a device with an Internet connection.
• Some videos are only available in English.

Training courses

Raymarine regularly runs a range of in-depth training courses to help you make the most of your products. Visit the Training section of the Raymarine website for more information:

• http://www.raymarine.co.uk/view/?id=2372

Technical support forum

You can use the Technical support forum to ask a technical question about a Raymarine product or to find out how other customers are using their Raymarine equipment. The resource is regularly updated with contributions from Raymarine customers and staff:

• http://forum.raymarine.com

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