



# Chart

App Guide

English

Software version: 2.1



Zeus<sup>®</sup> SR | Zeus<sup>®</sup> S

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## More information

Document version: 001

This document was prepared using software version 2.1.

Features described in this document may vary from your unit due to connected devices, settings, brand, and continuous software development.

For the latest version of this document in supported languages, and other related documentation, visit [www.bandg.com/downloads](http://www.bandg.com/downloads).

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# OVERVIEW

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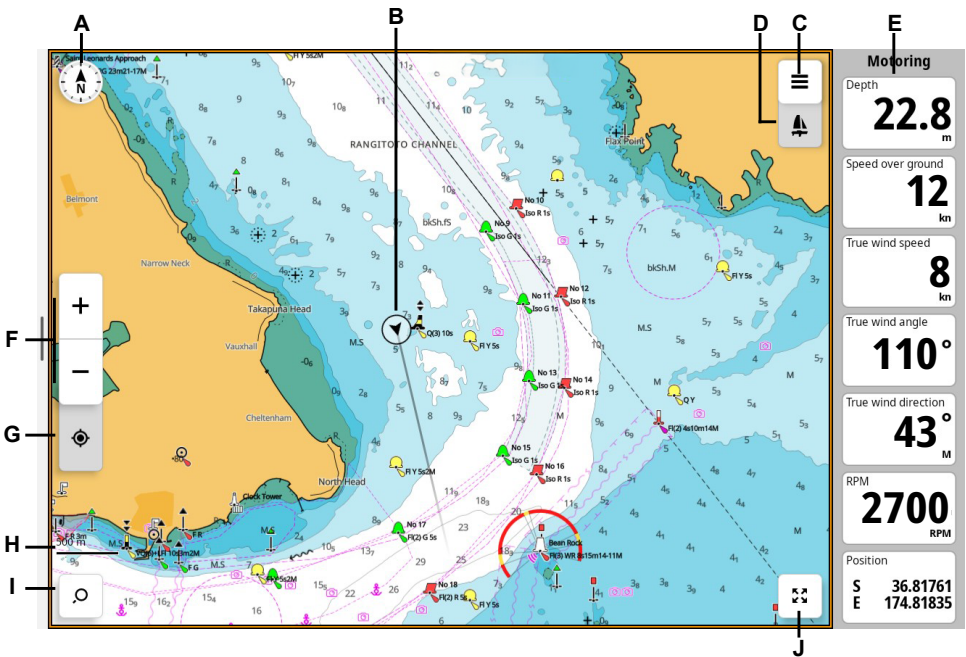
The **Chart** app integrates GPS data with electronic marine charts to show your vessel's location. It helps you to:

- Navigate safely
- Plan routes
- Track movements
- Explore points of interest
- Create and modify waypoints and routes

Additionally, **Chart** app has three modes on B&G devices: **Cruise**, **Race** and **Anchoring**. Refer to the **Chart modes** on page 32 in this document for further information.

# CHART SCREEN

To use all the features of the **Chart** app, you need a valid GPS position and a microSD® chart card with chart data.



- A Chart orientation selector
- B Your vessel
- C Chart settings button
- D Sailing mode indicator (Cruise/Race/Anchoring)
- E Instrument bar
- F Zoom-in and zoom-out buttons
- G Center chart to vessel
- H Chart scale
- I Search button
- J Full screen button

An instrument bar (E) is shown to the right of the chart. This vertical bar presents information from the sensors connected to your system. Refer to the **Instruments App Guide** for further information.

- **Notes:**
- Select the full screen button to hide the instrument bar and activity bar.
  - After 30 seconds of inactivity, the screen enters declutter mode and the search, chart settings and full screen buttons are hidden. Tap the screen to see them again.
  - Press and hold anywhere on the instrument bar (E) to change gauge data. Refer to the **Instruments App Guide** for further details.

# CHART DATA

Your display unit has a world chart stored on the internal memory. It provides a base chart with low-resolution scales and is not suitable for safe navigation.

**i** To get detailed charts, you can either download a digital version or use a microSD® card with the charts. You can buy these charts online or from a dealer.

**⚠ WARNING:** Chart data and routes are only intended as aids to navigation to facilitate the use of authorized government charts and traditional navigation methods. They do not replace a human navigator and should never be relied on as a sole or primary source of navigation. Always review against official publications and use situational awareness when navigating to avoid hazards.

If you purchased the unit without a chart card for your region, you can purchase a chart license from <https://xstore.c-map.com> or the **X-Chart Manager app** on your unit. You can store the licensed chart on your unit's internal memory or a microSD® card. Alternatively, contact your dealer for further information.

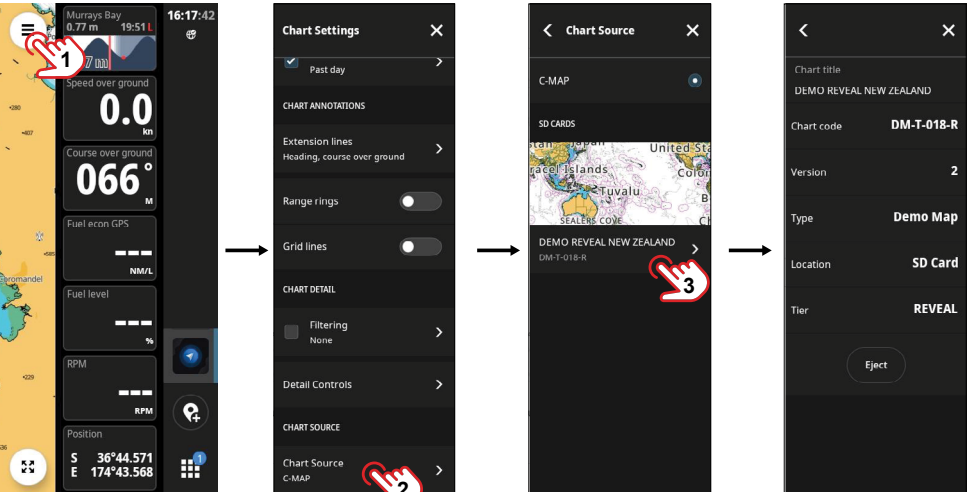
If you purchased the unit with a chart card for your region, the unit will default to that as its cartography source.

Refer to the **X-Chart Manager App Guide** to purchase the latest charts and keep your chart up to date.

Visit the B&G website for further information on supported charts.

## SELECT CHART SOURCE

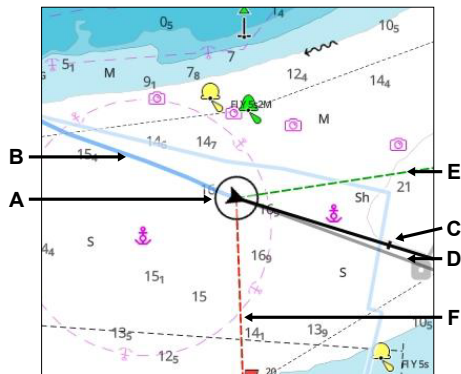
Select the chart settings button (1), then select the chart source via **Chart settings > Chart source** option (2). Select a list item under **Chart source**, select the chart (3) view the chart details area.



➔ **Note:** Charts are shared over the Ethernet network between devices running the same operating system, so only one chart per vessel is required.

# RECOGNIZE YOUR VESSEL

On your MFD, your vessel shows on the chart when the system has a valid GPS position. The following information displays:

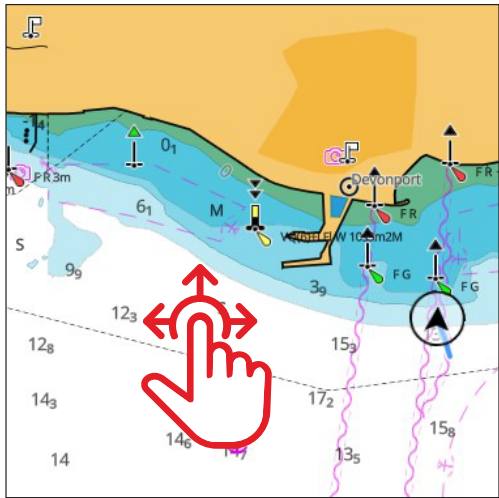


- A Current vessel location
- B Tracking (historical location)
- C Predicted course extension line (Course Over Ground from GPS position)
- D Predicted heading extension line (from compass data)
- E Starboard layline
- F Port layline

→ **Note:** Go to **Chart Annotations > Extension lines** in chart settings to display and alter extension lines. Refer to the Settings section in the document to adjust layline settings.

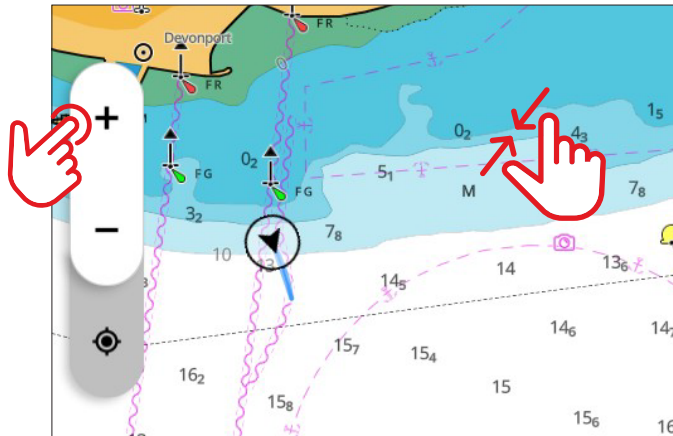
# PAN CHART

Select and drag your finger on the screen in any direction to pan the chart.



# ZOOM CHART

The chart range scale and range rings interval (when turned on) are shown on the chart panel. Use the scroll wheel, zoom buttons, or pinch to zoom anywhere on the chart to zoom in or out.

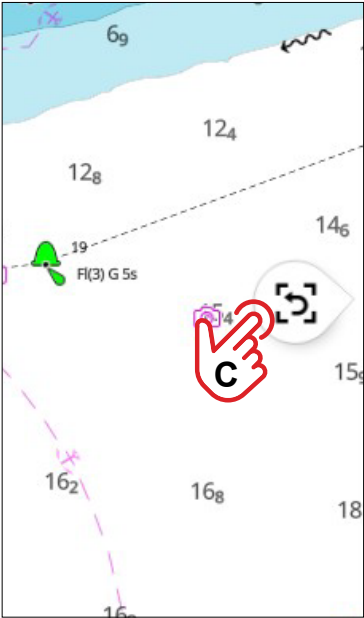
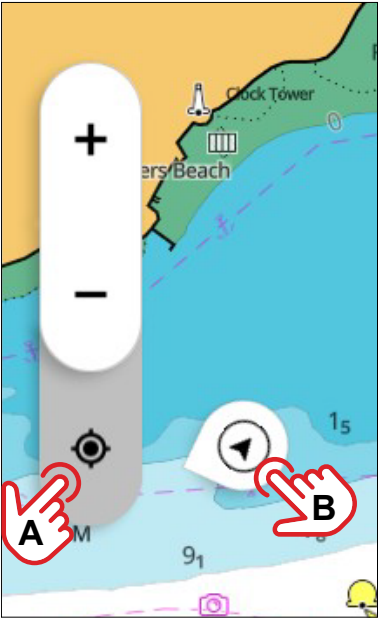


# LOCATE YOUR VESSEL

If you pan the chart so your vessel no longer shows in the center of the screen, you can select the center vessel button (A) to center the chart to your current location.

If you pan the chart so your vessel isn't visible on the chart, you can select the vessel location button (B) to center the chart to your current location.

Select the vessel location button (B) to display the previous position button (C) to return to your previous chart view.

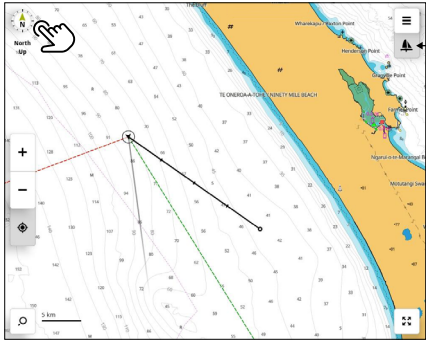




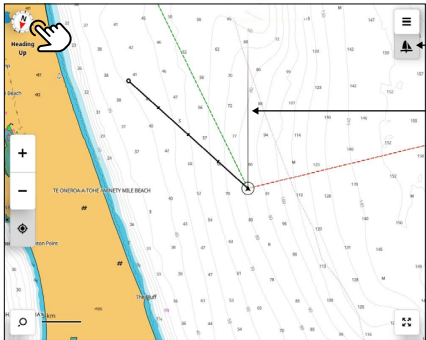
# CHART ORIENTATION

The chart orientation indicator always points towards true north. Select the chart orientation indicator repeatedly to cycle between available chart orientations, which vary based on the sailing mode (A).

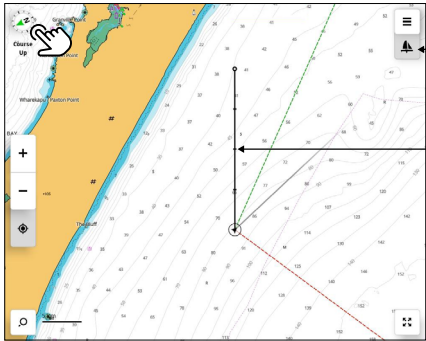
→ **Note:** The chart orientation indicator is disabled if your vessel is off-center or out of view on the screen. Select the center vessel button to enable.



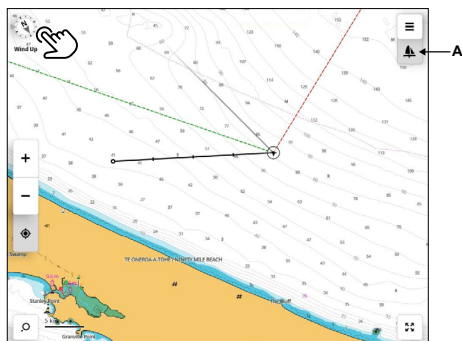
**North up**  
Displays the chart with north upward.



**Heading up**  
Displays the chart with the vessel's heading (B) directed upward. A heading source is needed for this view. If a heading is not available, then the COG from the GPS is used.



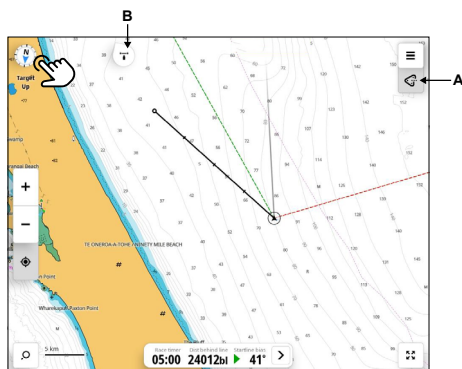
**Course up**  
Displays the chart with the vessel's course over ground (B) directed upward. A GPS source is needed for this view.



## Wind up

Displays the chart oriented so that the True Wind Direction is at the top of the screen. Wind and heading sensors are needed for this view.

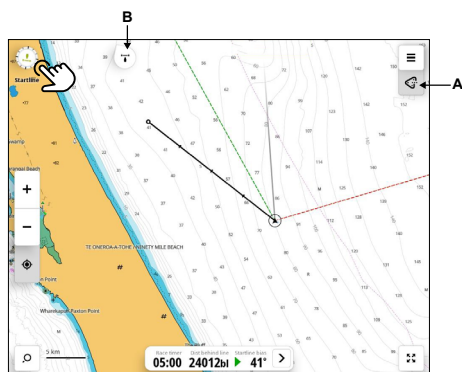
→ **Note:** The chart orientation will automatically adjust based on the wind direction. The rate of adjustment may vary based on your wind sensor damping settings.



## Target up

Orientates the chart so that your target waypoint is at the top of the screen. In race mode (A), before the race timer reaches zero, the start line will be shown in the middle of the screen. After the start, it will revert to showing the waypoint at the top of the screen.

An indicator (B) displays the race target start line when the start line is not visible on the screen.



## Start line

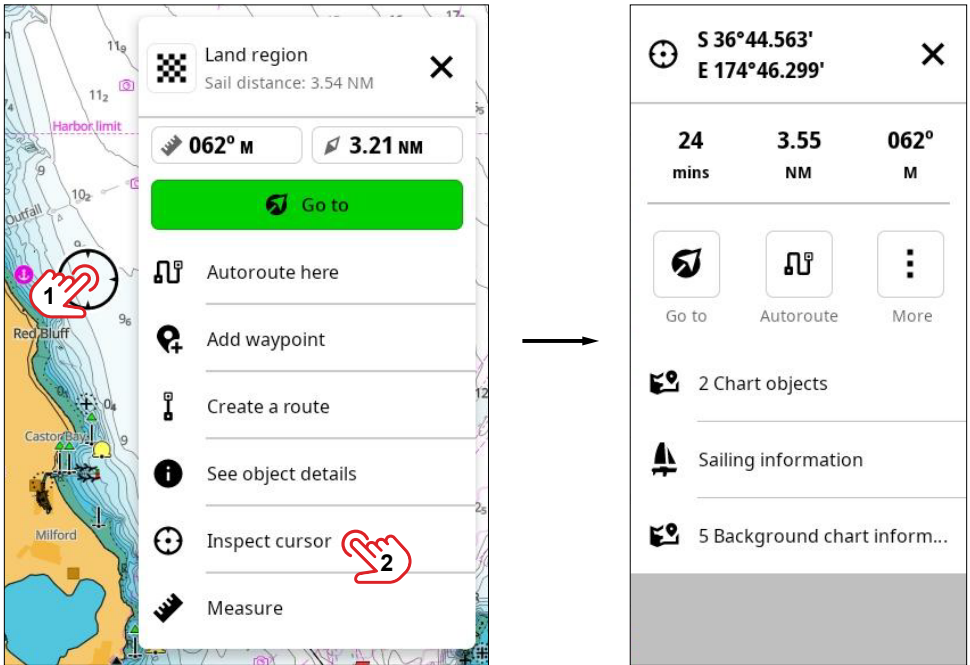
In race mode (A), the chart is oriented perpendicular to the start line. An indicator (B) displays the race target start line when the start line is not visible on the screen.

# LOCATION DETAILS

When you select a waypoint, route or any position on the chart (1), basic information about that selection displays. To reposition the basic information pop-up (mini-inspector), simply select and drag it.

To view more detailed information about the waypoint, route, cursor position, or area, select **Inspect cursor** (2).

Alternatively, you can select and hold any position on the chart to view the cursor details panel.

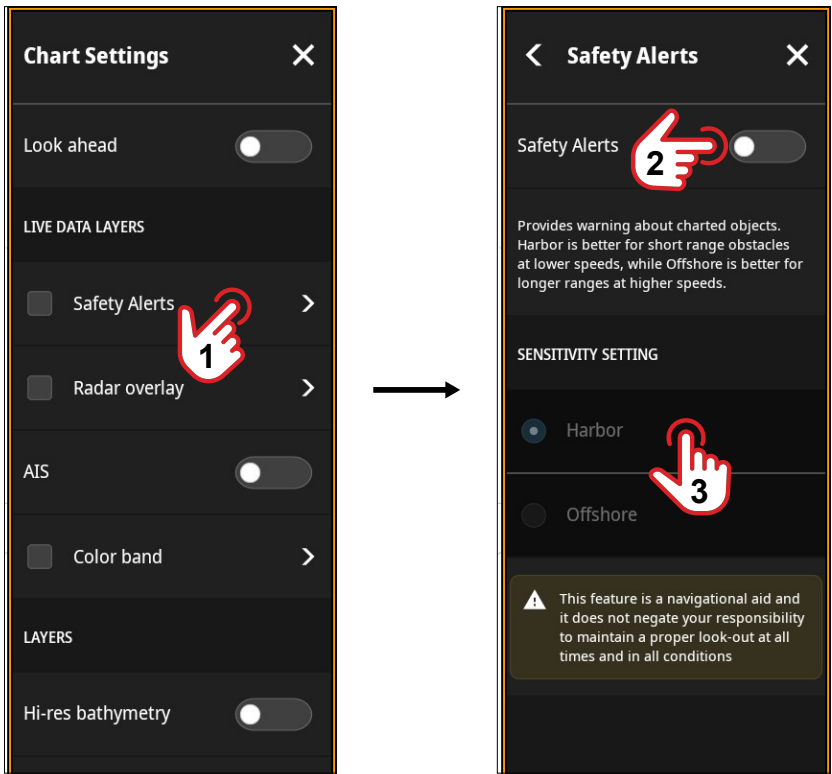


➔ **Note:** If you inspect the chart at a position, the mini inspector will also display the travel time and distance to the cursor.

# SAFETY ALERTS

Chart safety alerts assist with safe navigation in harbor and offshore environments. Safety alerts can be turned by navigating to chart **Settings > Safety Alerts**.

→ **Note:** Safety alerts require heading, location, and speed to function.



In the **Sensitivity setting** options, choose **Harbor** or **Offshore** sensitivity based on your current navigation environment.

## Harbor

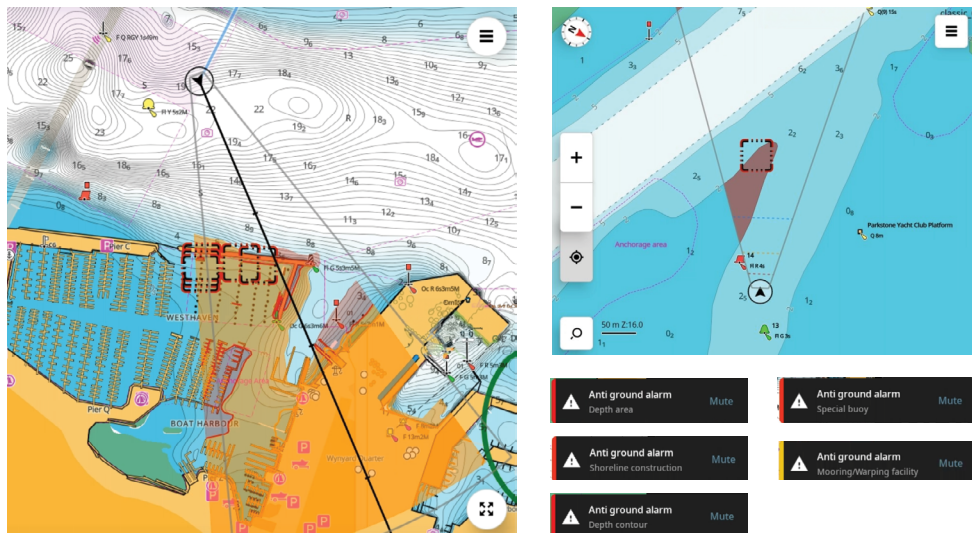
In **Harbor** mode, the system is less sensitive to prevent excessive alarms in crowded areas. Since there are many objects nearby, the system gives alerts when you are closer to an obstacle.

## Offshore

In **Offshore** mode, the system is more sensitive with increased safety limits. The system alerts you further from an obstacle so that you have more time to take corrective action.

## How safety alerts work

Safety alerts identify objects in the vessel's path that pose a risk of collision or grounding. Collision alerts apply to surface objects, such as buoys or cardinal markers. Grounding alerts are triggered by any object shallower than the vessel's draft, as measured at chart datum. The illustrations below show how charted objects that trigger alerts are displayed.



The Chart app continuously monitors the Closest Point of Approach (CPA) to detect objects ahead. CPA measures how close your vessel will come to an object if neither changes course. CPA is a concept also used in radar and AIS.

If an object CPA is within the defined safety zone — adjusted based on conditions — the system calculates the Time to Closest Point of Approach (TCPA). If the TCPA falls within the safety threshold, the app triggers an audible and visual alert.

→ **Note:** An AIS is required to monitor vessels.

TCPA helps filter out distant objects, ensuring alerts focus on immediate risks rather than potential hazards hours away. Alerts can be in the form of an:

- **Alarm** — a message that stays on the screen until you mute it. If your system's siren is on, it is also accompanied by an audible alarm.
- **Warning** — a message that stays on the screen until you mute it.
- **Notification** — a message that stays on the screen for 15 seconds and then automatically disappears, or until you mute it.

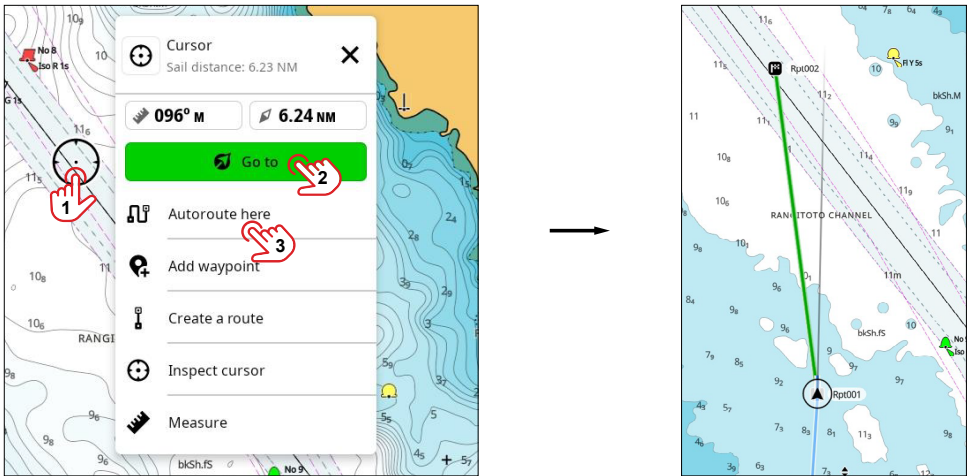
To set up and configure alerts, navigate to the unit **Settings > Alerts**. Refer to the **System Guide** for further information.

→ **Notes:**

- Turn on the siren for audible alarm alerts.
- When connected, external alarms will also be audible if an alarm alert is triggered.

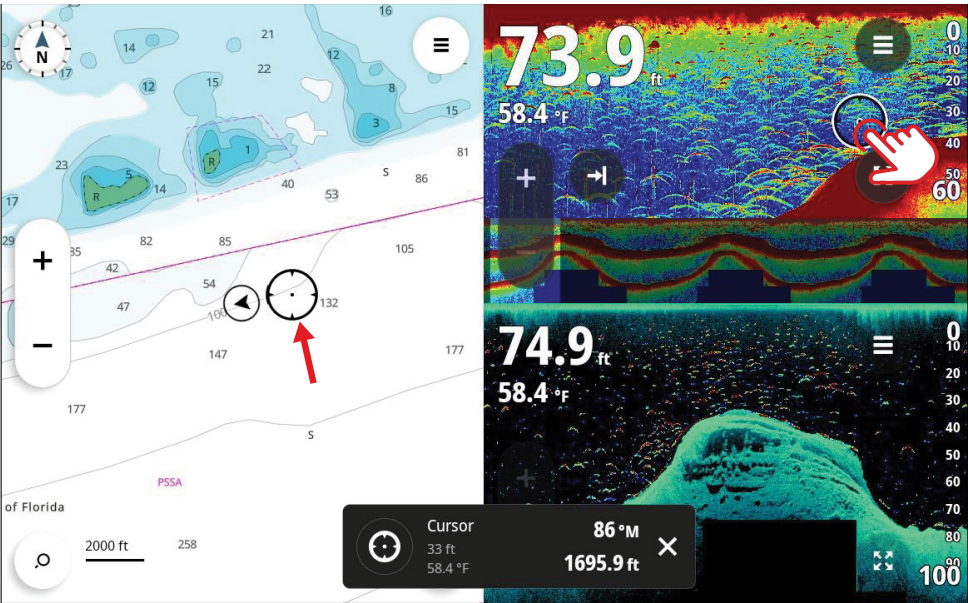
# NAVIGATE TO A LOCATION

To navigate to a location, select a position on the chart (1), select **Go to** (2). A flag icon identifies your selected location and a green line illustrates the navigation route. You can also select **Autoroute here** (3) if you want the unit to create a route for you.



# CURSOR MIRRORING

When using grouped apps with multiple panels, the cursor position you select on one app will be mirrored across all the panels. This feature works with chart, radar, and sonar apps (including Echo, DownScan, and SideScan).





# HEAT TRAILS

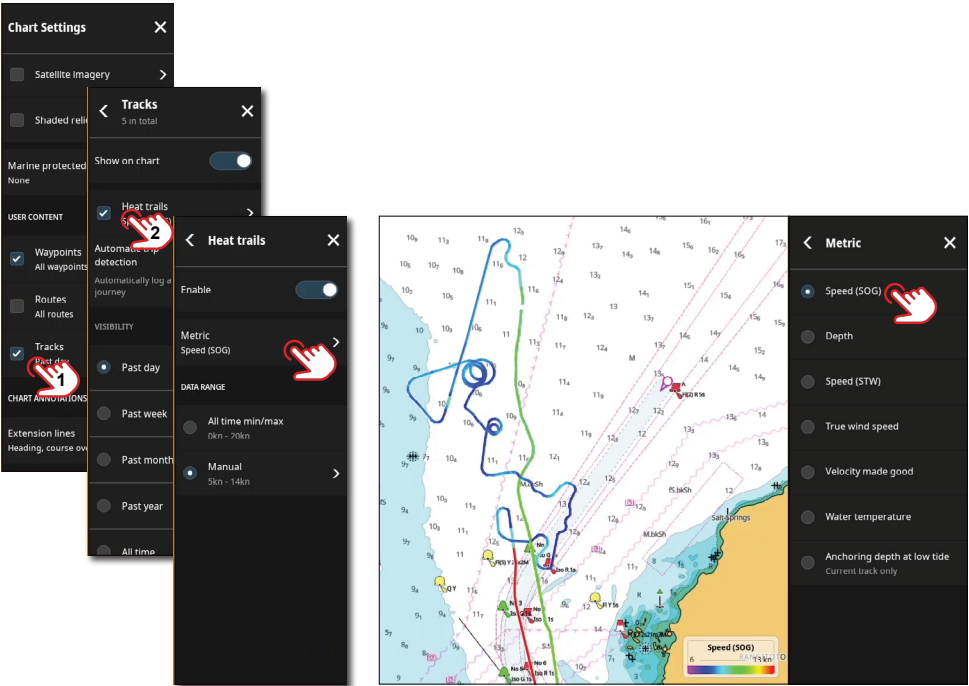
**i** This feature is available on Zeus SR devices only.

Heat trails show a colored track of the vessel's historic movement.

To turn on heat trails, navigate to chart settings, then under the **USER CONTENT** section, turn on **Tracks (1) > Heat trails (2)**. You can choose the metric to illustrate a track with colors to represent:

- **Speed (SOG)** – changes to speed over ground.
- **Depth** – changes to vessel depth.
- **Speed (STW)** – changes to speed through water.
- **True wind speed** – changes in true wind speed.
- **Velocity made good** – changes in velocity made good.
- **Water temperature** – changes in water temperature.
- **Anchoring depth at low tide** – changes in anchoring depth at low tide for the current track only.

Further in these settings you can also configure the **DATA RANGE** to illustrate the chosen metric, select from **All time min/max** or select **Manual** to configure the range.



➔ **Note:** The metrics are saved for the lifetime of the track.



# WAYPOINTS

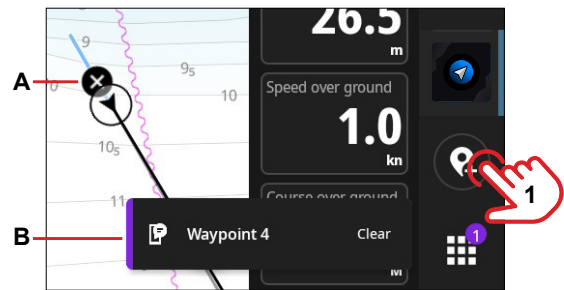
A waypoint is a point of reference or a marker that can be used for location and navigation. For example, you can save a waypoint for your favorite fishing spot.

## Add a waypoint

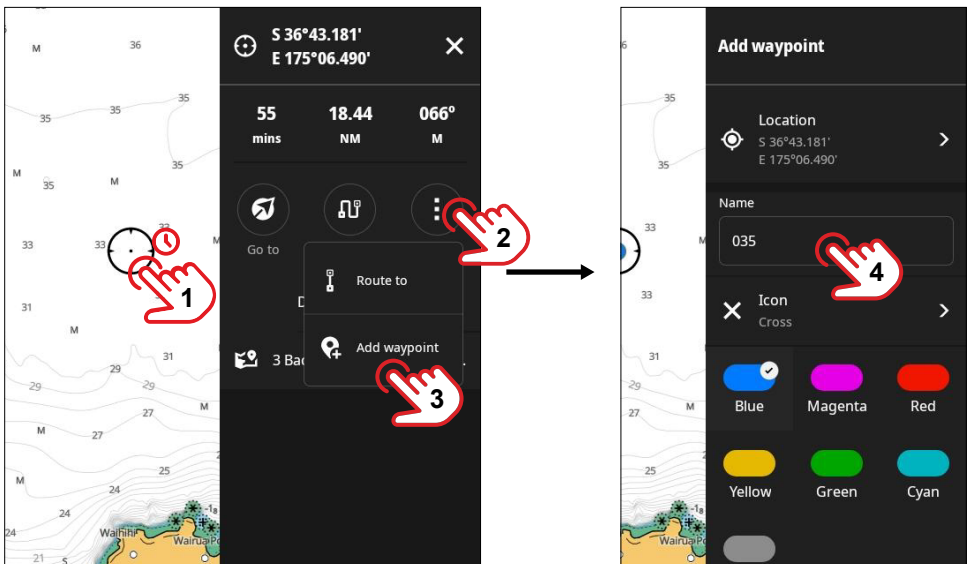
There are several methods to add a waypoint.

Press the waypoint key to add a waypoint at your vessel location or your cursor location if the cursor is active on screen.

Select the add waypoint button (1) on the recent apps panel to add a waypoint at your current vessel location.

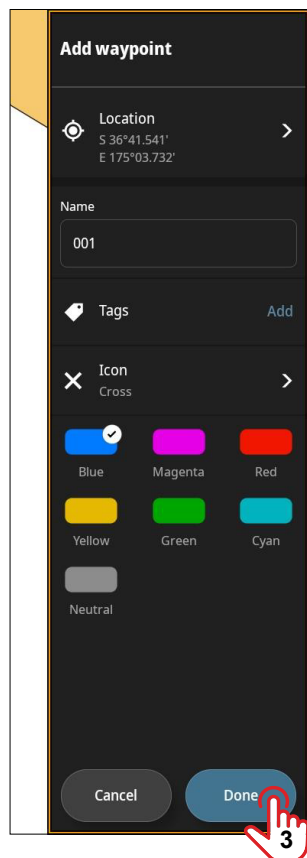
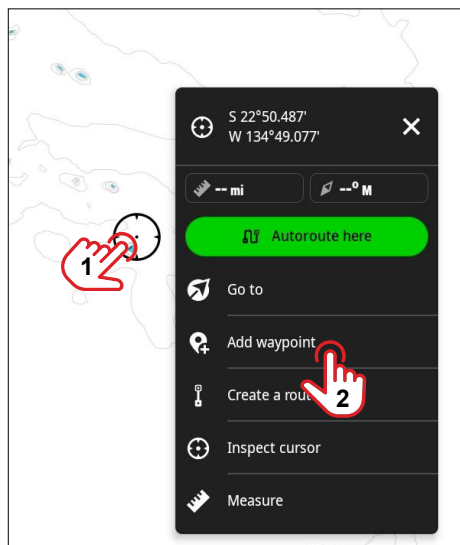


Alternatively, select and hold a position on the chart (1) to open the cursor details panel, select the cursor options button (2), then select **Add waypoint** (3) to add a waypoint at the cursor position. You can edit waypoint details on the **Add waypoint** panel.



→ **Note:** The waypoint is automatically given a name. On the edit waypoint panel, select the waypoint name (4) to rename the waypoint.

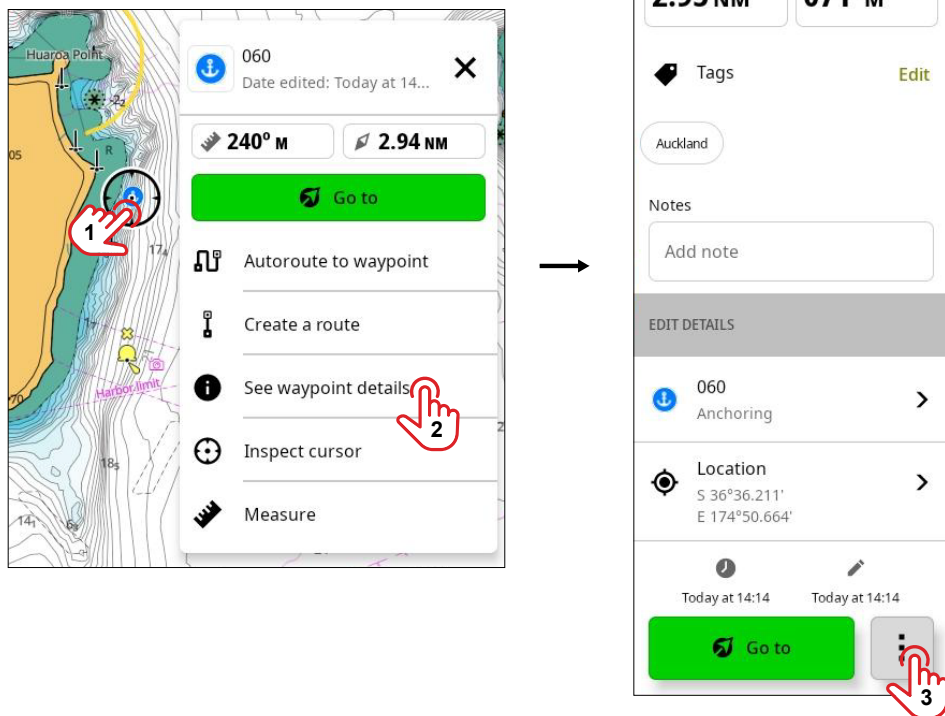
Finally, you can add a waypoint by selecting a position on the chart (1) and then select **Add waypoint** (2) from the extended pop-up. You can select a custom color and icon for the waypoint, select **Done** (3) to save the waypoint.



→ **Note:** The waypoint is automatically given a name. On the **Add waypoint** panel, select the waypoint name to rename it.

## Waypoint details

Select an existing waypoint (1) on the chart, then **See waypoint details** (2) on the mini-inspector.



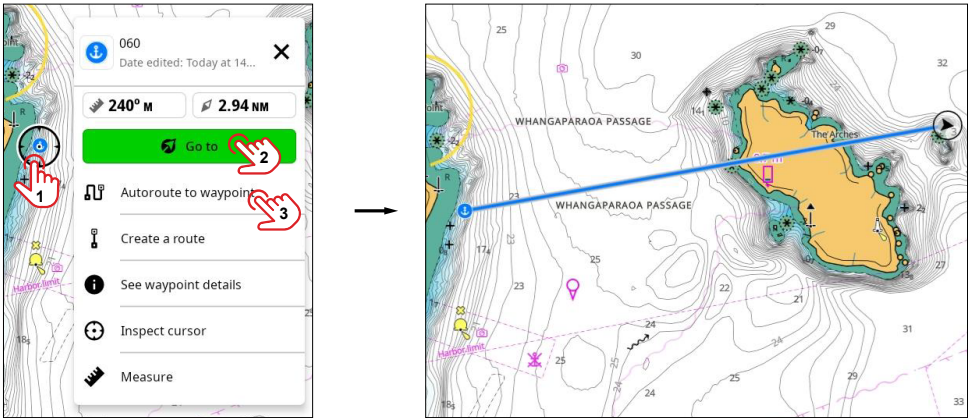
On the waypoint details panel, you can perform the following actions:

- Select **Go to** to start navigating to the waypoint
- Select the list items to customize waypoint name, marker color, marker icon and GPS location coordinates.
- Select the options button (3) to view waypoint options:
  - **Plan route** — to add this waypoint along a route
  - **Export** — to save the waypoint to a microSD® card
  - **Delete** — to delete the waypoint.

# Navigate to a waypoint

To navigate to a waypoint, select it on the chart (1), then select **Go to** (2).

If you want to autoroute to a waypoint select **Autoroute to waypoint** (3) to use it. A blue navigation line appears on the chart from your vessel to the waypoint.

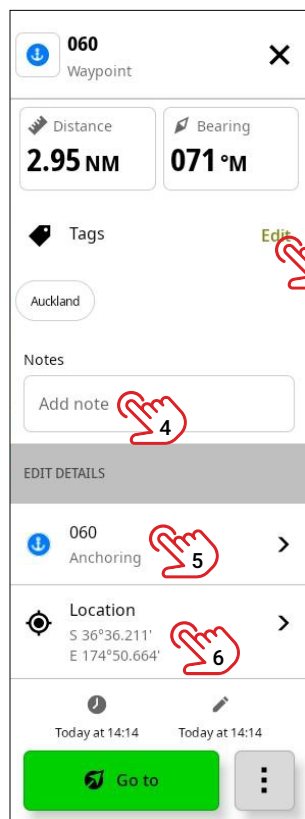
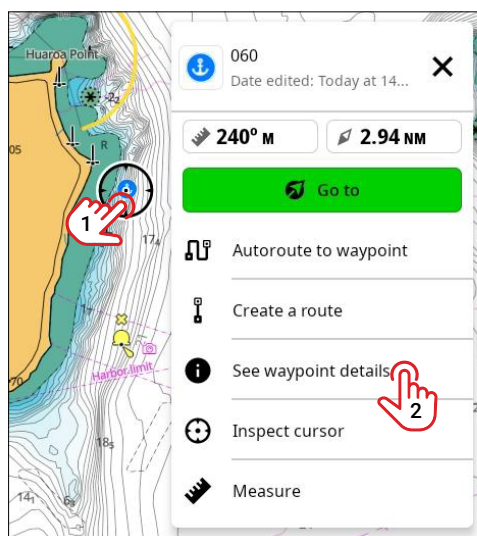


## Edit a waypoint

Select the waypoint (1), then select **See waypoint details** (2).

On the waypoint details panel, you can

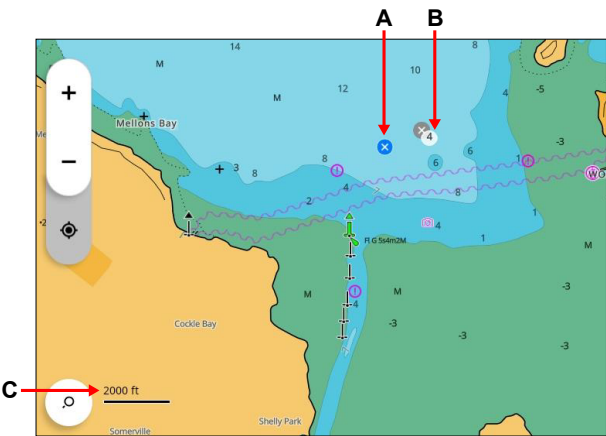
- Add/edit waypoint tags (3)
- Add/edit waypoint notes (4)
- Edit the waypoint name, icon, and color (5)
- Edit waypoint coordinates (6).



→ **Note:** If you edit a waypoint's color or icon style, the same settings are used when a new waypoint is created.

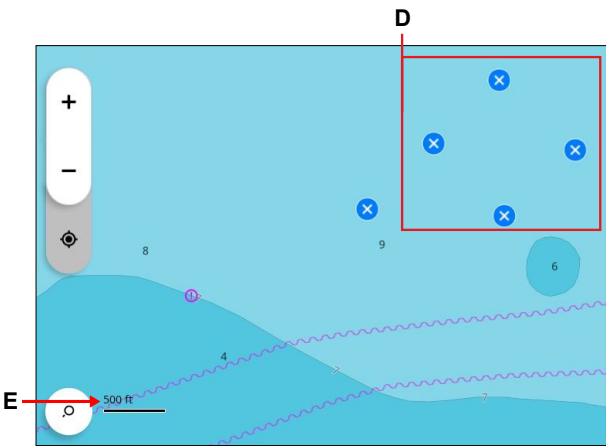
# Waypoint grouping

When you zoom out, decreasing the chart zoom level, a larger area is shown with less detail. Waypoints in close proximity to each other are grouped into a single point and a number is displayed to indicate the number of waypoints. This is done to declutter the chart view.



- A Single waypoint
- B Grouped waypoints with number of waypoints
- C Chart scale (zoom level)

Zoom into the chart to show more detail and ungroup the waypoints.




- D Ungrouped waypoints
- E Chart scale (zoom level)

➔ **Note:** You can turn off waypoint grouping in the chart settings. Navigate to **Chart settings** > **Waypoints** (User content section) > **Allow decluttering**.


# ROUTES

You can use the Chart app to quickly add a route to a location of interest. You can navigate the route with an autopilot or use it to guide you in manual navigation.

 **WARNING:** Routes are for general planning only and must be used in conjunction with conventional navigation practices and situational awareness. This does not replace a human navigator and should never be used as the only reference source.

## Autoroute a route leg

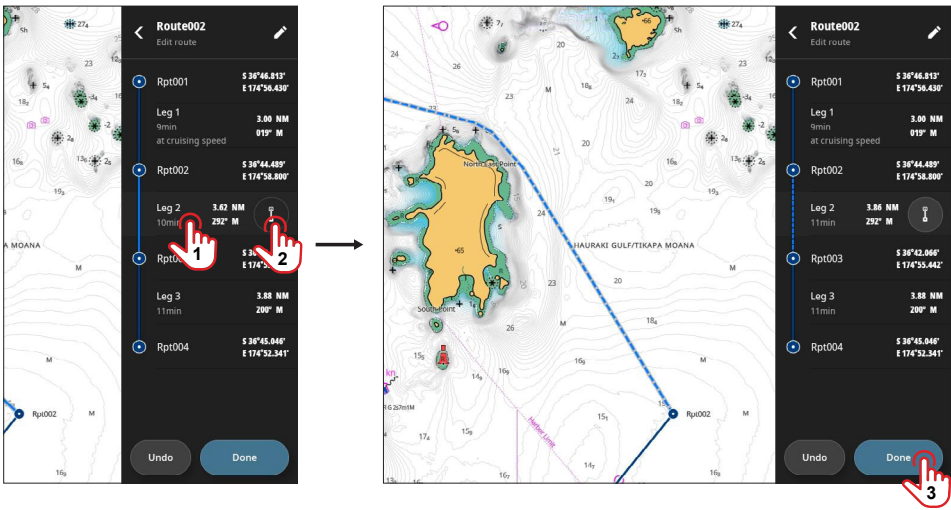
You can use autoroute to automatically plot each leg of a route. The system uses your vessel's dimensions, settings, and chart information to calculate a safe path for the leg.

 **WARNING:** You are responsible for checking the route leg suggested by the system is safe. There may be errors or omissions in the chart data (depth, obstacles, other vessels, tides, clearance heights etc.) or errors in your vessel's settings, speed or current ballast. Always review suggested routes against official publications and defer to visual sightings to avoid hazards.

To autoroute a leg, select the leg (1), and then the autoroute button (2).

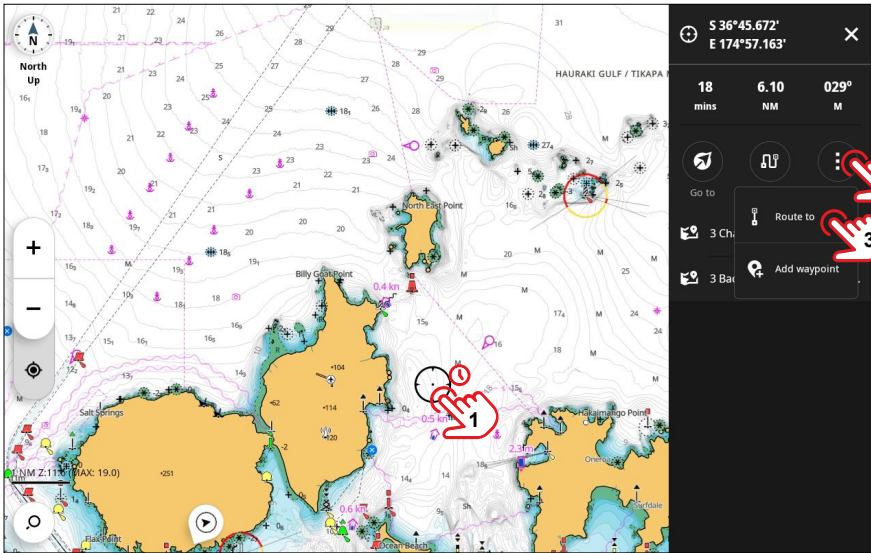
The system suggests a new route for the leg — this is indicated via a dotted line. Select the autoroute button (2) to revert to your original route. You can then select other route legs, one at a time, and the autoroute button.

Select **Done** to save the route.

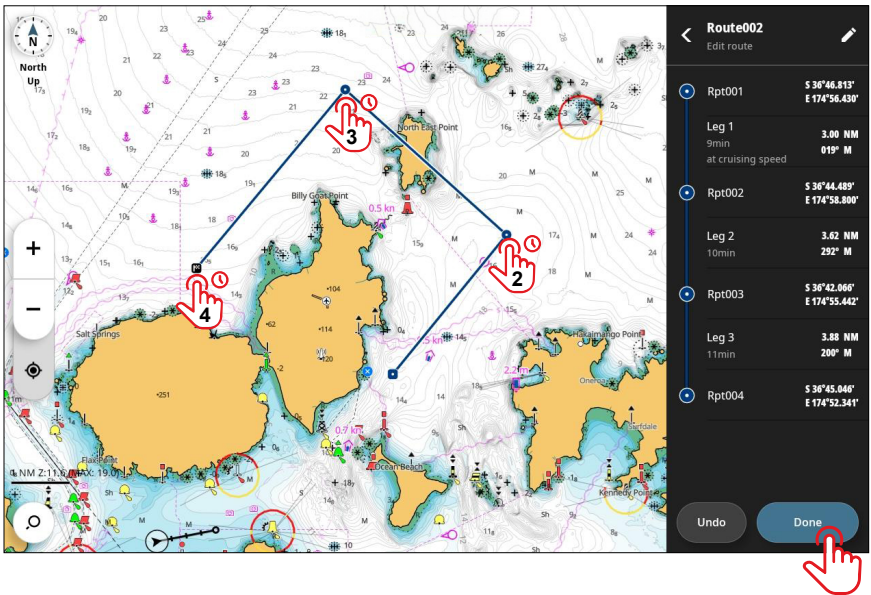


# Create a route

To create a route, select and hold a position on the chart (1) — this is your first routepoint. On the cursor options panel, select the menu (2) then **Route to** (3).



Next, select and hold a sequence of locations on the chart to plot your route. When your route is complete, select **Done**.

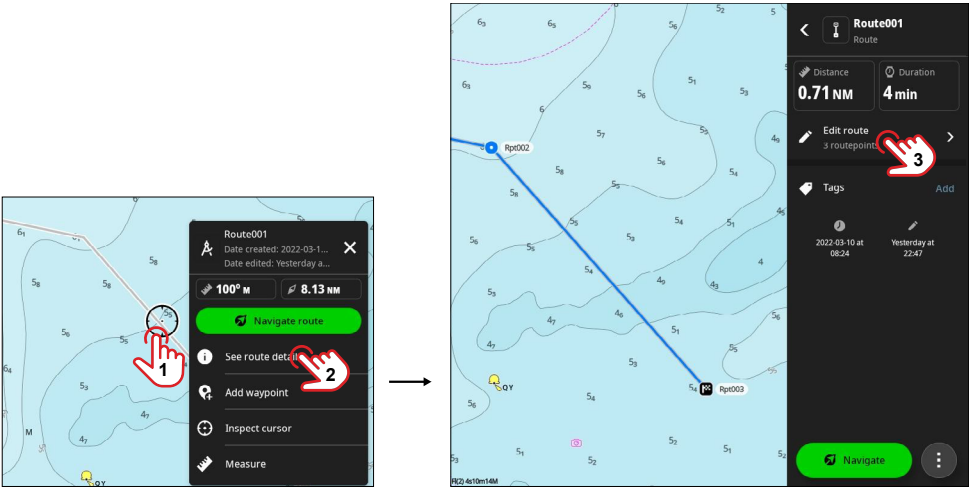




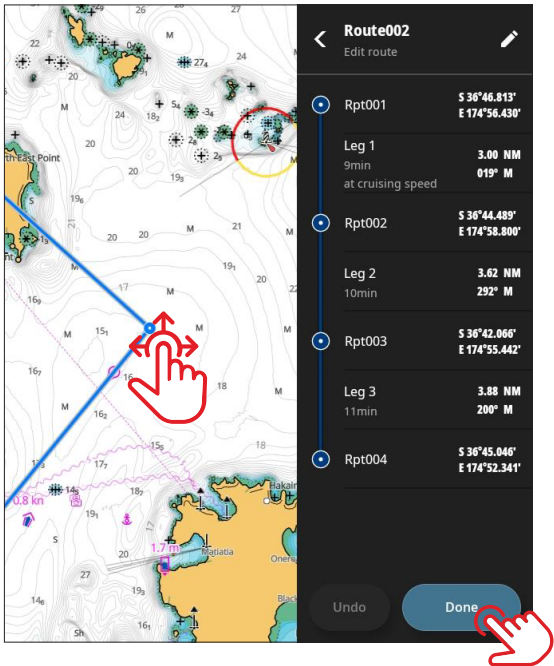
# Edit a route

Saved routes appear as a gray line with routepoints, and a selected route (to be edited) appears blue.

To edit a route, select a position on the gray line (1). Select **See route details** (2) and then select **Edit route** (3) on the route details panel.

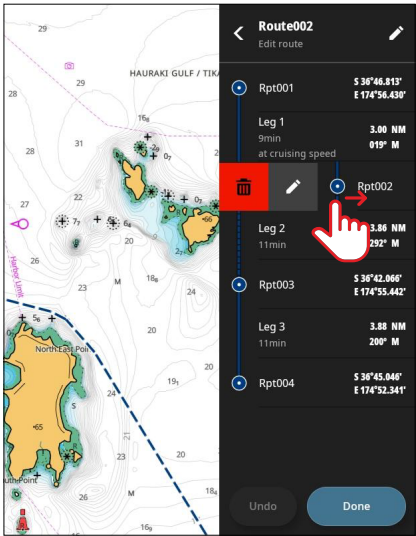


To move a route point, select and drag it on the screen. Select **Done** to save your changes.



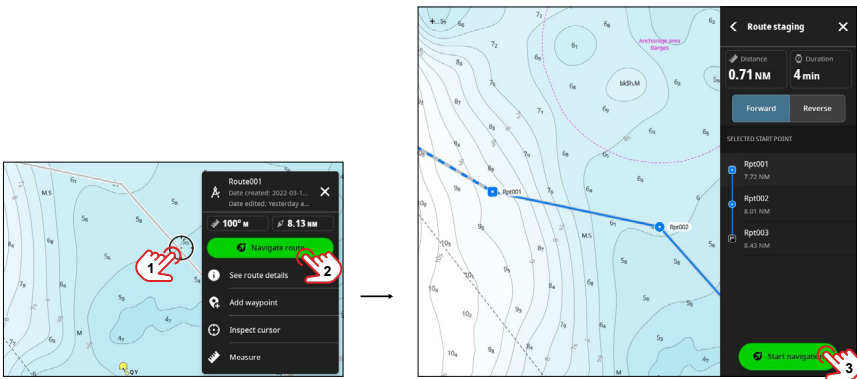
# Delete or rename a routepoint

To delete or rename a routepoint, swipe the desired routepoint to the right and select the delete or rename button. Select **Done** to save your changes.



# Navigate a route


To navigate a route, select a position (1) on a gray route line. The selected route to be navigated is blue. On the extended pop-up (2), select **Navigate route** (3).



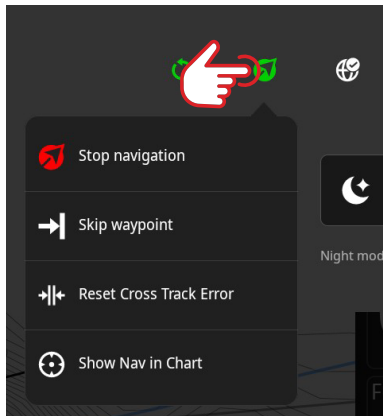
On the **Route staging** panel, you can:

- Preview the route duration and distance
- Preview the direction of travel
- Select a start point from the **Selected start point** menu
- Select **Start navigation** (3) to start navigating the route

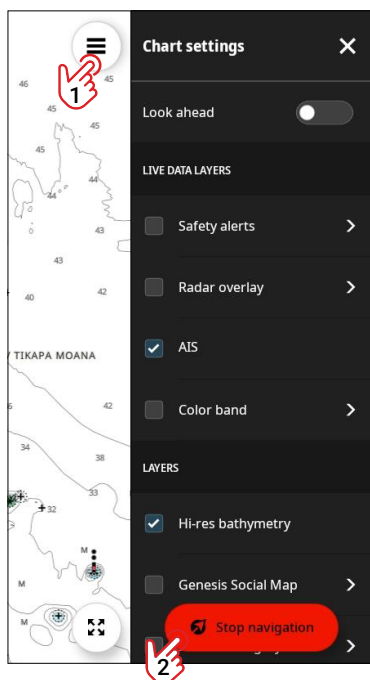
## Stop navigation

When navigation is active,  displays in the recent apps bar. There are four ways to stop navigation.

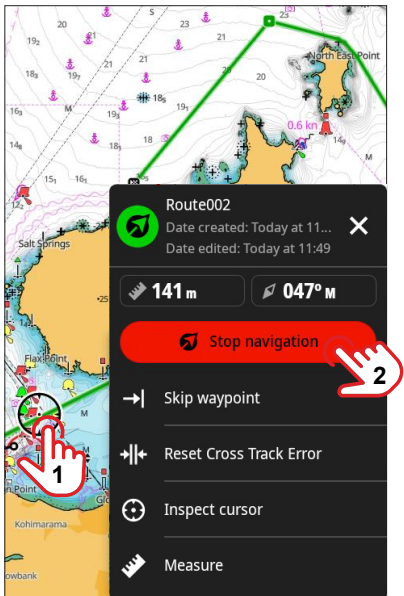
Swipe down from the top of the screen quick access menu, then select the icon to access basic navigation options such as **Stop navigation**, **Skip waypoint**, **Reset cross track error**, and **Show Nav in Chart** (route).



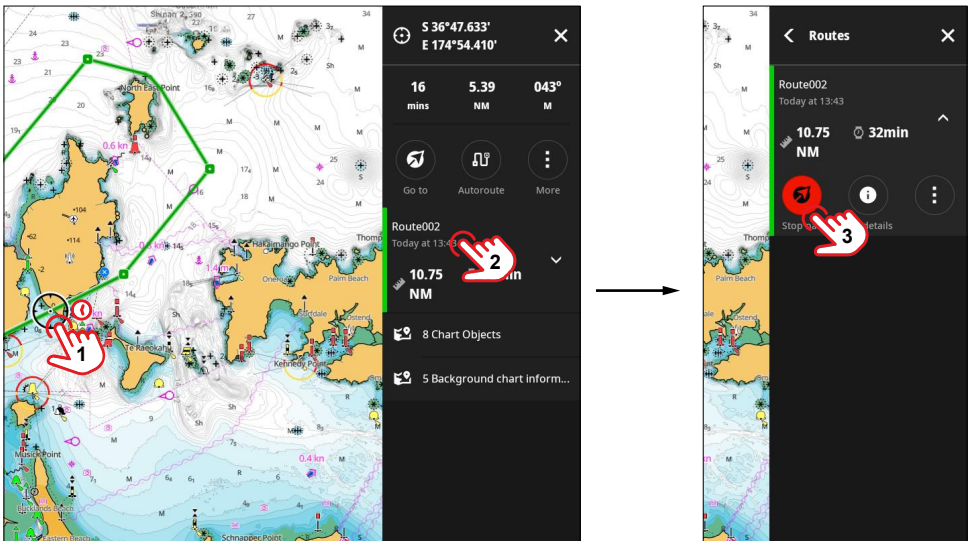
You can open chart settings (1), then select **Stop navigation** (2) to stop the current navigation.



To stop navigation on an active route or waypoint, select anywhere (1) on the green active navigation line, then **Stop navigation** (2).



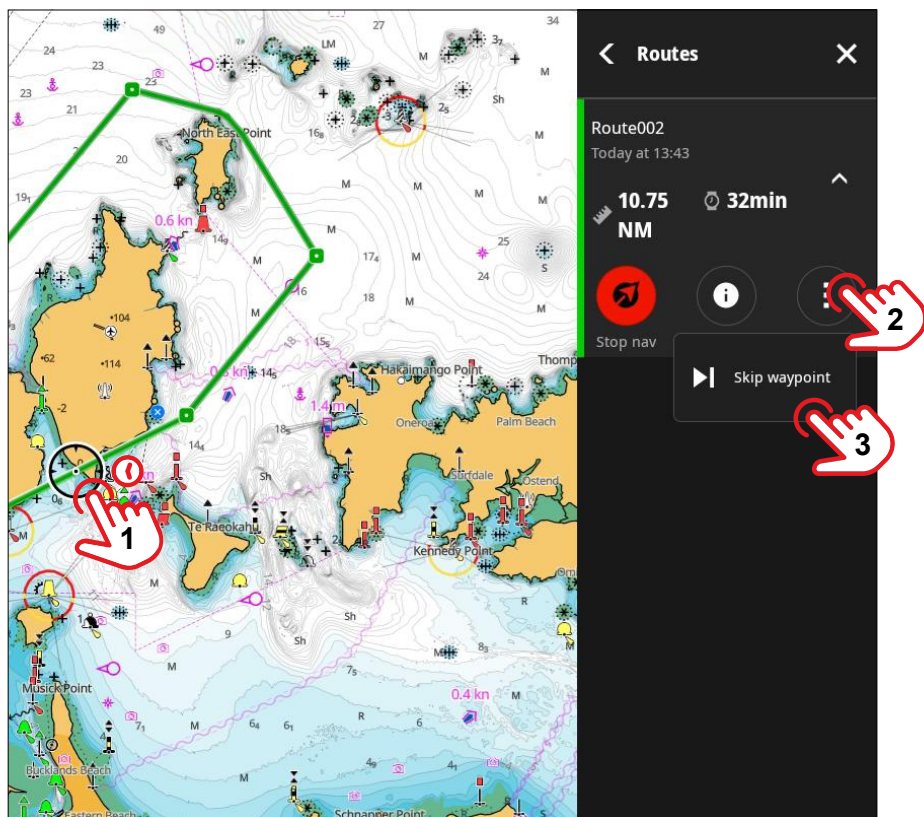
When actively navigating to a waypoint or location, you can also select and hold anywhere (1) on the green navigation line. Select the route name from the details panel, then select **Stop nav** (3) from the navigation options panel.



## Skip a waypoint

You can skip a waypoint along a route. The unit will chart a course for the next waypoint along the route.


When actively navigating to a waypoint or location, select and hold anywhere (1) on the green navigation line. Select the route name from the details panel, select the route options button (2) then select **Skip waypoint** (3). Skipped waypoints are displayed in gray.



# CHART MODES

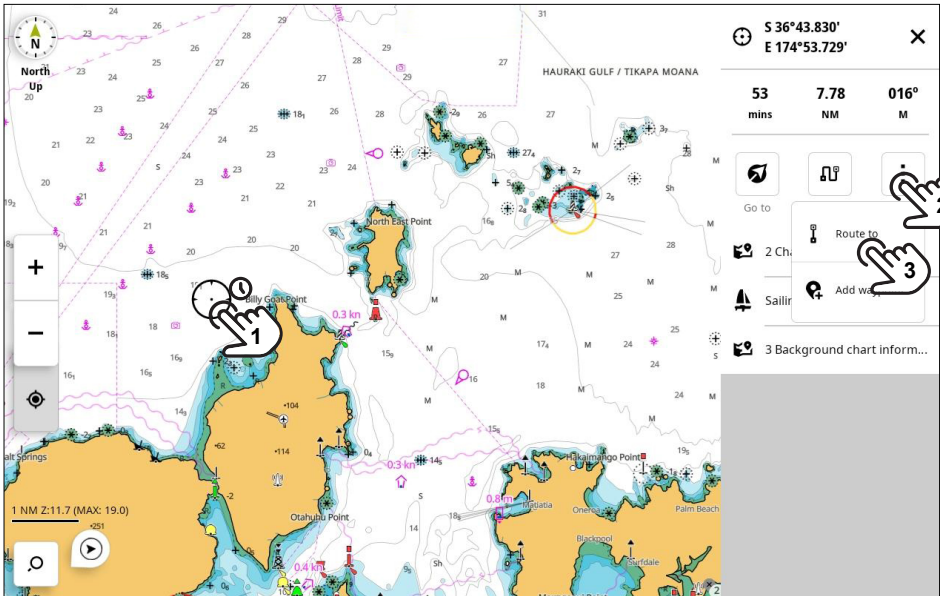
## Cruise mode

In **Cruise** mode, you can use the **Chart** app to quickly add a route to a location of interest. This route can be navigated using an autopilot or to guide you in manual navigation.

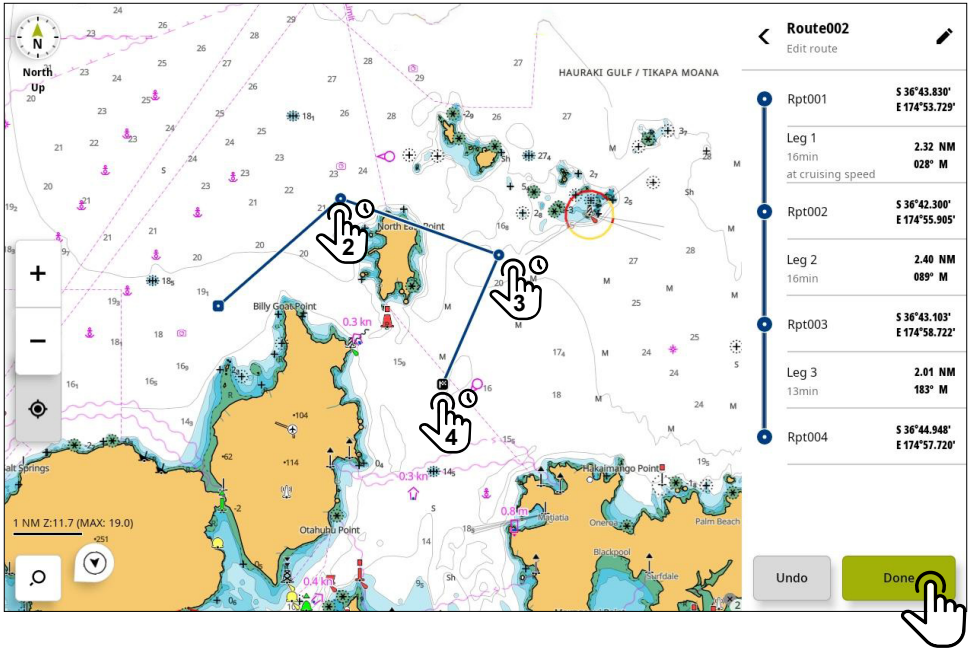
 **WARNING:** Routes are for general planning only and must be used in conjunction with conventional navigation practices and situational awareness. This does not replace a human navigator and should never be used as the only reference source.

## Create a route

To create a route, select and hold a position on the chart (1) — this is your first routepoint. On the cursor options panel, select the menu (2) then select **Route to** (3).




Next, select and hold a sequence of locations on the chart to plot your route. When your route is complete, select **Done**.





## Autoroute a route leg

You can use autoroute for each leg in a route. The system uses your vessel's dimensions, settings, and chart information to calculate the leg.



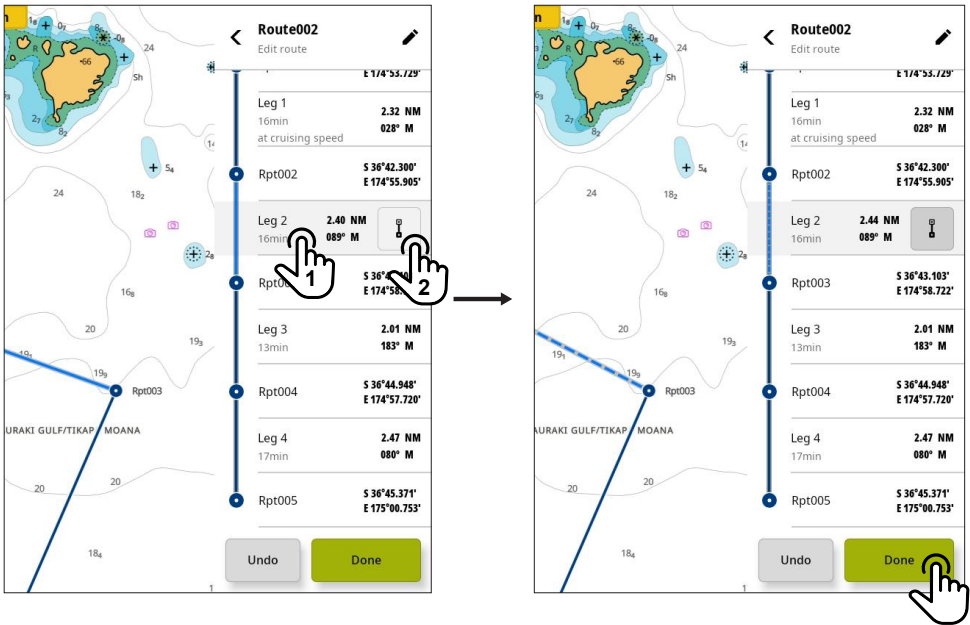
**WARNING:** You are responsible for checking the route leg suggested by the system is safe. There may be errors or omissions in the chart data (depth, obstacles, other vessels, tides, clearance heights etc.) or errors in your vessel's settings, speed or current ballast. Always review suggested routes against official publications and defer to visual sightings to avoid hazards.

To autoroute a leg, select the leg (1) then the autoroute button (2).

The system suggests a new route for the leg, this is indicated via a dotted line. Select the autoroute button (2) to revert to your original route.

You can then select other route legs one at a time, and the autoroute button for each leg. Select **Done** to save the route.

➔ **Note:** Autorouting does not consider sailing with wind or tide in its calculation.

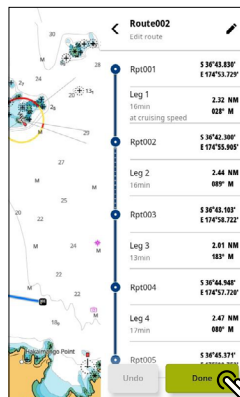
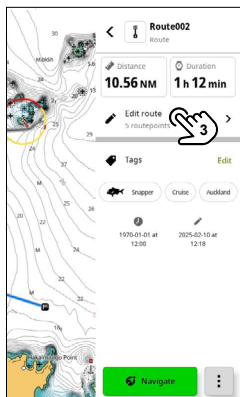
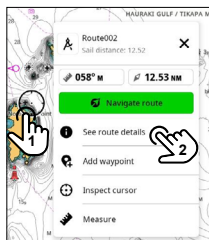


## Edit a route

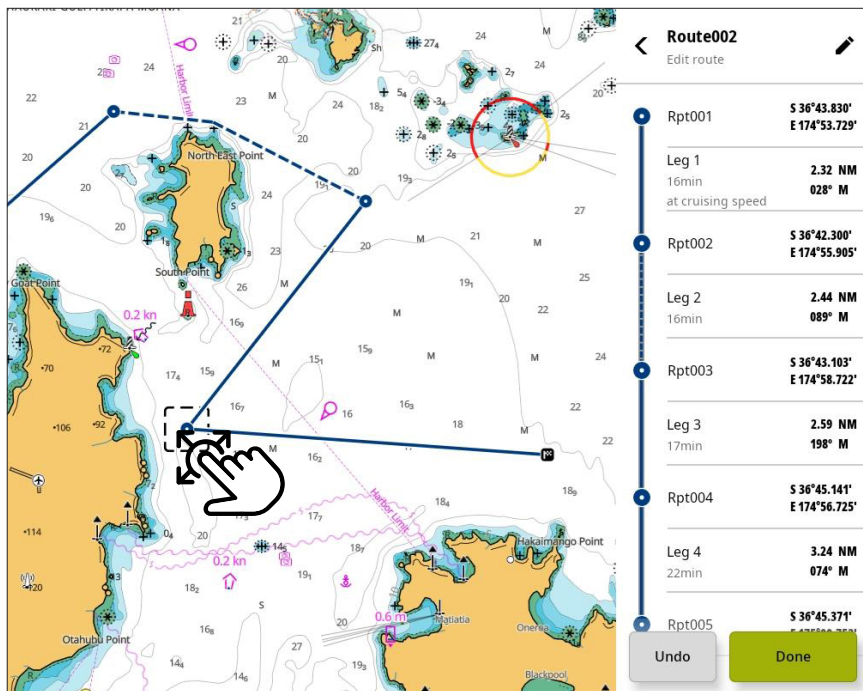
Saved routes appear as a gray line with route points, and a selected route (to be edited) is blue.

To edit a route, select a position on the gray line (1). Select **See route details** (2) and then select **Edit route** (3) on the route details panel.



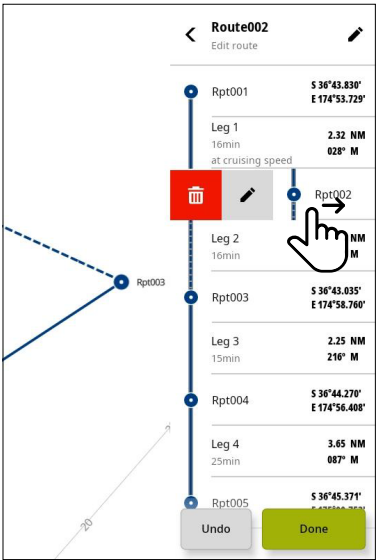


To move a routepoint, select and drag it on the screen. Select **Done** to save your changes.



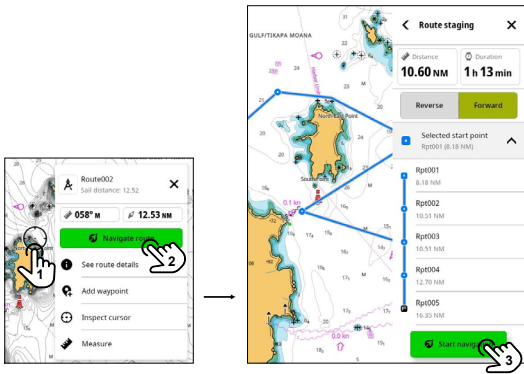
## Delete or rename a routepoint

To delete or rename a routepoint, swipe the desired routepoint to the right and select the delete or rename button. Select **Done** to save your changes.



## Navigate a route

To navigate a route, select a position on the gray route line (1). The selected route to be navigated is blue. Then select **Navigate route** (2).




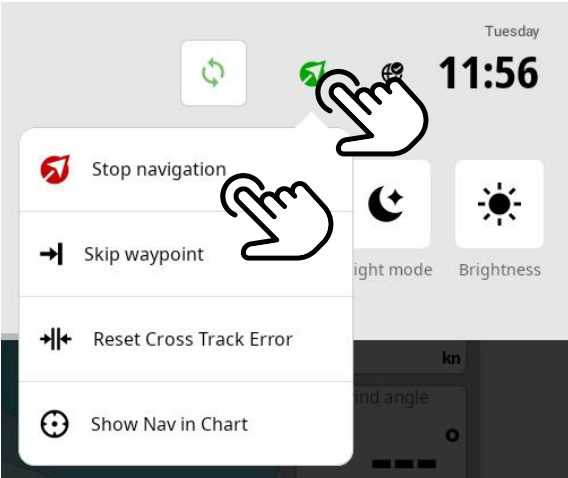
On the **Route staging** panel, you can:

- Preview the route duration and distance
- Preview the direction of travel
- Select a start point from the **Selected start point** menu.
- Select **Start navigation** (3) to start navigating the route.

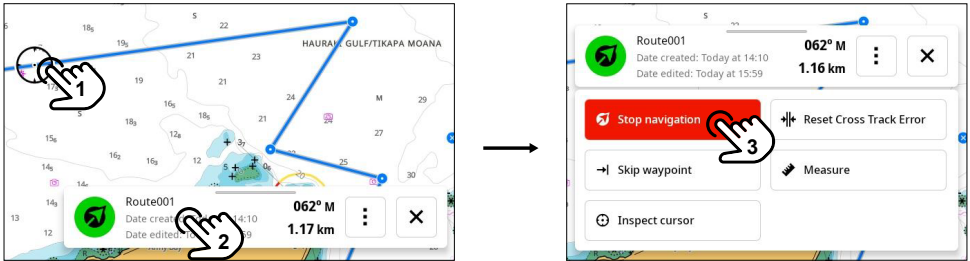
# Stop navigation

There are three ways to stop navigation.

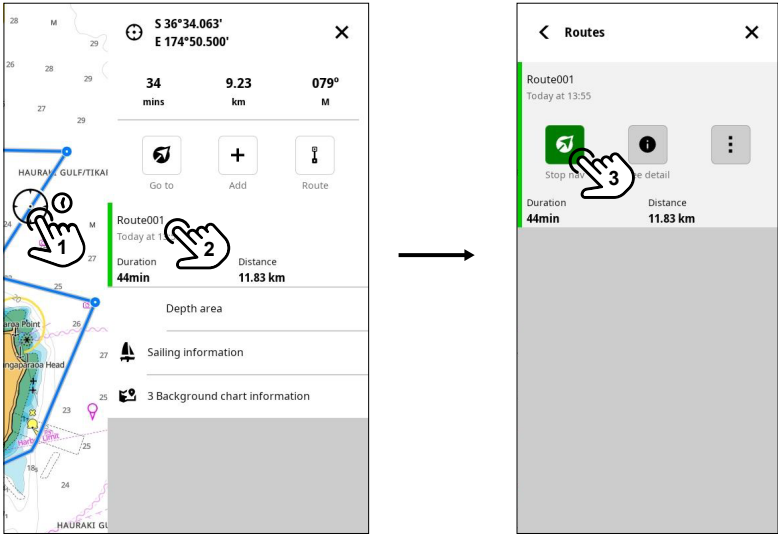
When navigation is active,  displays in the activity bar. Swipe down from the top of the screen quick access menu, then select the icon to access basic navigation options such as **Stop navigation**, **Skip waypoint**, **Reset cross track error**, and **Show Nav in Chart** (route).



To stop navigation on an active route or waypoint, select anywhere (1) on the blue navigation line. On the pop-up, select the route (2), then select **Stop navigation** (3) on the extended pop-up.

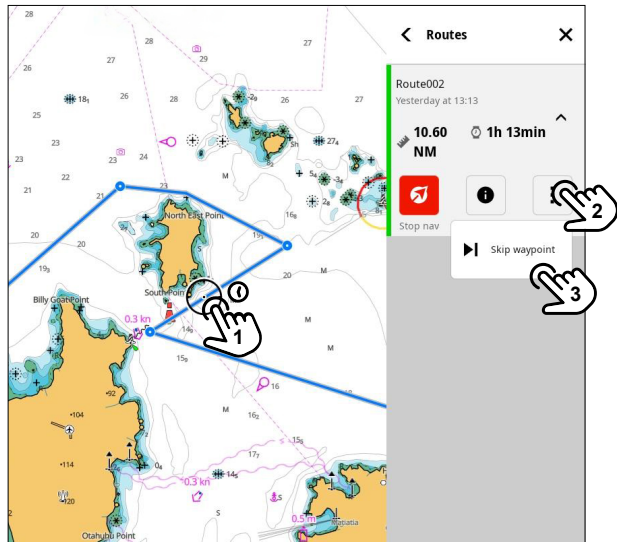


Alternatively, when navigating to a waypoint or location, you can also select and hold (1) anywhere on the blue navigation line to see the cursor details. Select the route name (2) from the details panel, then select **Stop nav** (3) from the navigation options panel.



### Skip a waypoint


You can skip a waypoint along a route. The unit will chart a course for the next waypoint along the route. When actively navigating to a waypoint or location, select and hold anywhere (1) on the blue navigation line. Select the route name from the details panel, select the route options button (2) then select **Skip waypoint** (3). Skipped waypoints are displayed in gray.



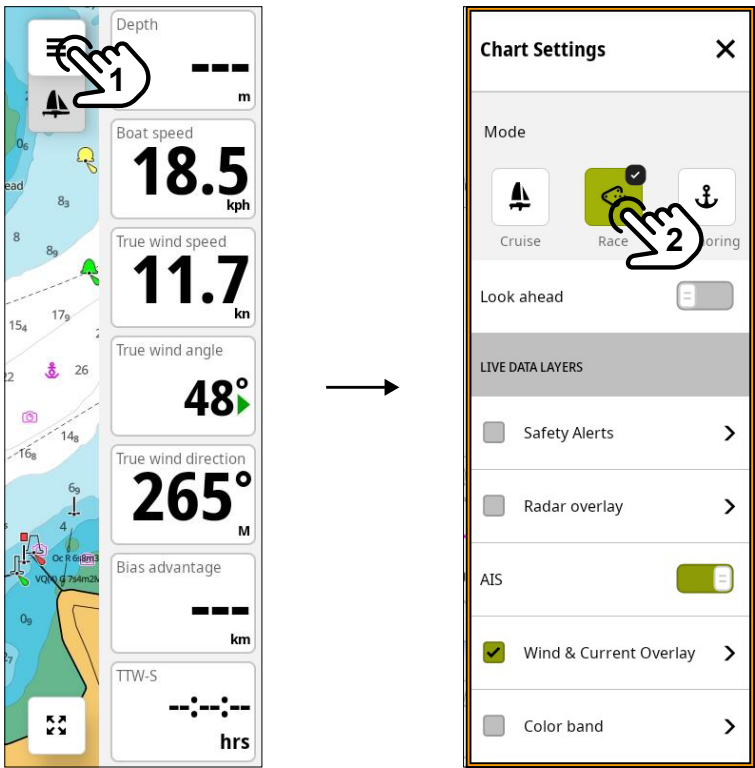
# Race mode

In **Race** mode, you can use the race panel to:

- Build a race route
- Display and control the race timer
- Create and manage the race start line
- Display race start line data
- Display tactical information for the current leg or next leg

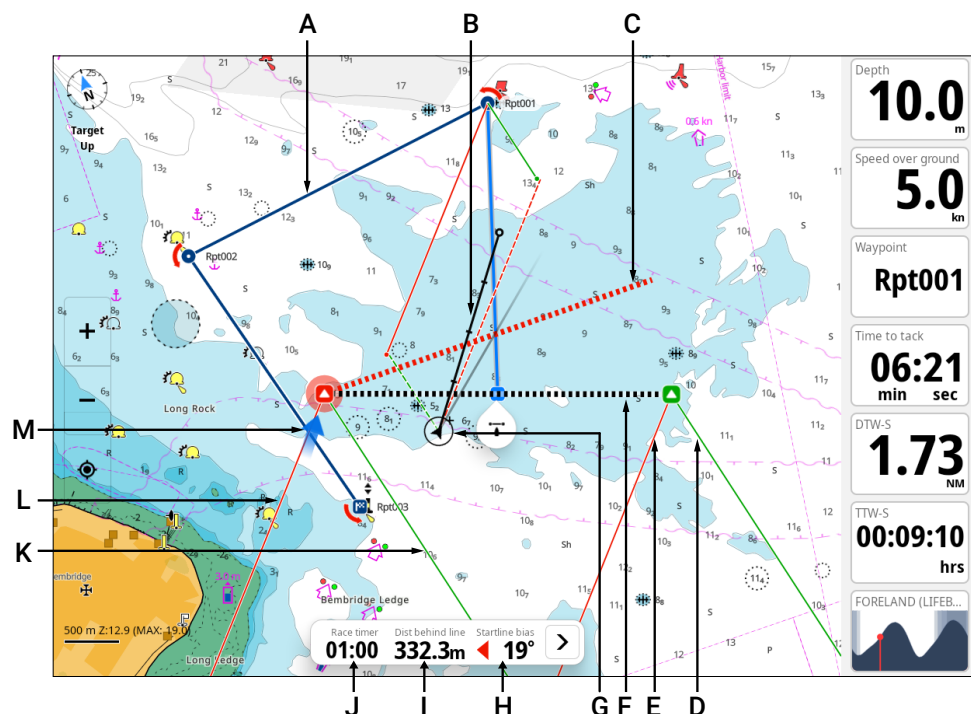
 **WARNING:** Routes are for general planning only and must be used in conjunction with conventional navigation practices and situational awareness. This does not replace a human navigator and should never be used as the only reference source.

Select the chart menu button (1), then select the **Race** mode button (2).



## Race screen

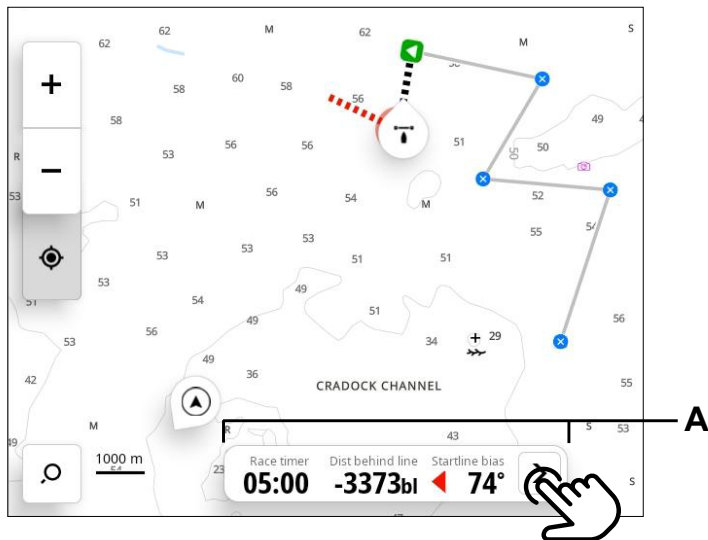
In **Race** mode, when participating in a race, the following information displays on the screen:



- A Race route
- B Extension line
- C Square wind line — drawn from biased start line end perpendicular to the True Wind Direction (TWD). A red halo displays for the port end or green halo for the starboard end.
- D Starboard tack layline to the starboard start line end point
- E Port tack layline to the starboard start line end point
- F Race start line
- G Boat (drawn to scale)
- H Start line bias angle
- I Distance (perpendicular) behind line
- J Race timer
- K Starboard tack layline to the port start line end point
- L Port tack layline to the port start line end point
- M Tide arrow (relative to start line)

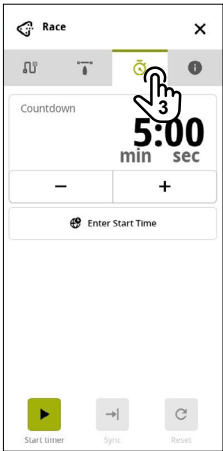
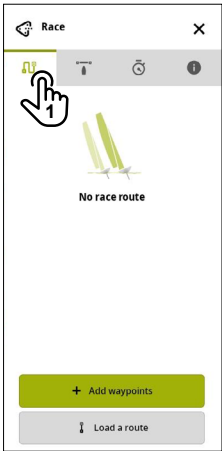
# The race panel

In **Race** mode, the race info bar (A) displays at all times, and shows the **Race timer**, **Distance behind line** (the start line), and **Startline bias**.

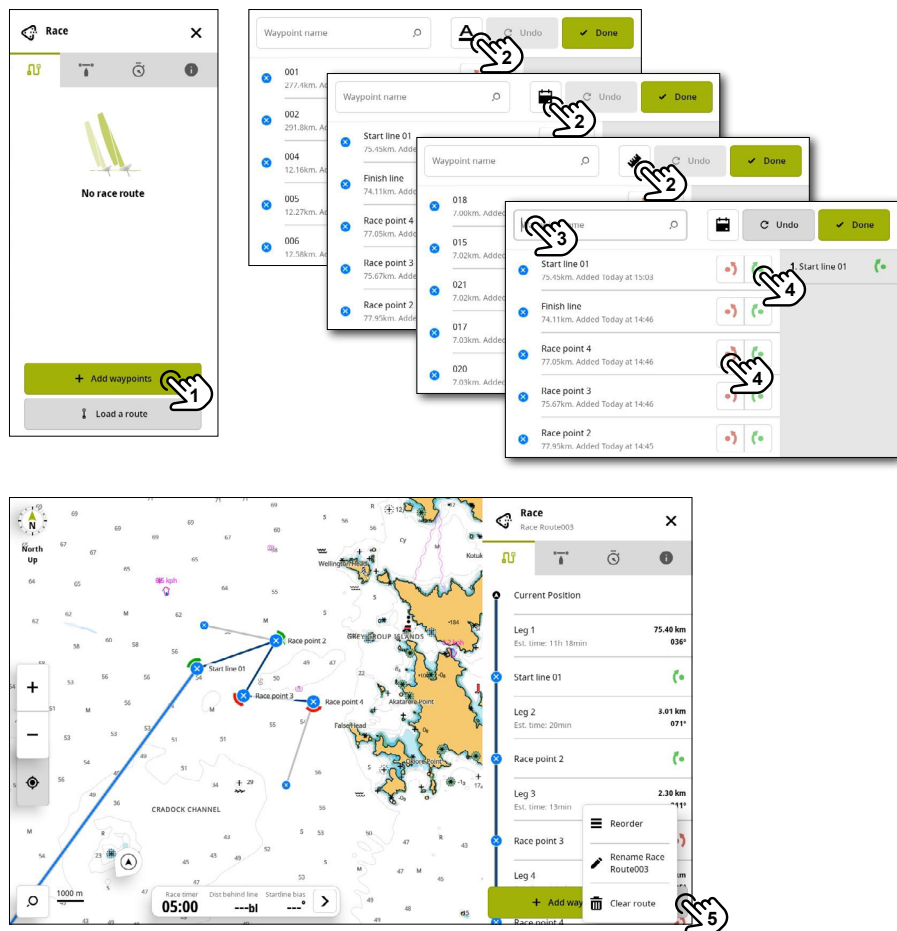


Select the race info bar (A) to display the race panel. The race panel contains four tabs:

- 1 Race route
- 2 Start line
- 3 Race timer
- 4 Information tab/End race



## Build a race route via waypoints



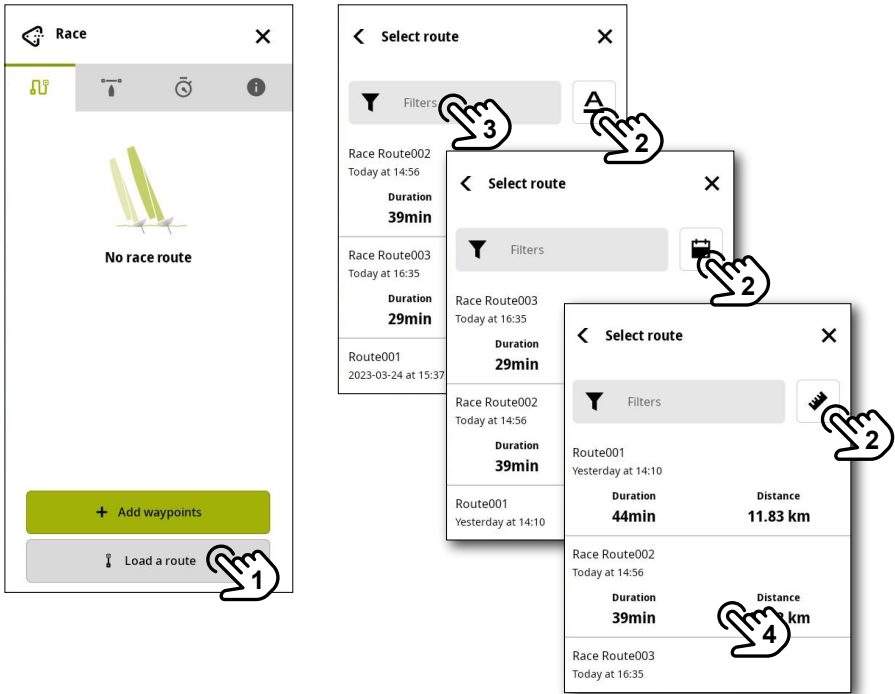
- A** Select **Add waypoints** (1) to choose waypoints from a list of existing waypoints.
  - B** Select the sort button (2) to view waypoints in:
    - Ascending alphabetical list
    - Ascending date/time of creation (recent most on top)
    - Ascending distance from current vessel position.

→ **Note:** Select the filter icon to filter waypoints by tags.
  - C** You can also type in the waypoint name if you know it (3).
  - D** Select the port or starboard rounding button alongside the waypoint (4) to add it to the list on the right. Select **Undo** to remove a waypoint from the list and select **Done** when you've finished.
  - E** All the selected waypoints are displayed. You can select **Add waypoints** to add more waypoints or select the menu button (5) to reorder the waypoints, rename the race or clear the race route.
- **Note:** The clear route action cannot be undone.

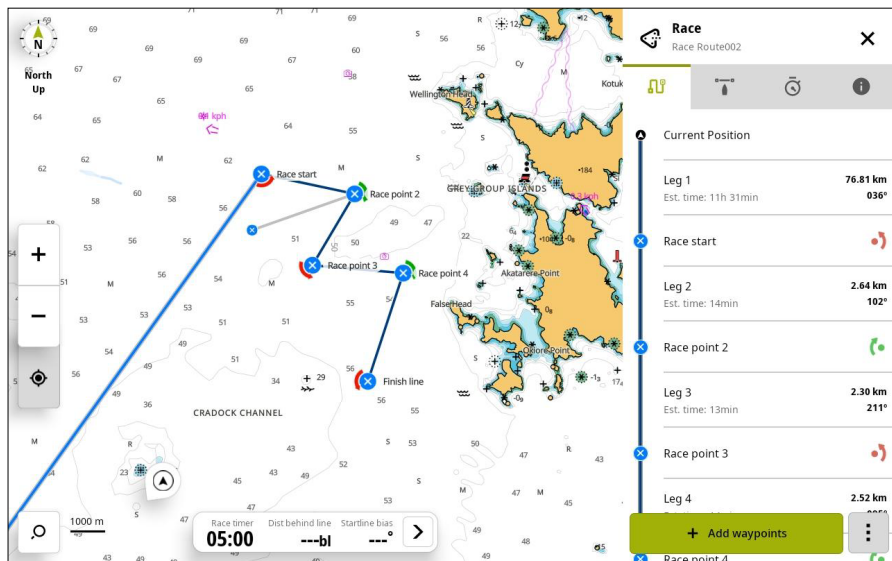


# Build a race route via an existing route

If you have a route saved on your device, you can add it as a race route.



- A Select **Load a route** (1) to choose a route from an existing list.
- B Select the sort button (2) to view the routes in:
  - Ascending alphabetical list
  - Ascending date/time of creation (recent most on top)
  - Ascending distance from current vessel position.
- C You can also type in the route name if you know it (3).
- D Select the desired route (4), then on the **Make race route** dialog, select the port or starboard rounding (5) for each waypoint. Select **Save & Go** when you're done.

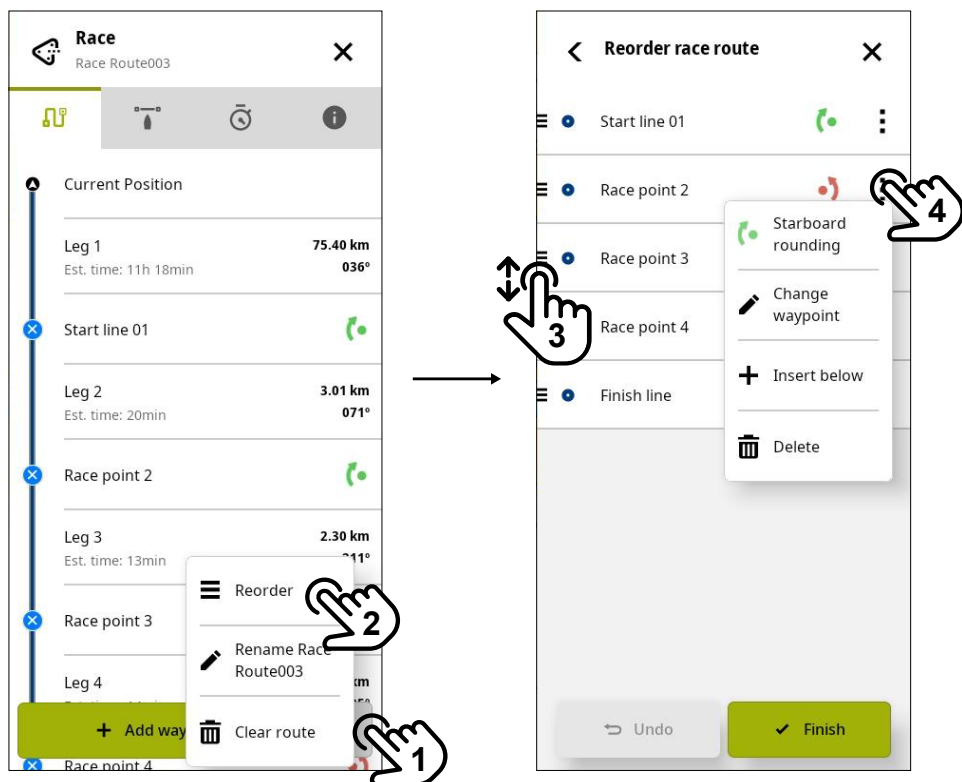


E All the selected waypoints display. You can select **Add waypoints** to add more waypoints or select the menu button to reorder the waypoints, rename the race or clear the route.

→ **Note:**

- You can also tap a route on the chart, inspect it, then press Race to load it onto the race panel.
- The clear route action cannot be undone.

## Reordering a race route



- A** Select the race route menu button (1), then select **Reorder** (2).
- B** Select a leg and drag it up or down.(3)
- C** Select the route options menu (4) to:
- Change from port to starboard rounding or vice versa.
  - Change the waypoint (the waypoint selection dialog will open).
  - Insert a new waypoint below the selected waypoint (the waypoint selection dialog will open).
  - Delete a waypoint.
- D** Select **Undo** to undo a change you've made, including the deletion of a waypoint.
- E** Select **Finish** when you're done.
- **Note:** Deleting a waypoint on the race panel only deletes it from the race route.

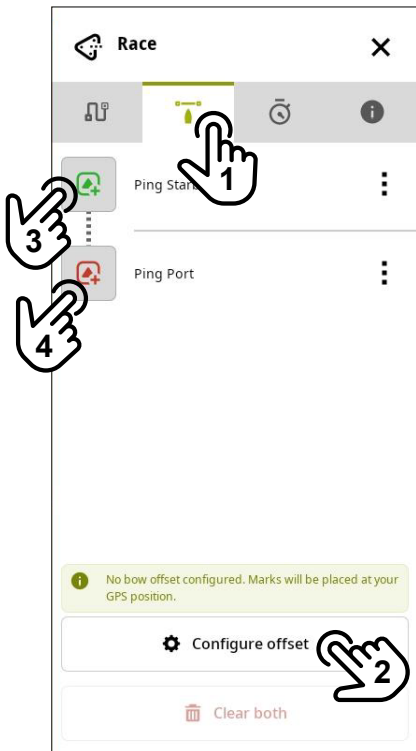
## Start line

The start line is a visual aid that shows the distance from the boat to the start line, tide direction, recommended start end bias, and what advantage in degrees and distance the biased end will give. The start line is a line between the port and starboard end points. There are three methods to set up the start line for your race.

### Set start line end points by pinging

Setting the start line end points by pinging requires maneuvering the boat to each end of the start line and then pinging.

→ **Note:** Before setting the start line position using the ping method, it is important that the bow offset is updated via **Configure offset (2)** to negate the difference between the GPS position and the bow of the vessel.

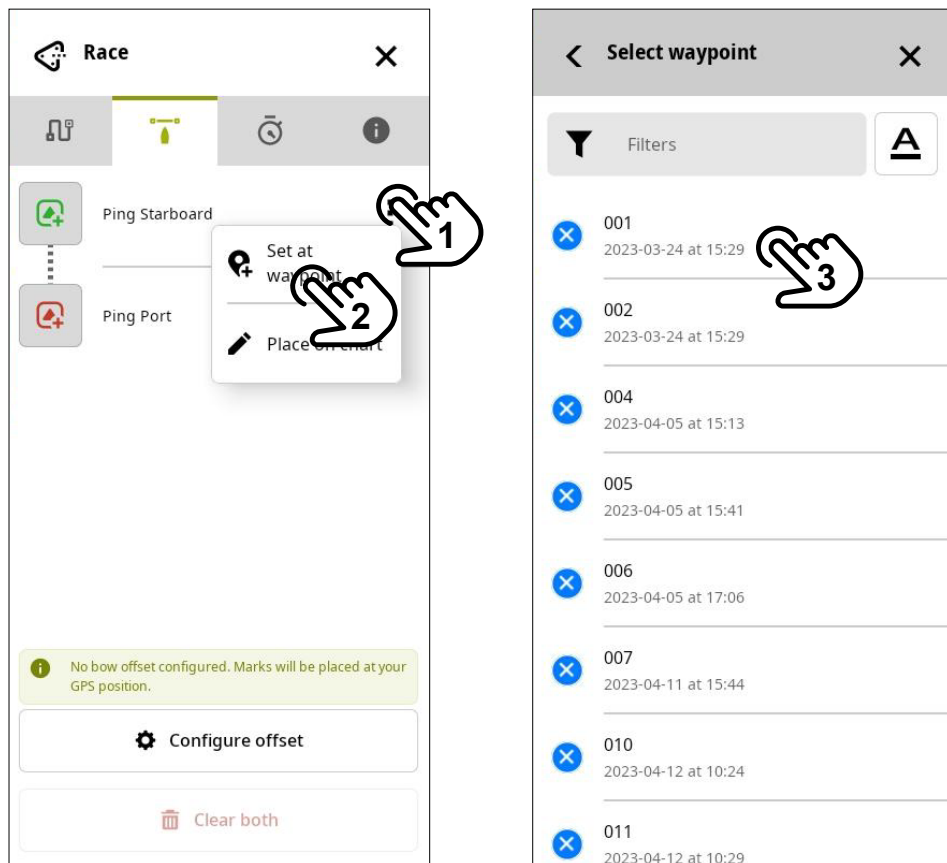


- To begin, select the start line tab (1) on the race panel.
- Select **Configure offset (2)** to adjust bow offset parameters.
- Approach the starboard end of the start line and select **Ping starboard (3)**. Then approach the port end of the start line and select **Ping port (4)** to place the start line starboard and port markers respectively.
- Select **Clear both** if you want to clear your start line markers.

→ **Note:** The clear markers action cannot be undone.

## Set start line end points at waypoints

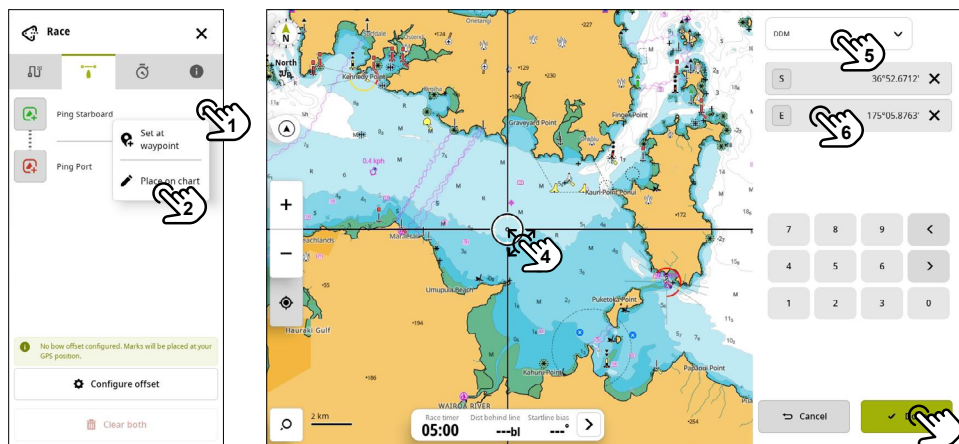
The start line can also be set up by using waypoints from an existing list. On the start line tab, select the menu button (1) alongside **Ping starboard** or **Ping port**. Then select **Set at waypoint** (2) and select a waypoint from the list (3). Here you can filter and sort the waypoints as required.



- Select **Set at waypoint** (2), then select a waypoint from the list (3). Here you can filter and sort the waypoints as required.
  - Select **Clear both** if you want to clear your start line markers.
- ➔ **Note:** The clear markers action cannot be undone.

## Set end points at coordinates

Finally, you can set up the start line by selecting a position on the chart or inputting the specific coordinates.

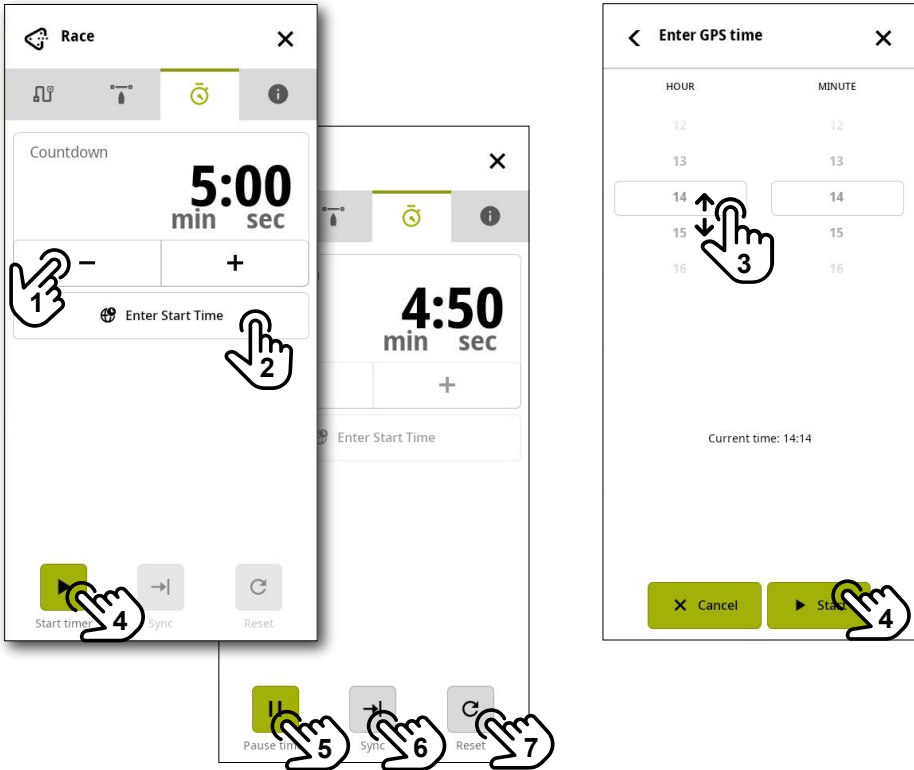


- On the start line tab, select the menu button (1) alongside **Ping starboard** or **Ping port**.
  - Select **Place on chart** (2), then touch and drag to select a location on the chart (4).
  - You can select the GPS coordinate system to use (5), then use the number pad to input the GPS coordinates (6).
  - Select **Done** when you are finished.
  - Select **Clear both** if you want to clear your start line markers.
- **Note:** The clear markers action cannot be undone.

## Race timer

The race timer can be used to count down to zero from a specified time, ideal for counting down to a race start. It can also be used to count up from zero to record the elapsed time. You can start and stop the timer, reset it, sync it, and specify a start value.

On the race timer tab, you can set a countdown timer for your race start time.



- A Select the -/+ buttons (1) to adjust the countdown timer in one minute increments.
- B You can also enter a specific start time for the race. Select **Enter start time** (2), then on the **Enter GPS time** panel select the desired time by scrolling (3) the hour/minute wheel.
- C Select **Start** (4) when you are done.

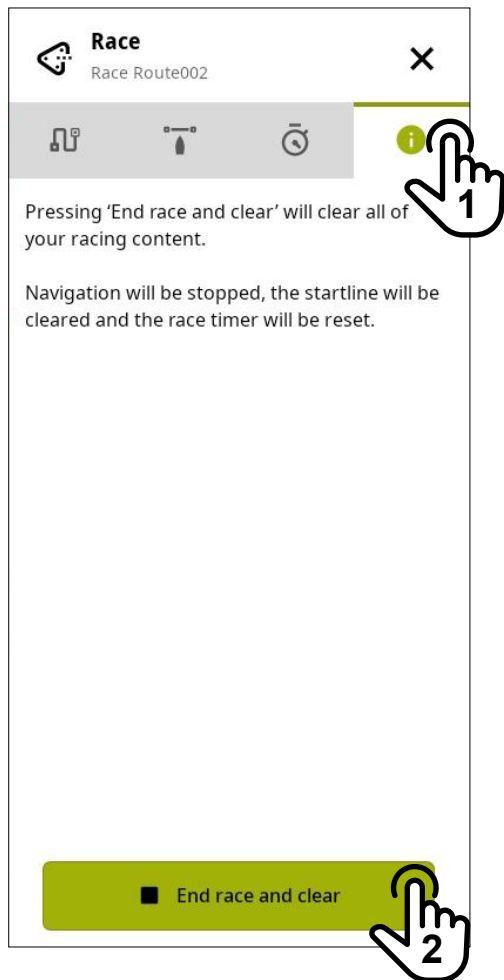
→ **Note:** When the race timer is at 0:00, your distance to the start line is shown for 10 seconds. If you're behind the start line, it appears green, and if you're across it, it appears red. This helps you assess if your start is good.

When the timer is running, you can:

- Select **Pause timer** (5) to pause the race timer.
- Select **Sync** (6) to synchronize the time up or down to the nearest full minute.
- Select **Reset** (7) to reset the timer to the start value. If the timer is running when **Reset** is selected, it continues to run from the start value.

## Information tab/End race

At the end of the race, go to the information tab on the race panel (1), then select **End race and clear** (2).



→ **Note:** The end race action cannot be undone.



## Anchor mode

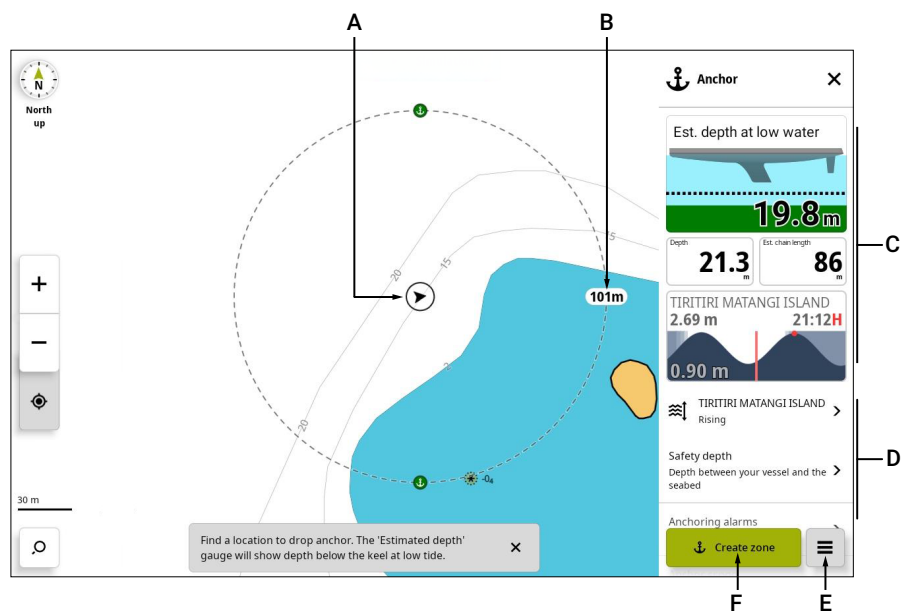
In **Anchor** mode, you can use the anchor panel to plan a location to anchor and set an alarm to alert you when the depth is too shallow or the vessel leaves the anchor zone.

→ **Note:** Vessel dimensions, tide, and depth data are required to use **Anchor mode**. When tide or depth data are missing, you can create a perimeter zone alarm.

**⚠ WARNING:** Anchoring information is for general planning only and must be used in conjunction with conventional practices and situational awareness. This does not replace a human navigator and should never be used as the only reference source.

### Choose an anchor location

Select the chart menu button then select the **Anchoring** mode button. Your vessel location with the potential anchor zone is shown on the chart. Anchoring information is shown on the side panel. Press **Create zone** once you have found a suitable location.



#### A Anchor zone

→ **Note:** A color coded track in green, amber, and red illustrates the areas for safe, warning, and aground respectively.

→ **Note:** The value in this gauge is the estimated depth below your keel at the next low water. This is calculated by taking the current depth reading and subtracting the change in height of tide from now to the next low water.

#### B Anchor zone diameter

#### C Anchor location information

- **Est. depth at low water** — The zone is color coded to illustrate:
  - Green — safe zone

- Amber — within safety depth limits
- Red — vessel will ground at next low water.
- **Depth** — displays the current depth from the transducer
- **Est. chain length** — this value is calculated on current depth and chain scope in the settings.
- Tide chart — a red dot illustrates the nearest high/low tide.

D Anchor mode settings

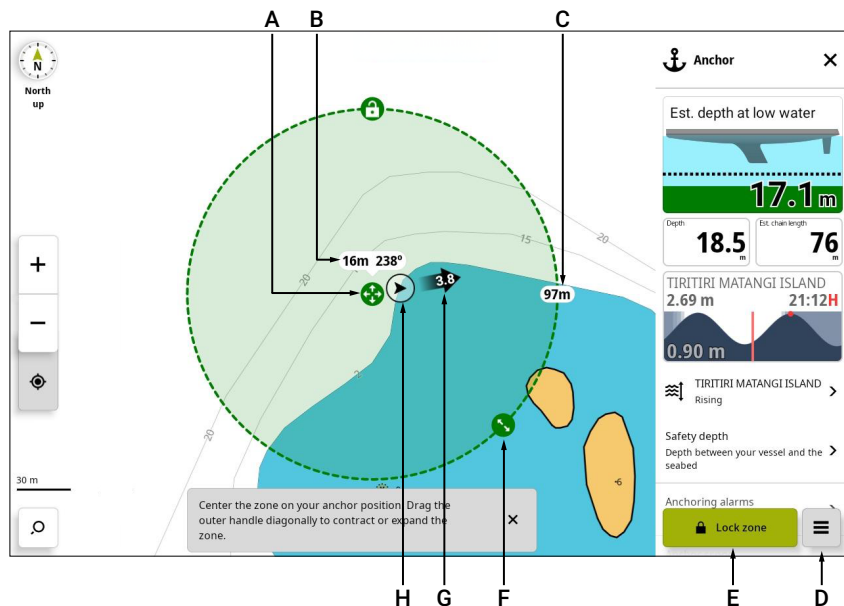
E Delete zone and exit

F Create anchor zone

## Lock the anchor zone

After you select **Create zone**, an anchor zone is created at your vessel location. You can move the anchor waypoint location and adjust the anchor zone circumference before you select **Lock zone**.

Once the zone is locked you will receive alerts if the depth becomes too shallow or your vessel moves out of the zone.



A Anchor waypoint

B Your vessel distance and bearing from the anchor waypoint

C Anchor zone diameter

D Reset zone or exit

E Lock the anchor zone

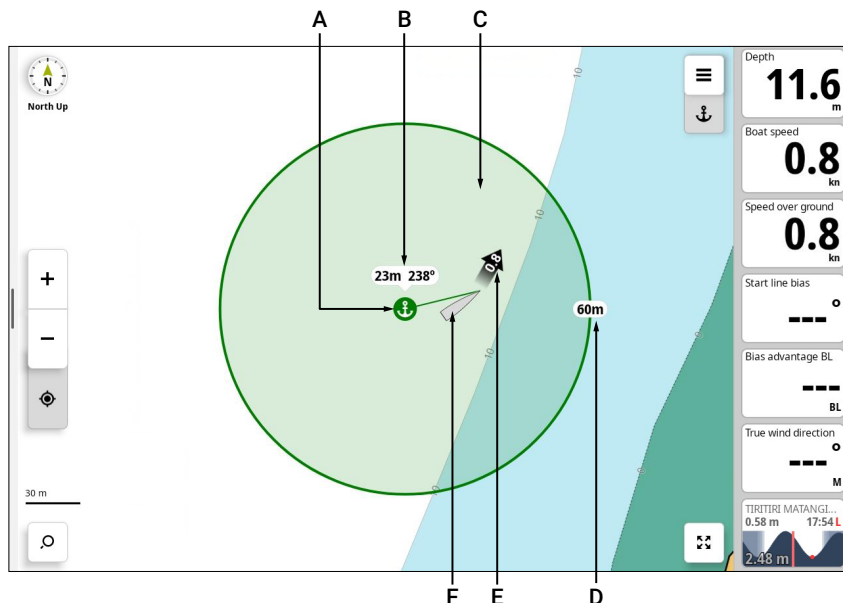
F Drag to change the anchor zone diameter

G Your vessel drift direction and speed

H Your vessel location

## At anchor

When **Anchor** mode is active, the **Chart** app shows information related to the anchor waypoint, anchor zone, and your vessel.



- A Anchor waypoint
- B Your vessel distance and bearing from anchor waypoint
- C Anchor zone
  - **Note:** Changes color based upon your distance to perimeter. Green = ok, amber = boat touching perimeter, red = boat exit perimeter
- D Anchor zone diameter
- E Your vessel drift direction and speed
- F Your vessel location
  - **Note:** Changes color, green, amber, or red, depending upon the depth at next low water.

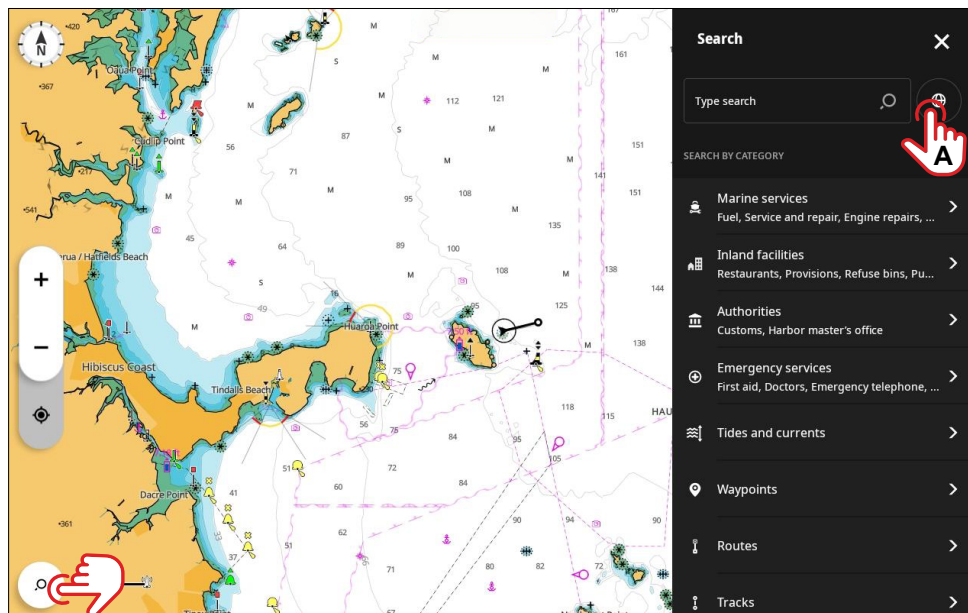
## Anchor mode settings

Change the **Anchor** mode settings to customize alerts and displayed information.

- **Tide stations** — Your unit uses tide data from the nearest tide station, but you can choose a different tide station.
- **Safety depth** — Set the minimum depth between your vessel's draft and the seabed at low tide.
- **Anchoring alarms** — You can activate anchor alarms based on perimeter, depth, or both.
- **Anchor scope** — Set the rode-to-depth ratio the system uses to estimate chain length shown on the anchor panel.

# SEARCH

The app has built-in search which provides information in the immediate vicinity of the vessel or an area of interest.



Select the search button on the bottom left of the chart screen to open the **Search** panel. Here you can search via:

- **GPS coordinates** — Select **(A)** to use the GPS coordinate system to search for location-specific information.
- **Marine services** — To search for fuel stations, service and repair, workshop, chandler, electricity, and other marine services. Select from the displayed categories or use the text input field.
- **Inland facilities** — To search for restaurants, provisions, public toilets, showers, and other marine inland facilities.
- **Authorities** — To search for a customs office or harbor master's office. Select from the displayed categories or use the text input field.
- **Emergency services** — To search for a doctor, emergency telephone, Police station, or Water police station. Select from the displayed categories or use the text input field.
- **Find tides and currents** — To view the Tides and Currents information in the region. Select a Tide data source, then select View details to see more information.
- **Waypoints** — To search from a list of waypoints created or imported by you and stored on the unit. Select a waypoint to view it on the chart.
- **Routes** — To search from a list of routes created or imported by you and stored on the unit. Select a route to view it on the chart.

- **Tracks** — To search from a list of tracks created or imported by you and stored on the unit. Select a track to view it on the chart or create a route.
- **Tags** — To search from a list of tags used on waypoints, routes, or tracks created or imported by you and stored on the unit. Select a tag to view it on the chart.

➔ **Note:**

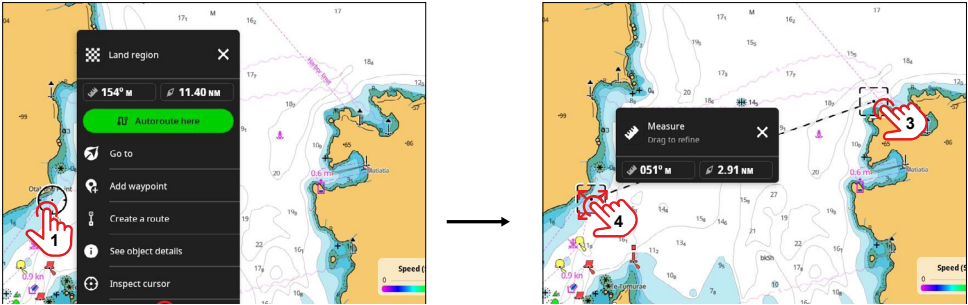
- Position the chart close to the area of interest and zoom in to view the search results.
- The search function uses information stored on the chart card and does not access the internet. Your search queries must be specific to return good results.

# MEASURE DISTANCES

You can measure the distance and bearing between two points on a chart.

Select a position on the chart **(1)**, then select **Measure (2)** on the pop-up. Select a second position on the chart **(3)** to see the distance and bearing information from the first position **(1)**.

Select and drag either of the positions **(3, 4)** on the chart to refine the measurement.



→ *Note: The bearing is always the bearing of position two (3) relative to position one (4).*

# AUTOMATIC IDENTIFICATION SYSTEM (AIS)

If a compatible Automatic Identification System (AIS) is connected to the system, you can see nearby marine traffic. An AIS improves situational awareness, aids in collision avoidance, and supports traffic management

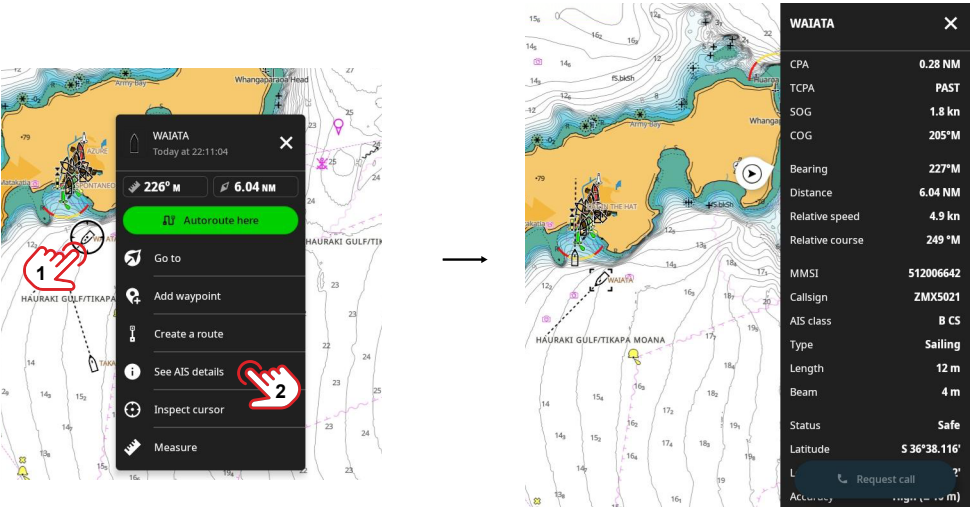
You can display AIS targets as an overlay on chart and radar images.

Set alarms for dangerous targets and filter targets displayed in the system settings

➔ **Note:** If your system has an AIS transponder, enter your vessel's MMSI in: **Settings >Your Vessel** to prevent false alarms.

## Selecting an AIS target









When you select an AIS target icon, choose **See AIS details** from the cursor menu. The AIS symbol changes to the selected target symbol, and the AIS target information is displayed. Only one target can be selected at a time.










# AIS target symbols

The unit shows the AIS target symbols listed below.

→ **Note:** An AIS receiver must be connected to the system to display AIS targets on the screen.

Symbol	Description
	AIS stationary target (or moving target if extension lines are not enabled).
	AIS dangerous target. <ul style="list-style-type: none"><li>• Yellow is used when the radar palette is <b>Red</b> or <b>Green</b>.</li><li>• Purple is used when the radar palette is <b>White</b>.</li><li>• Red is used when the radar palette is <b>Yellow</b>.</li></ul>
	AIS scaled target. The symbol is scaled according to the physical size of the vessel as obtained from AIS info, if available.
	AIS moving target with predicted course extension (dashed line). Shows as a straight line if going straight or if no rate-of-turn AIS data is available.
	AIS moving target with track.
	Associated target. When the radar and the AIS signal acquire the same target, the system displays the target with one symbol. This reduces the number of AIS symbols and radar targets on the Plan Position Indicator (PPI). The association function also compensates for a possible failure in one of the two targets, e.g., if the radar target is positioned behind an island, the system keeps tracking and visualizing the AIS target. → <b>Note:</b> The system continues to analyze the radar target when the target association is active.
	Selected AIS target.
	Lost AIS target. The symbol is located at the last received position from the target.



Symbol	Description
	AIS AtoN (Aids to Navigation) target symbol.
	Virtual AIS AtoN (Aids to Navigation) target symbol.
  	<p>AIS AtoN (Aids to Navigation) dangerous target.</p> <ul style="list-style-type: none"> <li>• Yellow is used when the radar palette is <b>Red</b> or <b>Green</b>.</li> <li>• Purple is used when the radar palette is <b>White</b>.</li> <li>• Red is used when the radar palette is <b>Yellow</b>.</li> </ul>
	AIS-SART (Search and Rescue Transmitter) active.
	AIS-SART (Search and Rescue Transmitter) test.

## Digital selective calling

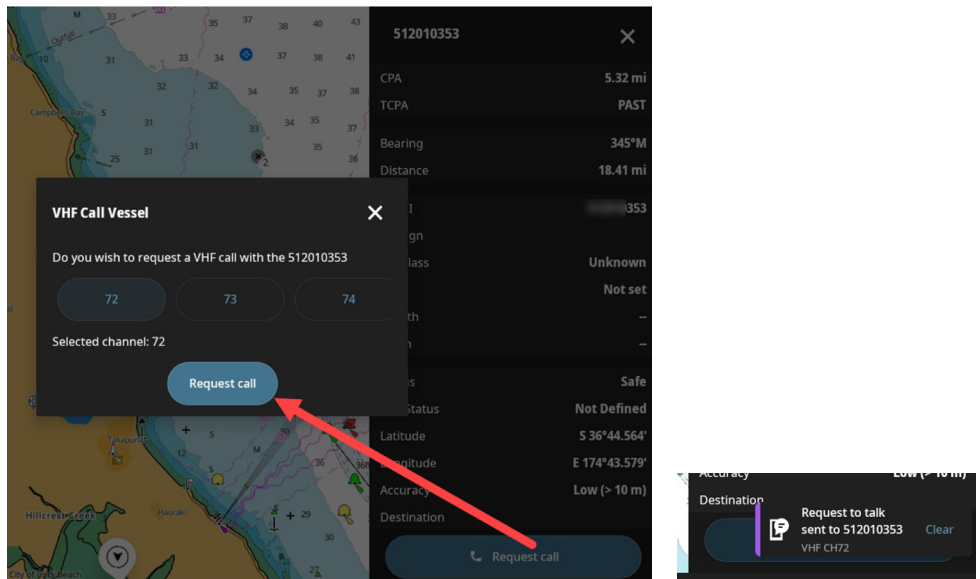
Digital selective calling (DSC) is a standard for transmitting predefined digital messages via VHF marine radio systems.

If your vessel is equipped with a VHF radio supporting DSC over NMEA 2000®, you can select an AIS target on the chart and request a DSC call with that vessel.

### Request a call

On the chart, select the AIS target and view AIS details.

- 1 Select **Request call**.
- 2 Select the VHF channel for the call then **Request call**.
- 3 Confirm any alerts from the VHF.

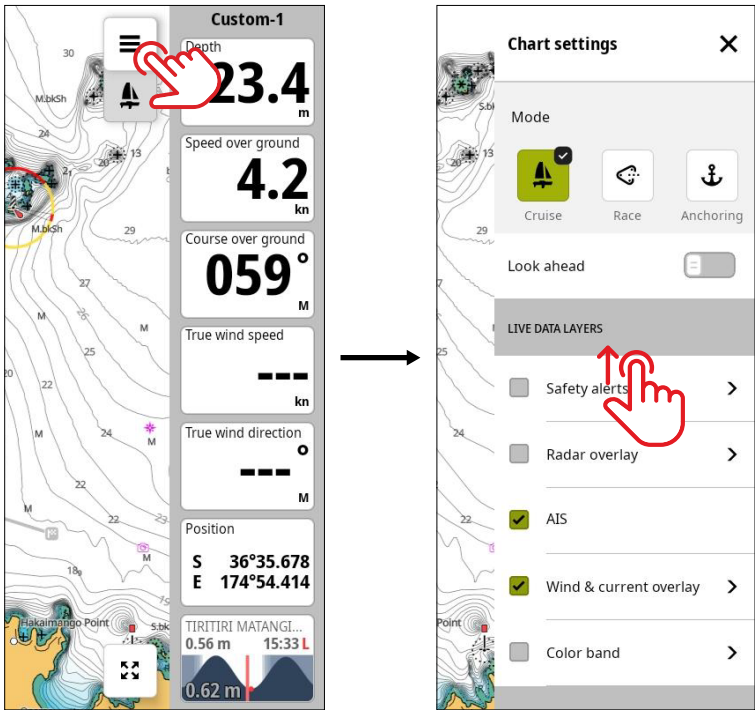


→ **Note:** Channel choices depend on your VHF configuration and local regulations.

# CHART SETTINGS

Select the chart settings button, then swipe up on the **Chart settings** panel to see all available configuration options.

- **Note:** Options displayed on the chart settings may vary based on connected devices and sensors.
- **Note:** Only the settings common to C-MAP chart cards are described in this document. Settings unique to these cards, or cards from any other vendors, are not described.



- **Note:** Due to continuous software updates and connected devices, the above image may appear different to your unit.

## Chart modes

Choose from **Cruise**, **Race**, or **Anchor** chart modes. Refer to the respective chart mode topic in this document.

## Look ahead

Use to move the vessel icon on the screen and maximize your view ahead of the vessel.

## Live data layers

Use to show and configure chart screen overlays. The options depend on the devices connected to your system. You can also turn on the Automatic Identification System (AIS) here to track vessels. Configure visibility and settings for:

- **Safety alerts** — select from Harbor or Offshore sensitivity for alerts. Refer to the **Safety alerts** on page 14.
- **Radar overlay** — turn on to interpret the radar image by correlating radar targets with chart objects.
  - *Note: A heading sensor is required for the radar overlay.*

### AIS

Turn on Automatic Identification System (AIS) to facilitate marine traffic monitoring and vessel assistance. Refer to the topic **Automatic Identification System (AIS)** in this document.

- *Note: An AIS receiver must be connected to the system to display AIS targets on the screen.*

### Wind and Current overlay

Use to give a clear view of the relative true wind direction and the calculated tide set and rate. A shaded segment provides a history of the true wind direction, and a wind barb provides reference to the true wind speed.

- *Note: Wind speed, wind direction, tide, boat speed, heading, SOG, and COG are required for wind and current overlay.*

### Color band

Turn on then configure to add or delete a color to highlight a depth within your custom selected range. For example, you can assign the color red to identify a depth of between 5 m - 10 m on the chart.

- *Note: You can customize color band names, add multiple bands, and toggle them on or off individually.*

## Layers

Here you can turn on and individually configure:

- **Hi-res bathymetry** — This layer helps you identify shallow areas, drop offs, ledges, holes or humps by accurate contour lines down to 30 cm (1ft) level of detail. Available data includes the very best of C-MAP HRB data, including C-MAP Team Lake Surveys (US only) and Genesis Social Map, quality controlled and fully integrated. Use to apply color up to a selected depth.
- **Genesis Social Map** — Layers built by aggregate public end-user trips uploaded to the Genesis Social Map System. The layers are available on X-Chart Reveal X.
  - **Bathymetry** — provides precise contour lines that help identify underwater features like shallow areas, drop-offs, ledges, holes, and humps.
  - **Vegetation** — vegetation density is reflected by a green transparency. Non-transparent green indicates dense vegetation, and more transparent green indicates less dense vegetation.

- **Bottom hardness** – provides a visual representation of the seafloor's hardness.
    - **Smooth:** Dark orange indicates harder bottom, and white indicates softer bottom.
    - **Contrast:** Brown indicates harder bottom, and dark green indicates softer bottom.
  - **Satellite imagery** (land) – overlays composite satellite visual data.
  - **Shaded relief** (sea bottom) – to make contours and topography stand out on the chart.
  - **Marine protected areas** – makes it easier to identify legally protected conservation areas.
  - **Raster charts** – Paper chart-like presentation included on specific X-Chart Reveal X cartography. Raster chart resolution and coverage changes with each release. Use the X-Chart Manager app to keep charts up to date.
    - **Note:** *Raster charts are images without chart object data. The **Inspect cursor** menu shows chart objects from the C-MAP layer.*
    - **Note:** *An internet connection is required to update or upgrade charts.*
- **Note:** *The options available depend on the chart card used.*

## User content

Use to filter waypoints, routes or tracks show on your chart.

The filtering is based on the date of creation, allowing you to show items created in the last day, last week, last month, last year, or all items.

→ **Note:** *The Heat trails feature is only available on Zeus SR devices.*

## Chart annotations

Use to manage extension lines for your vessel and other vessels, and to show/hide range rings, grid lines and dynamic icons.

### Extension lines

Extension lines show a prediction of vessel location based on current heading and course over ground. Settings here include:

- **Heading** – plots the heading of your vessel on the chart.
- **Course over ground** – plots the course over ground of your vessel on the chart.
- **Course over ground for other vessels** – plots the course over ground of another vessel.

### Laylines

Turn on the option to see laylines extending from a waypoint or target to indicate the point at which to tack or gybe.

- **Wind history** – turn on to see the preferred time period to see a wind shift heatmap.
- **Show overlaps** – extends the laylines beyond the tack/gybe intersection.
- **Tidal correction** – applies the system calculated tidal vector to the laylines to adjust for tidal flow.
- **Projection** – select to adjust where you would like to display layline projections from boat and target, boat only or target only.

- **Layline targets** — select the target true wind angle (TWA) for your laylines.
- You can choose the source of layline data:
  - Polar (if a sailing processor is on the network)
  - Manual
  - Target Table (actual)

## Range rings

Turn on to see range rings at your vessel position.

## Grid lines

Turn on to see grid lines across the chart.

## Chart detail

- **Filtering** — Use to filter out chart symbols and objects beyond a selected depth.
- **Depth palette** — Use to configure and apply a shallow water gradient to the depth area on the chart above the selected depth.
- **Detail controls** — Use to select **Tides and currents symbols**, **Symbol style**, **Chart symbology**, **Language**, and **Cartography type**.
  - **Cartography type** — select **ENC cartography only** to display ENC chart data.

## Chart source

Use to select the chart data source. Refer to the **X-Chart Manager app guide** to purchase or update charts.

# SIRIUSXM® WEATHER AND FISH MAPPING®

Your MFD can display satellite weather, Fish Mapping® and audio via a SiriusXM® capable receiver.

To display chart overlay data, the Navico® WM-4 receiver must be connected to your network and you must have the appropriate SiriusXM® subscription that includes SiriusXM® Weather, Fish Mapping®, and SiriusXM® radio.

→ **Note:** *SiriusXM® features are available for North America only.*

→ **Note:** *Choose either Weather or Fish Mapping® for marine charts; only one can be active at a time.*

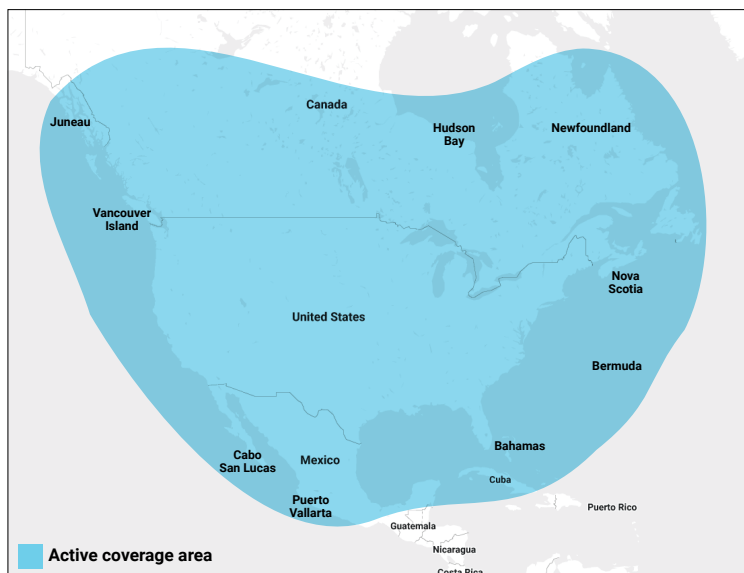
## About SiriusXM® Weather

When a supported Navico satellite weather receiver module is connected to your system and with the appropriate subscription, SiriusXM® Marine weather information is available.

The options available depend on the satellite weather receiver module connected to your system and your subscription.

SiriusXM® weather service covers a variety of North American inland waters and coastal areas. For more information refer to [www.siriusxm.com/marine](http://www.siriusxm.com/marine).

## Service coverage map

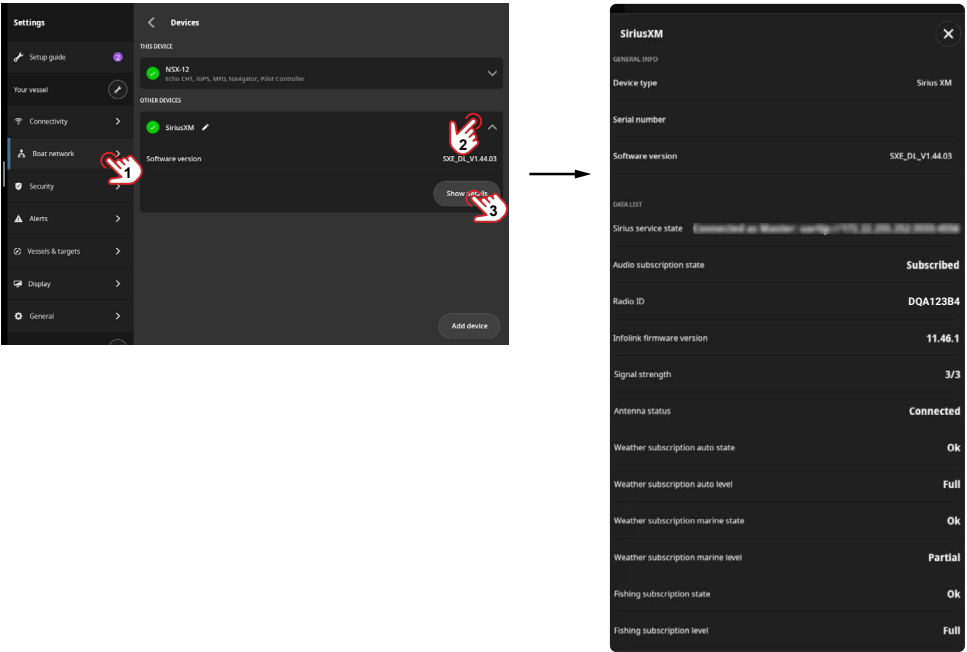


This map provides an estimated representation of SiriusXM® Marine service coverage and does not specify precise service levels. Satellite signal strength may be restricted in border areas.

SiriusXM® Marine offers weather, fishing, and audio services within approximately 150 NM offshore in the contiguous United States and its coastal areas, as well as in Southern Canada. If you're a Canadian boater, please visit [www.siriusxm.ca/marine](http://www.siriusxm.ca/marine).

# SiriusXM® subscription

Information relating to the WM-4 and SiriusXM® subscription and Radio ID are detailed in Device information under **Settings > Boat network (1) > Devices > Expand SiriusXM (2) > Show Details (3)**

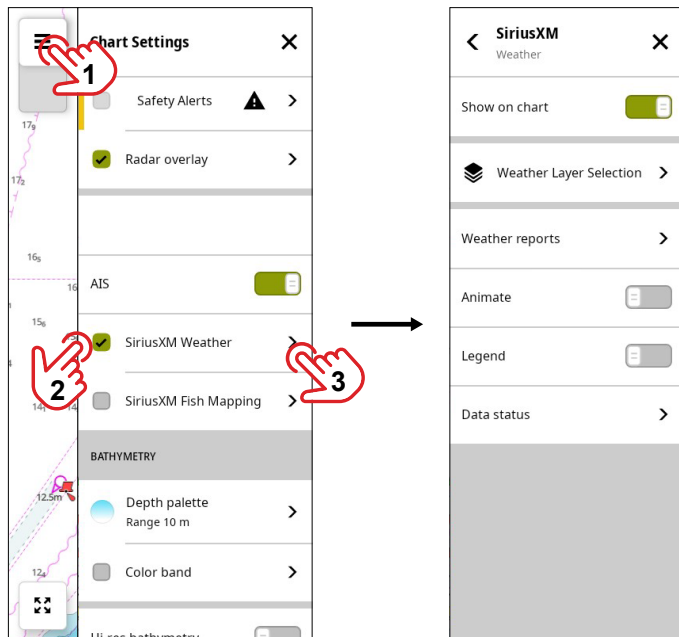


To activate the subscription online visit [www.siriusxm.com/marine](http://www.siriusxm.com/marine)  
You can also call SiriusXM® on 1-855-796-9847 (Monday–Friday, 8 am–8 pm ET USA).  
You will need the Radio ID of the WM-4 and the service will be activated shortly after the SiriusXM® Customer Care Center enters the information into their system.



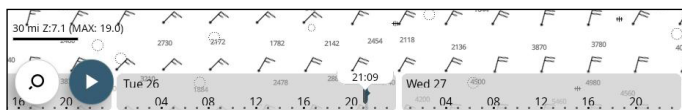
## Turn on SiriusXM® Weather

To turn on the SiriusXM® Weather overlay, navigate to chart settings (1), then select the check box **SiriusXM Weather** (2). Select list item to modify overlay settings (3).



Here you can:

- Select and configure weather layers.
- Read weather reports from:
  - **Local weather** — View reports from service providers at your current location.
  - **Marine zones** — Depending on your subscription, SiriusXM® offers weather reports for U.S. and Canadian marine zones, except for high seas. You pick a zone to check its forecast or set it as your zone of interest for weather warnings.
  - **Tropical statements** — You can read tropical statements including information about weather conditions. These statements are available for the entire Atlantic and the Eastern Pacific.
  - **Marine warnings** — You can read warnings issued by the National Weather Service.
- **Animate** — turn on to see an animation of weather overlays. When activated, the time for the current graphic animation is displayed in the panel.



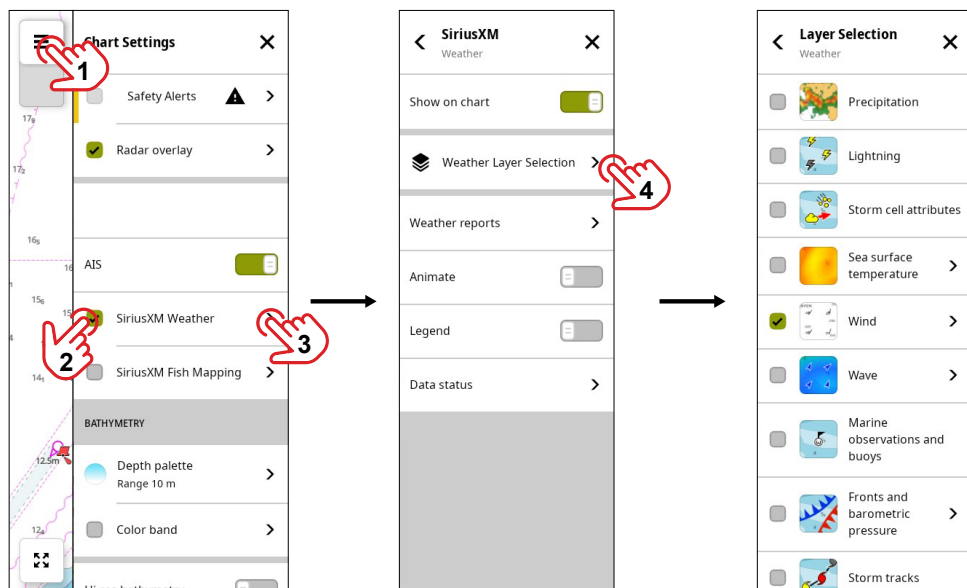
You can animate the past or the future, depending on the weather view you have turned on:

- with precipitation overlay, you can animate for the past (up to 3 hours) and only assume weather conditions in the immediate future.
- with colored wave height overlay, you can animate the future (predicted) wave height over 48 hours from current time.
- with wind overlay, you can see future (predicted) wind direction and speed over 48 hours from current time.
- **Legend** — turn on to see a dynamic legend on the bottom right of the chart. The legend shows data based on the active layers.

## Weather layer selection

Navigate to **Chart Settings** > **SiriusXM Weather** > **Weather Layer Selection** (4) to select the data layers to display from the **Layer Selection** panel. Check the box alongside the layer name to activate the layer visibility.

→ **Note:** A maximum of four layers can be active at a time.



You can select from the following layer options:

### Precipitation

Shades of color are used to show precipitation type and intensity. A darker color indicates higher intensity.

- Rain — From light green (light rain) - yellow - orange - to dark red (heavy rain)
- Snow — Blue
- Mixed — Pink

→ **Note:** Turn on **Animate** and **Legend** to see more information.

## Cloud tops

Displays cloud cover over the visible chart region.

→ **Note:** Turn on **Animate** and **Legend** to see more information.

## Wave

You can configure the Wave overlay properties here.

- Select from **Hide**, **Color overlay** or **Text overlay** — Wave heights in an area can be shown as color changes or via text overlay. Turn on the **Legend** for details.
- **Direction** — turn on to display directional arrow direction shows the wave's movement direction.
- **Period** — turn on to show the time (in seconds) between waves. The period is displayed under each arrow.
- **Data range** — the data range can be configured when **Color overlay** is the selected to display wave height. You can change the minimum and maximum range and select the padlock icon to lock the setting. You can also select the on-screen legend to configure this data range.

## Sea surface temperature (SST)







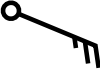


















You can show the SST as **Color overlay** or **Text overlay**. When **Color overlay** is selected, the SST legend is shown on the bottom right side of the chart.

The **Data range** can be configured when **Color overlay** is the selected to display SST. You can change the minimum and maximum range and select the padlock icon to lock the setting. You can also select the on-screen legend to configure this data range.

Wind

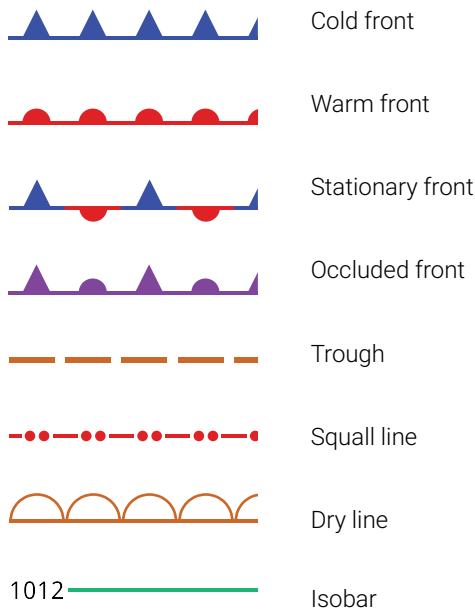
Forecast wind barbs can be shown or hidden on the weather panel. The rotation of the wind barbs indicate the relative wind direction, with the tail showing the direction the wind is coming from. Wind speed is indicated by a combination of small and large barbs at the end of the wind tail.

Wind barb symbology table:

				
calm < 1 knot	1-2 knots N	3-7 knots NNE	8-12 knots NE	13-17 knots ENE
				
18-22 knots E	23-27 knots ESE	28-32 knots SE	33-37 knots SSE	38-42 knots S
				
43-47 knots SSW	48-52 knots SW	53-57 knots WSW	58-62 knots W	63-67 knots WNW
				
68-72 knots NW	73-77 knots NNW	78-82 knots N	83-87 knots NNE	88-92 knots NE
				
93-97 knots ENE	98-102 knots E	103-107 knots ESE	108-112 knots SE	113-117 knots SSE

## Fronts and barometric pressure

Weather fronts are presented as lines that indicate the leading edge of an air mass.



Pressure-center symbols may appear close to weather fronts.



Shows a low-pressure center, which means an area with less pressure. Moving away from it means pressure goes up. In the northern hemisphere, winds go counterclockwise around low-pressure centers.



Shows a high-pressure center, meaning an area with higher pressure. Moving away from it means pressure drops. In the northern hemisphere, winds go clockwise around high-pressure centers.

➔ **Note:** Select the layer settings to configure the overlay style, color and data range.

## Marine observations and buoys








Marine buoys and coastal observation stations take readings. These readings help to report on air and water temperature, tide, waves, wind speed and direction, visibility, and barometric pressure. Select a buoy icon to see further information.

## Lightning

Lightning strikes are represented by the ⚡ icon. Lightning displays up on the precipitation overlay if strikes were seen in the past seven minutes. The network only detects lightning that goes from clouds to the ground.

### Storm cell attributes

Several weather icons are available to show current or predicted weather conditions. Select an icon to display detailed weather information.

	Surface observation
	Tropical storm tracking; past (grey) - present (red) - future (yellow)
	Hurricane (category 1-5) tracking; past (grey) - present (red) - future (yellow)
	Tropical disturbance/depression tracking; past (grey) - present (red) - future (yellow)
	Storm attributes
	Watch box warning and location
	Marine zone location

### Storm tracks

Turn on **Storm tracks** to track storms. It is valuable for boaters as it helps anticipate weather conditions and plan fishing trips accordingly.

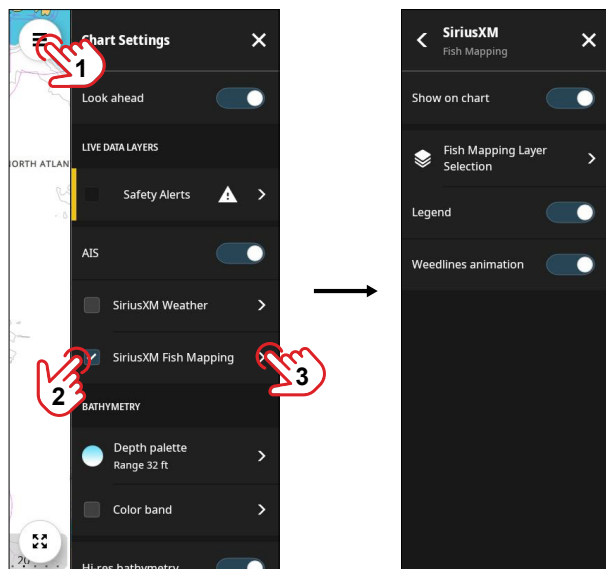
## About SiriusXM® Fish Mapping®

Fish Mapping is SiriusXM® Marine's most comprehensive plan and is available on your unit (via a subscription). You can mark the spots where bait fish gather and game fish hunt.

## Turn on SiriusXM® Fish Mapping®

To turn on the SiriusXM® Fish Mapping® overlay, navigate to chart settings (1), then select the checkbox **SiriusXM® Fish Mapping** (2). Select list item to modify overlay settings (3).

→ **Note:** *Weather and Fish Mapping® are both valuable features for marine charts, but only one can be active at a time. Choose the feature that best suits your current needs and preferences.*



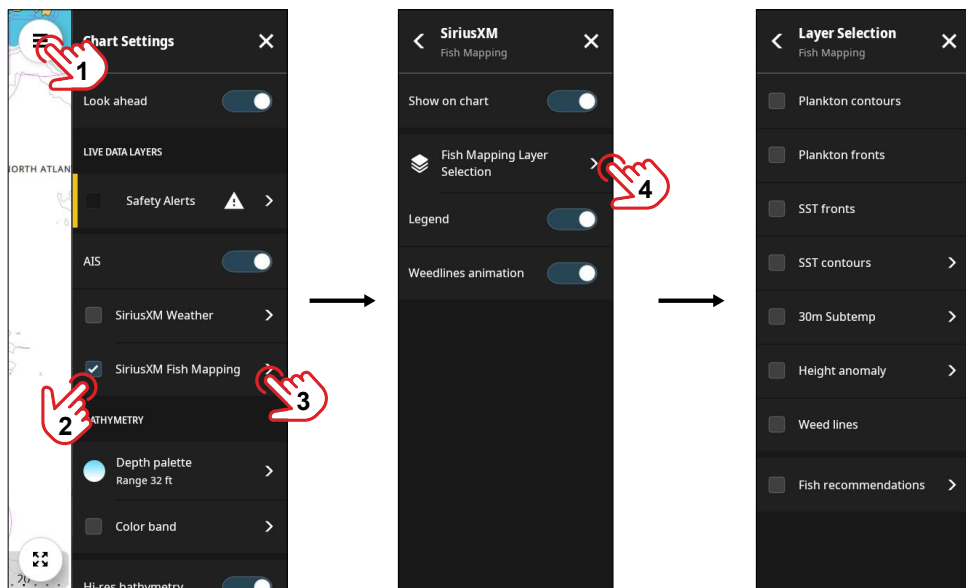
Here you can:

- Select and configure Fish Mapping® layers.
- Turn on the **Legend** to see a dynamic legend on the bottom right of the chart. The legend shows data based on the active layers.
- Turn on **Weedlines animation**

## Fish Mapping® layer selection

Navigate to **Chart Settings** > **SiriusXM Fish Mapping** > **Fish Mapping Layer Selection** (4) to select the data layers to display from the **Layer Selection** panel.

Check the box alongside the layer name to turn on the layer visibility.



### Plankton contours

Turn on to see contour lines for plankton.

### Plankton fronts

Turn on to plankton fronts to identify where turbid nutrient-rich water favorable for bait fish occurs next to clear predator-preferred water, this provides better visibility for hunting.

### Sea Surface Temperature (SST) fronts

When turned on in combination with Plankton fronts, you can see locations where strong and very strong red temperature front lines and green plankton front lines overlap. The overlapping lines indicate better fishing conditions in the area.

### Sea Surface Temperature (SST) contours

Turn on to see contour lines for sea surface temperature. You can further configure the lower and upper temperature range for the contour lines then select the padlock icon to lock the setting.



## 30m Subtemp

The 30m subtemp feature displays water temperature 30 meters below the surface.

Users can overlay temperature contours to identify areas with the preferred temperature range for target game fish. It's updated every 24 hours, helping anglers locate fish hunting grounds.

Cooler temperatures are shaded in light red, while warmer areas are in darker red.

Understanding fish species' temperature preferences allows fishermen to pinpoint productive fishing spots. By combining this feature with other fish mapping layers, such as sea surface temperature fronts and plankton fronts, anglers can increase their chances of finding game fish.

## Height anomaly

The sea surface height anomaly feature provides valuable insights for anglers. Updated every 24 hours, it indicates changes in sea levels, highlighting areas of upwellings and downwellings.

Upwellings bring nutrient-rich water to the surface, attracting bait and game fish, while downwellings indicate nutrient-poor areas less favorable for fishing.

Visualized as shaded lines and circles on the display, positive and negative numbers denote changes in sea surface height. Anglers can identify convergence zones where upwellings and downwellings meet, likely offering better fishing opportunities. This feature complements other Fish Mapping tools like sea surface temperature and plankton fronts.

For optimal use, anglers should avoid areas with high eddies and focus on convergence zones.

## Weedlines

Weedlines offer valuable information about the distribution of weeds in marine environments. This feature provides updated weed line data, crucial for anglers and boaters. You can view weed lines on a full screen, zooming in to identify areas with floating algae and weeds, which serve as habitats for various marine life.

The system includes three days of weed imagery for monitoring changes over time. This feature aids users in locating prime fishing spots and understanding marine ecosystems.

→ **Note:** *Weedlines are identified using satellite imagery, although accuracy may vary near shore due to interference. Environmental factors like cloud cover and wind can also affect the visibility and stability of weed lines, which may change daily.*


## Fish recommendations

Fishing Recommendations takes the guesswork out of finding locations with ideal conditions for specific game fish species. These locations are identified by oceanographers' expert analysis to help you find the best areas to find fish faster, which can help save you both time and fuel.

Recommended fishing locations are represented as easy-to-identify color-coded overlays on the chart. You can select the individual game fish you're after or add additional target game fish like tuna. You can select and display all species at once.

These recommendations are based on numerous factors, including temperature breaks and temperature conditions preferred by the game fish you hunt.

You can select from the following fish types:

Color displayed on chart	Fish type
	Billfish
	Blue marlin
	Bluefin
	Kingfish
	Mahi
	Sailfish
	Skipjack
	Swordfish

