

NSX[®] Chart App Guide

English

Software version: 1.9.X





www.simrad-yachting.com

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More information

Document version: 004

This document was prepared using software version 1.9.X

Features described and illustrated in this guide may vary from your unit due to continuous development of the software.

For the latest version of this document in supported languages, and other related documentation, visit: www.simrad-yachting.com/downloads/nsx.

Contact us

For product support and service information, visit www.simrad-yachting.com/contact-us.

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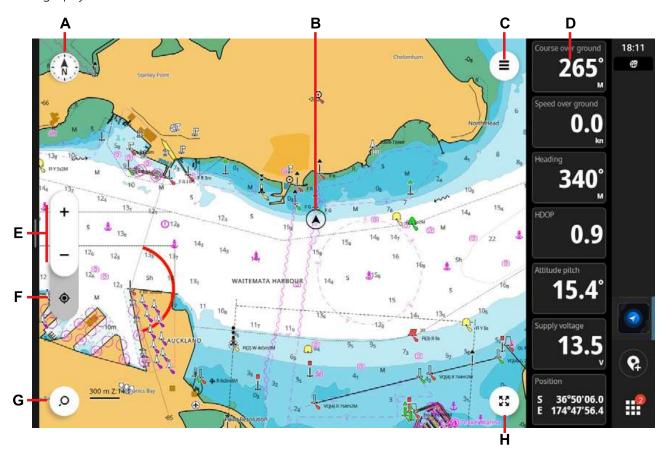
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OVERVIEW

The **Chart** app displays marine charts you can use to create, edit or delete waypoints and routes, explore points of interest, and display AIS targets. You can also export chart waypoint and route data to a microSD® card.

CHART SCREEN

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



- A Chart orientation indicator
- **B** Your vessel
- **C** Chart settings button
- **D** Instrument bar
- **E** Zoom-in and zoom-out buttons
- F Center chart to vessel
- **G** Search button
- **H** Full screen button

An instrument bar (**D**) 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 recent apps panel.
- 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.



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.

<u>MARNING:</u> For safe navigation, you must download a digital chart or insert a microSD® chart card with detailed charts.

<u>MARNING</u>: 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.

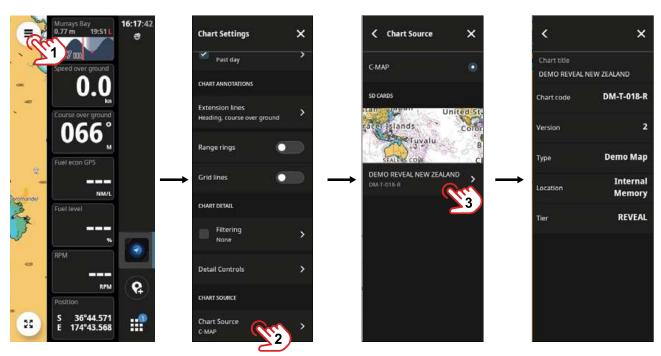
If you purchased the unit without a chart card for your region, you can purchase a chart card from **https://xstore.c-map.com**. Insert the chart card into the microSD® card reader and select it as your chart source. Alternatively, contact your dealer for further information.

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 or visit the Simrad® 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.

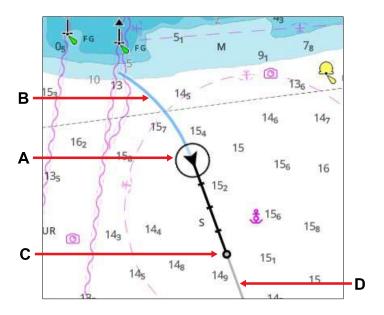


Note: While most popular third-party chart cards are supported, please contact the chart vendor for information on compatibility, availability, and pricing.



RECOGNIZE YOUR VESSEL

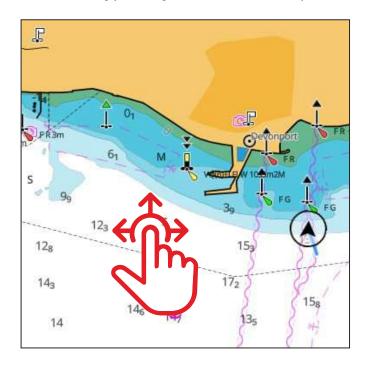
Your vessel shows on the chart when the system has a valid GPS position.



- 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)
- → Note: Go to Chart Annotations > Extension lines in chart settings to display extension lines.

PAN CHART

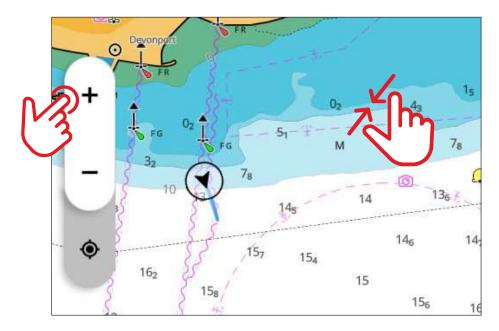
Select and drag your finger on the screen in any direction to pan the chart.





ZOOM CHART

To zoom in or out, use the zoom buttons or pinch to zoom anywhere on the chart.

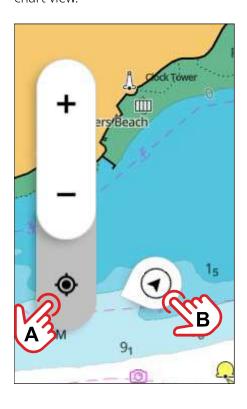


LOCATE YOUR VESSEL

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.



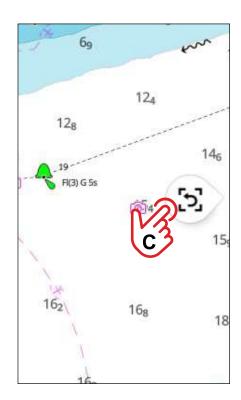




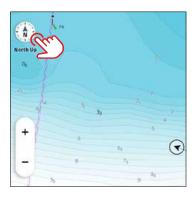
CHART ORIENTATION

The chart orientation indicator always points towards true north. Select the chart orientation indicator repeatedly to cycle between available chart orientations.

→ **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.

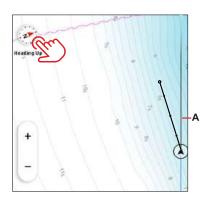
North up

Displays the chart with north upward.



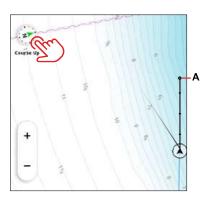
Heading up

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



Course up

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





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, simply select and drag it.

To view more detailed information about the waypoint, route or cursor position, select the more options button (2), then **Inspect cursor** (3) from the extended pop-up.

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

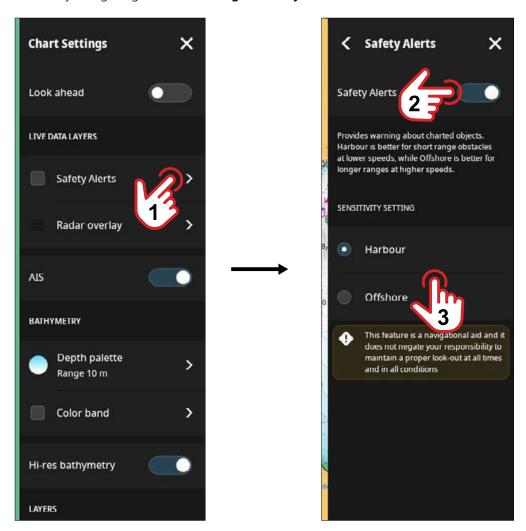


→ **Note:** If you inspect the chart at a position, the mini inspector will also display the travel time and distance to the cursor.



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**.



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

Harbor

In **Harbor** mode, the safety alerts are less sensitive. This is because, when you're navigating in tight spaces like a harbor, you're already paying close attention to your surroundings. Since there are many objects nearby, the system gives you an alert when you get much closer to an obstacle.

Offshore

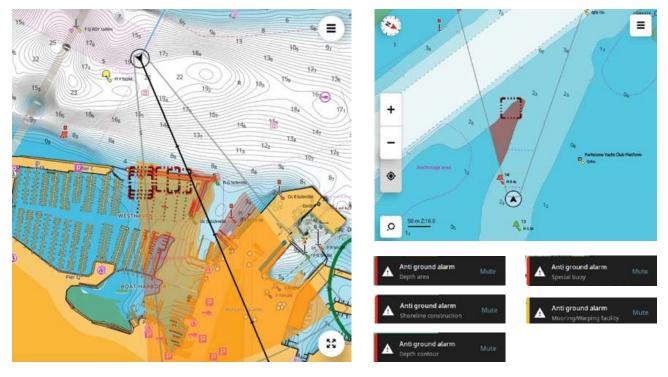
In open water, it's crucial to be aware of objects that are further away. Approaching an object that's a hundred meters away in the middle of the ocean can be very risky. In **Offshore** mode, the system is more sensitive in terms of Closest Point of Approach (CPA) and Time to Closest Point of Approach (TCPA), and it allows for greater safety margins.



How safety alerts work

The safety alerts work by highlighting objects in the vessel's path that represent a risk of collision or grounding. Collision for objects on the surface, like a buoy or cardinal marker, or in the case of grounding, any object shallower your draft measured at chart datum.

The illustrations below show the appearance of chart objects which raise an alert.



To determine the 'dangerousness' of a chart object the app constantly monitors the CPA of any charted object ahead of the vessel.

CPA describes how near the vessel will get to an object given its current course over ground provided neither object changes course. It is a concept also used in Radar and AIS.

Should an object/vessel come within the specified safety limit - which changes according to the conditions - the feature will calculate the TCPA of the object (or objects) and, if this time comes within the next safety limit, present the user with an alert (audible and visual).

The TCPA is used to filter out objects with a low CPA (i.e. that you are pointed directly at), but that are far enough away not to constitute an imminent risk (i.e. that are hours away from you at your current speed over ground).



NAVIGATE TO A LOCATION

To navigate to a location, select a position on the chart (1), select the options button, select **Go to** (2). A flag icon identifies your selected location and a green line illustrates the navigation route.

You can also select **Autoroute to cursor** (3) if you want the unit to create a route for you.





SIRIUSXM® WEATHER AND FISH MAPPING®

Your NSX 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.

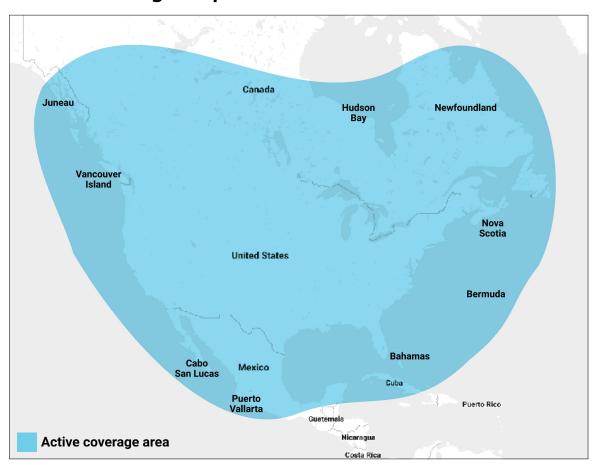
About SiriusXM® Weather

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**.

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.

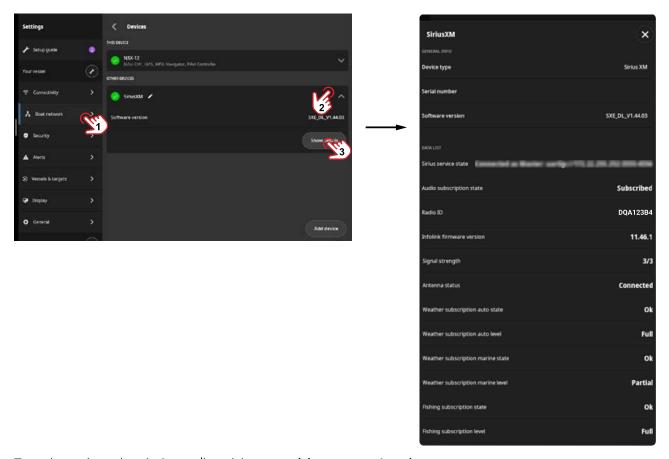
SiriusXM® Marine offers weather, fishing, and audio services within approximately 150 NM offshore in the contiguous United States and its coastal areas, as well as in Southern Canada.

→ Note: If you're a Canadian boater, please visit www.siriusxm.ca/marine.



SiriusXM® subscription

Information relating to the WM4 and SiriusXM® subscription and Radio ID are detailed in the Device information Settings > Boat network (2) > Devices > Expand SiriusXM (2) > Show Details (3)



To activate the subscription online visit: www.siriusxm.com/marine

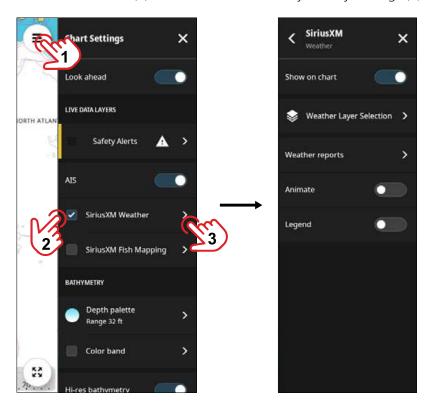
You can also call SiriusXM® on 1-855-796-9847 (Monday–Friday, 8 am–8 pm ET USA).

You will need the Radio ID of the WM4 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).

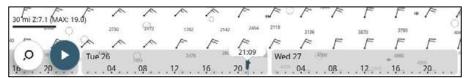


Here you can:

- 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.



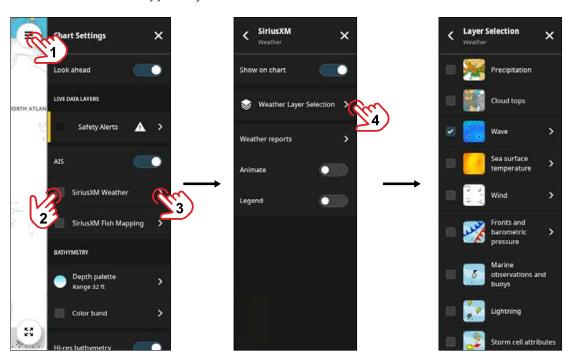
You can animate the past or the future, depending on which weather view you have turned on:

- 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.

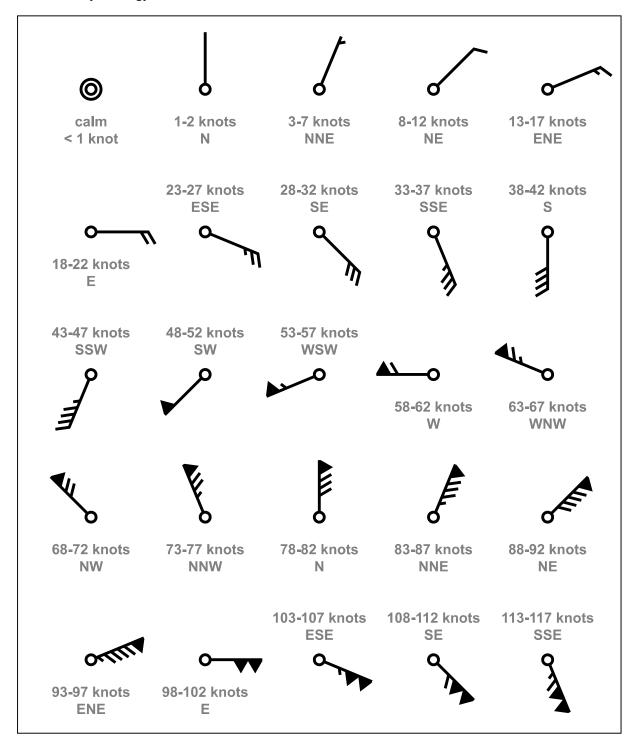
The **Data range** can be configured when **Color overlay** is the selected to display SST. You can change the minimum and maximum range and select the padlock icon to lock the setting. You can also select the onscreen legend to configure this data range.



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.

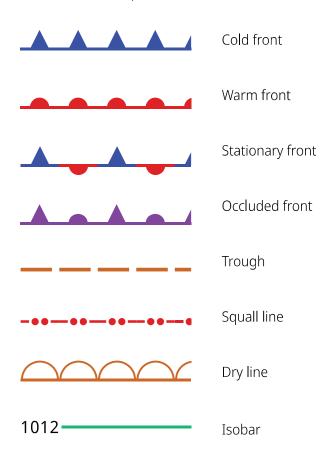
Wind barb symbology table:





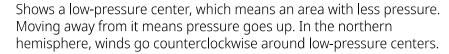
Fronts and barometric pressure

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 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 $\frac{6}{2}$ 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.

F W	Surface observation
§ § §	Tropical storm tracking; past (grey) - present (red) - future (yellow)
5 5 5	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.



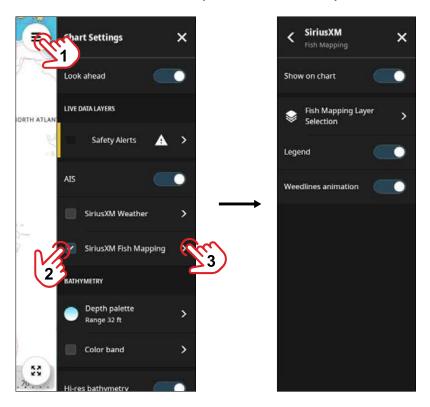
About SiriusXM® Fish Mapping®

Fish Mapping is SiriusXM® Marine's most comprehensive plan and is available on your NSX. 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:

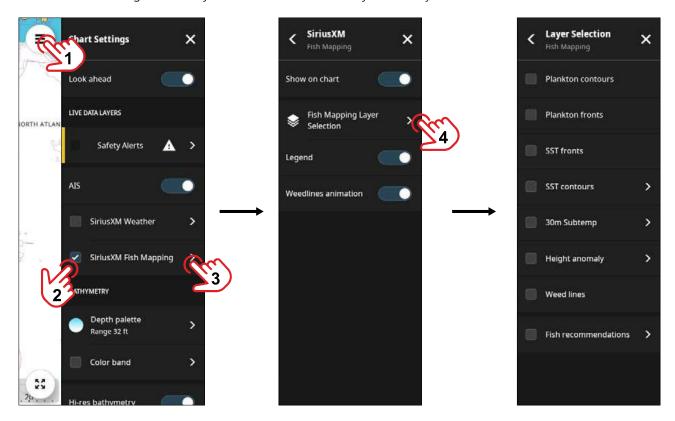
- Select and configure Fish Mapping[®] layers.
- Turn on the **Legend** to see a dynamic legend on the bottom right of the chart. The legend shows data based on the active layers.
- Turn on Weedlines animation



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.

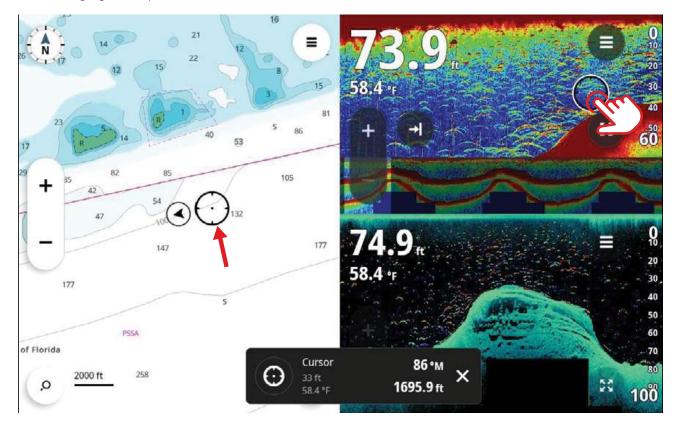
You can select from the following fish types:

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



CURSOR MIRRORING

On grouped apps with multiple chart panels, the cursor position is mirrored across the panels. Cursor mirroring is also available in grouped apps with chart and sonar when a position is selected on any of the active imaging sonar panels.





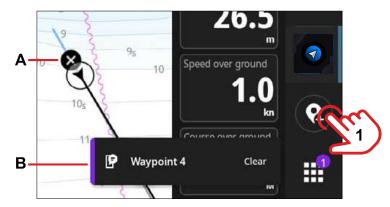
WAYPOINTS

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 three methods to add a waypoint.

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



- **A** Waypoint marker
- **B** Confirmation of waypoint creation with name

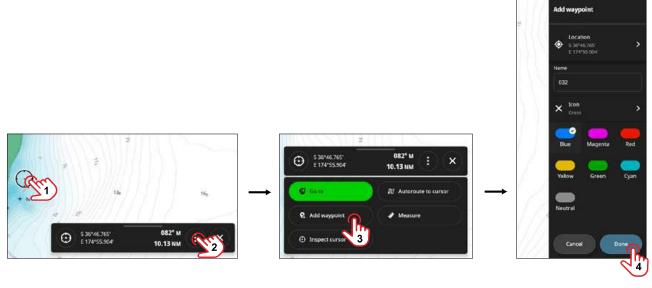
Alternatively, select and hold a position on the chart (1) to open the cursor details panel, select the cursor options button (2), then select **Add waypoint** (3) to add a waypoint at the cursor position. You can edit waypoint details on the **Add waypoint** panel.



→ **Note:** The waypoint is automatically given a name. On the edit waypoint panel, select the waypoint name (3) to rename the waypoint.



Finally, you can add a waypoint by selecting a position on the chart and then select **Add waypoint** (3) from the extended pop-up. You can select a custom color and icon for the waypoint, select **Done** (4) 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, select the pop-up menu (2), then **See waypoint details** (3) on the extended pop-up.



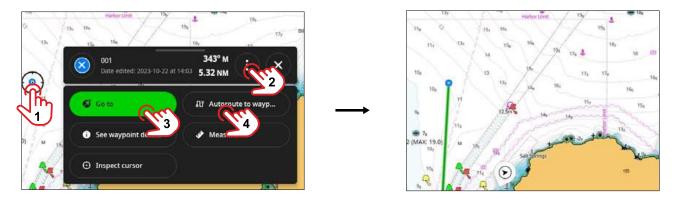
On the waypoint details panel, you can perform the following actions:

- 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 (4) 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), select the options button (2), then select **Go to** (3). If you want to autoroute to a waypoint select **Autoroute to waypoint** (4) to use it. A green navigation line appears on the chart from your vessel to the waypoint.

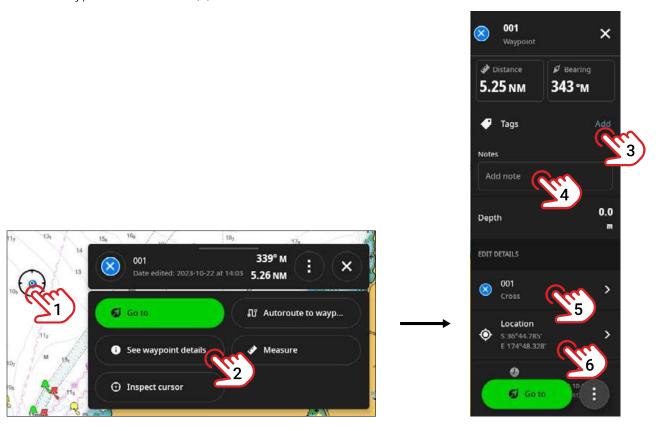




Edit a waypoint

Select the waypoint (1), 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).

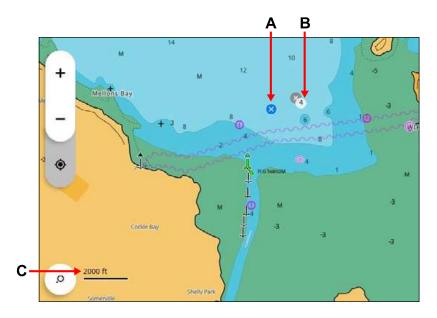


→ Note: If you edit a waypoint's color or icon style, the same settings are used when a new waypoint is created.



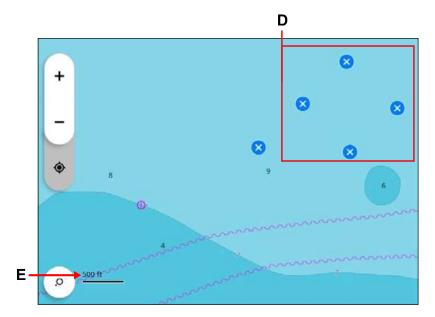
Waypoint grouping

At higher zoom levels, multiple waypoints in close proximity to each other are condensed and grouped into a single point and a number is displayed alongside 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** Altitude (zoom level)

Zoom into the chart to ungroup the waypoints for a normal view.



- **D** Ungrouped waypoints
- **E** Zoom level
- → **Note:** You can turn off waypoint grouping in the chart settings. Navigate to **Chart settings** > **Waypoints** (User content section) > **Allow decluttering**.



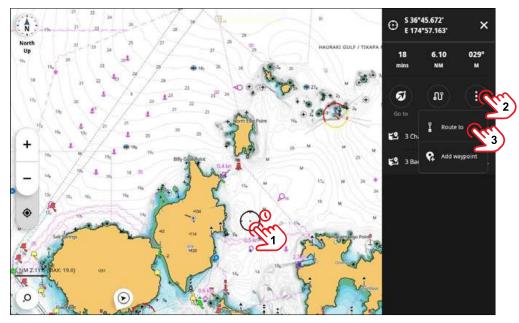
ROUTES

You can use the Chart app to quickly add a route to a location of interest. This route can be navigated using an autopilot or to quide you in manual navigation.

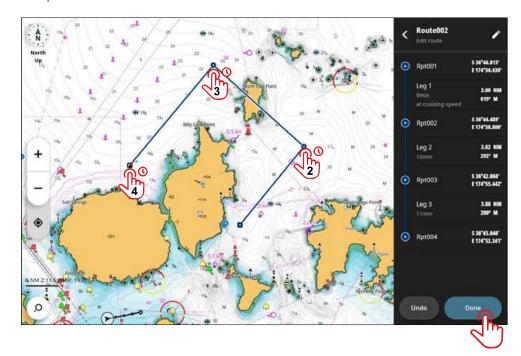
<u>MARNING</u>: Routes are for general planning only and must be used in conjunction with conventional navigation practices and situational awareness. This does not replace a human navigator and should never be used as the only reference source.

Create a route

To create a route, select and hold a position on the chart (1) — this is your first route point. 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**.





Autoroute a route leg

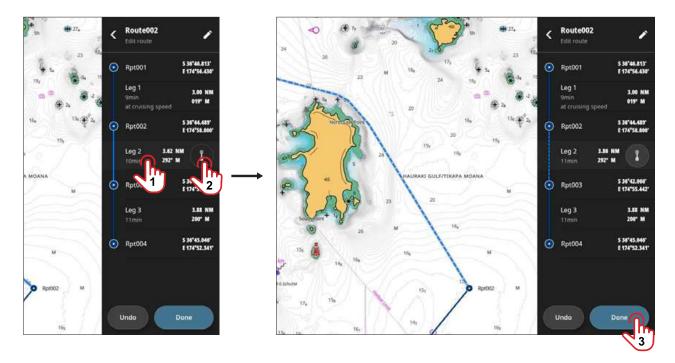
You can create autoroutes for each leg in a route. The system takes into consideration your vessel's dimensions, settings and chart information to determine the autoroute of the leg.

<u>MARNING</u>: 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.

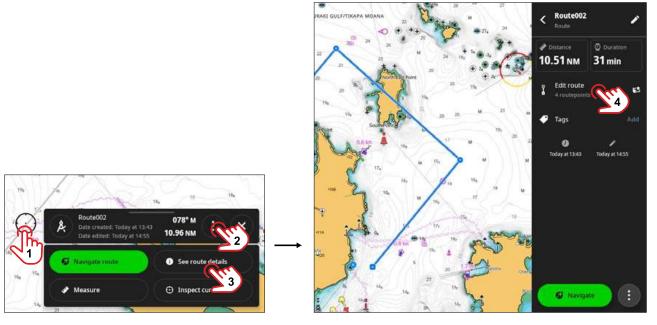




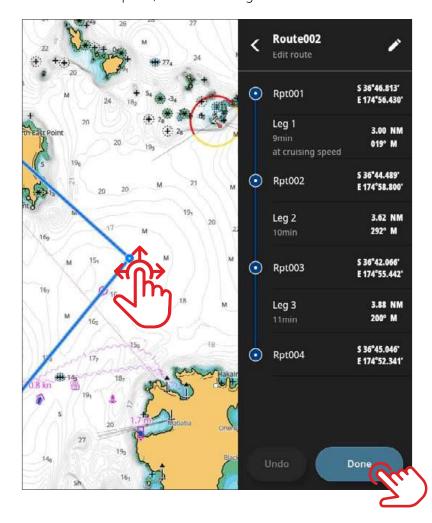
Edit a route

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. On the extended pop-up (2), select **See route details** (3) and then select **Edit route** (4) on the route details panel.



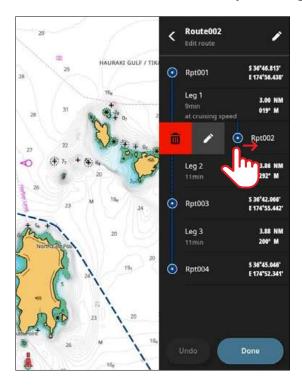
To move a route point, select and drag it on the screen. Select **Done** to save your changes.





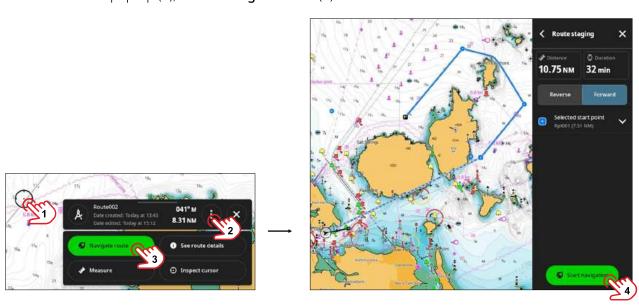
Delete or rename a routepoint

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:

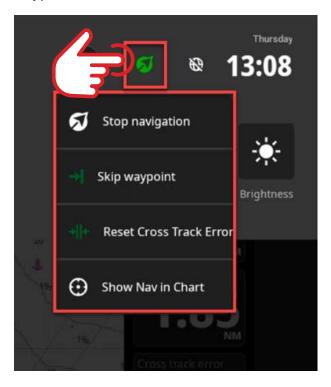
- Preview the route duration and distance
- Preview the direction of travel
- Select a start point from the **Selected start point** menu
- Select **Start navigation** (**4**) to start navigating the route



Stop navigation

There are three ways to stop navigation.

When navigation is active, displays in the recent apps 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).

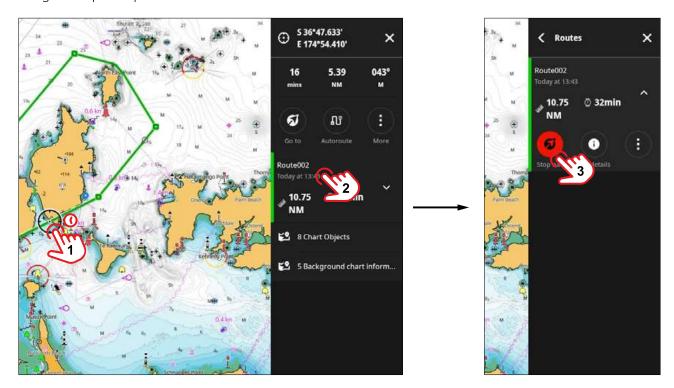


To stop navigation on an active route or waypoint, select anywhere (1) on the green active navigation line. Select the options button on the basic information pop-up (2), then **Stop navigation** (3).



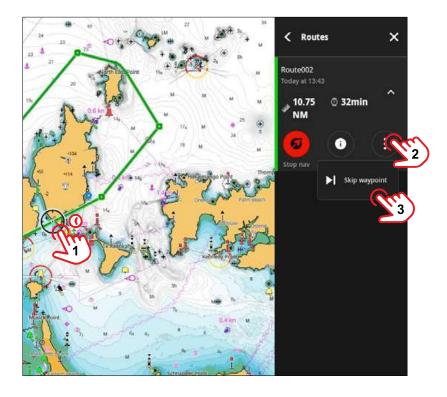


When actively navigating to a waypoint or location, you can also select and hold anywhere (1) on the green navigation line. Select the route name from the details panel, then select **Stop nav** (3) from the navigation options panel.



Skip a waypoint

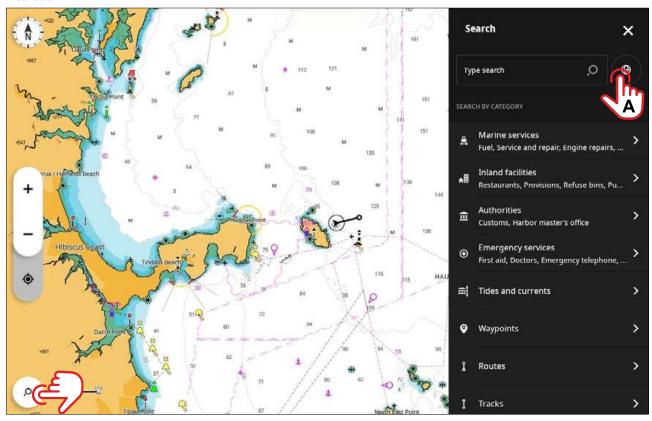
You can skip a waypoint along a route. The unit will chart a course for the next waypoint along the route. When actively navigating to a waypoint or location, select and hold anywhere (1) on the green navigation line. Select the route name from the details panel, select the route options button (2) then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





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:

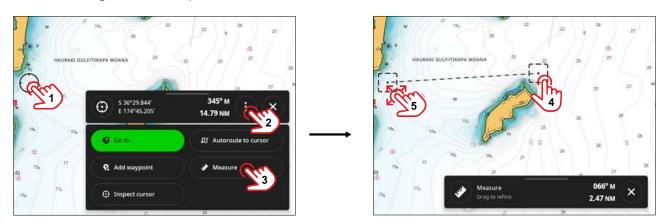
- **GPS coordinates** Select (**A**) to use the GPS coordinate system to search for location-specific information
- **Marine services** To search for fuel stations, service and repair, workshop, chandler, electricity, and other marine services. Select from the displayed categories or use the text input field.
- → **Note:** The search function uses data from the information stored on the chart card and does not access the internet. Your search queries must be specific to return good results.
- **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.
- → Note: Position the chart close to the area of interest and zoom in to view the search 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 (3)** on the extended pop-up. Select a second position on the chart (4) to see the distance and bearing information from the first position (1). Select and drag either of the positions (4, 5) on the chart to refine the measurement.



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



AUTOMATIC IDENTIFICATION SYSTEM (AIS)

An Automatic Identification System (AIS) facilitates marine traffic monitoring and vessel assistance. The information provided by an AIS supplements information acquired from radars for location tracking and is used to detect and avoid vessel collisions.

If a compatible AIS is connected to your display unit, you can view and track AIS targets. When another vessel within range transmits a Digital Selective Calling (DSC) signal, you will be able to see the vessel's messages and location on your unit. You can display AIS targets as an overlay on radar and chart images, making this feature an important tool for safe traveling and collision avoidance.

Additionally, you can filter AIS targets display using the **Vessels & targets** option in the unit's **Settings** menu.

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. Yellow is used when the radar palette is black/red or black/green. Purple is used when the radar palette is white/red. Red is used when the radar palette is black/yellow.
	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. Note: 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.
(+)	AIS AtoN (Aids to Navigation) target symbol.
*+.	Virtual AIS AtoN (Aids to Navigation) target symbol.
+	AIS AtoN (Aids to Navigation) dangerous target. • Yellow is used when the radar palette is black/red or black/green. • Purple is used when the radar palette is white/red. • Red is used when the radar palette is black/yellow.
\otimes	AIS-SART (Search and Rescue Transmitter) active.
\otimes	AIS-SART (Search and Rescue Transmitter) test.



Digital Selective Calling

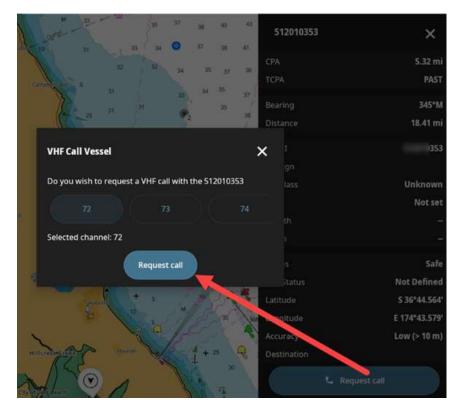
Digital selective calling (DSC) is a standard for transmitting predefined digital messages via medium-frequency (MF), high-frequency (HF) and very-high-frequency (VHF) maritime radio systems.

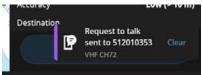
If your vessel is equipped with an AIS system connected to an NMEA 2000® VHF, you can select an AIS target on the chart and request a DSC call with that vessel.

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.





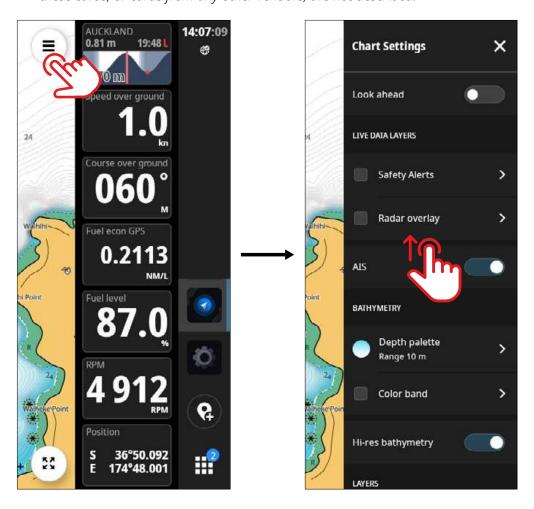
→ Note: Channel choices depend on your VHF configuration and local regulations.



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.



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 topic on *page 10*.
- 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 to work.



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.
- → Note: SiriusXM® options only display when suitable hardware is connected and an active subscription is available.

Bathymetry

Depth palette

Select to configure and apply a shallow water gradient to the depth area on the chart above the selected depth.

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.

Hi-res bathymetry

High-Res Bathymetry (HRB) 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 maps, quality controlled and fully integrated. Use to apply color up to a selected depth.

Layers

Here you can turn on and individually configure:

- 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.
- → 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.

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.

Range rings

Turn on to see range rings at your vessel position. Useful when using the radar overlay feature.



Grid lines

Turn on to see grind lines across the chart.

Chart detail

- **Filtering** Use to filter out chart symbology and objects beyond a selected depth.
- **Detail controls** Use to select **Tides and currents symbols**, **Symbol style**, **Chart symbology**, and **Language**.

Chart source

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

