GPSMAP® 5000 Series
owner's manual

GARMIN®

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See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

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Introduction

This manual includes information for the following products:

- GPSMAP® 5208
- GPSMAP 5212
- GPSMAP 5215

Tips and Shortcuts

- Touch **Home** from any screen to return to the Home screen.
- Touch **Menu** from any main screen to access additional settings.
- Press and release the **Power** key to adjust the display settings (**Backlight** and **Color Mode**).
- Press and hold the **Power** key to turn the chartplotter on or off.

Manual Conventions

In this manual, when you are instructed to touch something, use your finger to touch that item on the screen. Small arrows (>) used in the text indicate that you should touch a series of items in order. For example, if you see, "Touch **Charts** > **Navigation Chart**," you should touch the **Charts** button on the screen, and then touch **Navigation Chart**.

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Getting Started

Front and Rear Panels

GPSMAP 5208 - Front

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Turning the Chartplotter On

NOTE: The first time you power on your chartplotter, you must go through a setup sequence. See "Initializing Chartplotter Settings".

1. Press and release the **Power** key. After a few moments, the Warning screen appears.

Warning Screen

Home Screen

2. Touch **I Agree** to open the Home screen.

Turning the Chartplotter Off

To turn the chartplotter off, press and hold the **Power** key.

Initializing Chartplotter Settings

The first time you turn your chartplotter on, you must configure a series of initial settings. These settings must also be configured when restoring factory settings (page 4). All of these settings can be configured later from the Configure screen (page 36).

The initial settings are as follows:

- **Language**—touch the language that you want shown on your screen.
- **Welcome**—touch **OK**.
- **Position Format**—specify the coordinate system to use for location readings.
- **Time Format**—select **12-hour**, **24-hour**, or **UTC** (Universal Time Code) to specify the format in which time is displayed.
- **Time Zone**—select your time zone.
- **Units**—select **Statute**, **Metric**, or **Nautical** to specify units for on-screen measurements.
- **Minimum Safe Depth**—specify the minimum safe depth for your boat. Refer to your boat specifications for more information.
- **Minimum Overhead Clearance**—specify the minimum overhead clearance for your boat. Refer to your boat specifications for more information.

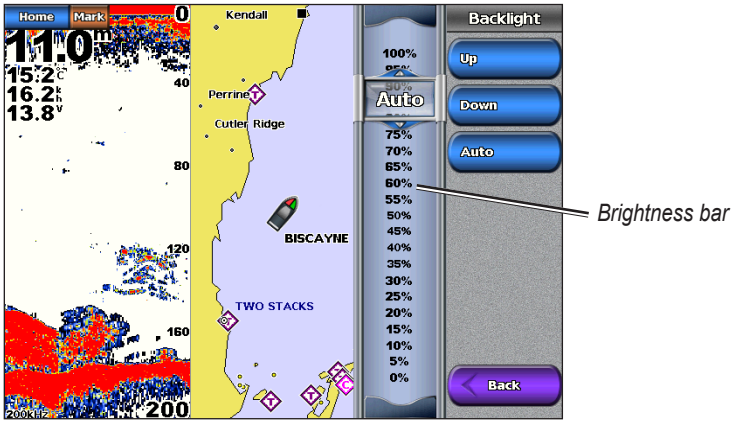
Acquiring GPS Satellite Signals

When you turn the chartplotter on, the GPS receiver must collect satellite data and establish its current location. When the chartplotter acquires satellite signals, the signal strength bars at the top of the Home screen are green  . When the chartplotter loses satellite signals, the green bars disappear  and a flashing question mark appears on the boat icon on the chart screen.

For more information about GPS, visit the Garmin Web site at www.garmin.com/aboutGPS.

Adjusting the Backlight

1. While the chartplotter is on, press and quickly release the **Power** key.
2. Touch **Backlight**.
3. Select an option to adjust the backlight:
   - To allow the chartplotter to automatically adjust the backlight based on ambient light, touch **Auto**.
   - To manually adjust the backlight, either touch and hold **Up** or **Down**, or touch and drag the brightness bar.

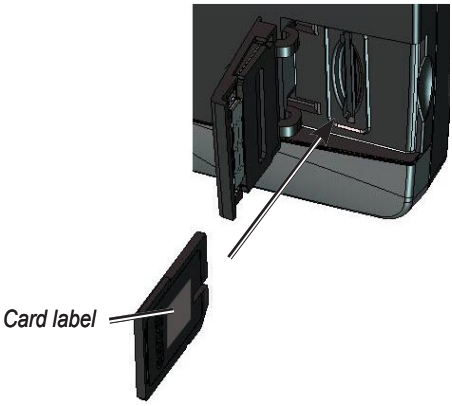


Adjusting the Color Mode

1. Press and quickly release the **Power** key.
2. Touch **Color Mode**.
3. Touch **Day Colors**, **Night Colors**, or **Auto**.

Inserting and Removing SD Cards

Your chartplotter supports SD (Secure Digital) cards. Insert optional BlueChart® g2 Vision® SD cards to view high-resolution satellite imagery and aerial reference photos of ports, harbors, marinas, and other points of interest. Insert blank SD cards to transfer data such as waypoints, routes, and tracks to another compatible Garmin chartplotter or a computer (page 32). The SD card slot is located on the lower-right corner of the chartplotter.



- To insert the SD card, open the access door and press the SD card until it clicks.
- To eject the SD card, press the card in again and release it.

Restoring the Original Factory Settings

CAUTION: This procedure deletes any information you have entered.

1. From the Home screen, touch **Configure** > **System** > **System Information** > **Factory Settings** > **Reset**.
2. Select an option:
   - Touch **Yes** to restore all factory settings.
   - Touch **No** to exit without restoring factory settings.

Viewing System Information

You can view the software version, basemap version, unit ID number, and your XM WX Weather® radio ID (if available). You may need this information to update the system software or purchase additional map data information.

From the Home screen, touch **Configure** > **System** > **System Information**.

Using the Simulator Mode

Simulator mode turns the GPS receiver off for use indoors or for practice. The chartplotter does not track satellites in simulator mode.

CAUTION: Do not try to navigate using simulator mode because the GPS receiver is turned off. Any satellite signal strength bars shown are only simulations and do not represent the strength of actual satellite signals.

1. From the Home screen, touch **Configure** > **System** > **Simulator** > **On**.
2. Touch **Setup** to set speed, track control (simulated heading), position, simulator time, and simulator date.

Understanding the Home Screen

Use the Home screen to access all other screens.

NOTE: Options on this screen vary based on the chartplotter type and optional connected network devices.

- **Charts**—selects Navigation Chart, Perspective 3D, Mariner's Eye 3D, Fish Eye 3D, Fishing Chart, and Radar Overlay (page 6).

NOTE: Mariner's Eye 3D, Fish Eye 3D, and Fishing Charts are available only if you use a BlueChart g2 Vision SD card.

- **Sonar**—sets up and provides sonar information (only available if the chartplotter is connected to a Garmin sonar module) (page 51).
- **Combinations**—sets up the screen to view a chart, sonar, radar, and video in a 2, 3, or 4-field split screen (page 21).
- **Information**—shows information including tides, currents, celestial data, user data, information about other boats, gauges, and video (page 30).
- **Mark**—marks, edits, or deletes your current location as a waypoint or Man Overboard (page 25).
- **Where To?**—provides navigation features (page 23).
- **Radar**—sets up and displays radar (only available if the chartplotter is connected to a radar module) (page 45).
- **Weather**—sets up and displays various weather parameters, including precipitation, forecast, fishing, sea conditions, and visibility (only available if the chartplotter is connected to a weather module and you have an XM® subscription) (page 59).
- **Configure**—allows you to view and edit your chartplotter and system settings (page 36).
- **Man Overboard**—marks your current location as a waypoint, and sets a course back to the marked location. (page 25).

Using Charts

The GPSMAP 5000 series chartplotters have a basic worldwide imagery map and built-in detailed BlueChart g2 offshore cartography for US waters. The following options are available when you touch **Charts** on the Home screen:

- **Navigation Chart**—displays navigation data available on your preloaded maps, including buoys, lights, cables, depth soundings, marinas, and tide stations in an overhead view.
- **Perspective 3D**—displays a view from above and behind your boat for a visual navigation aid.

NOTE: Mariner's Eye 3D, Fishing Charts and Fish Eye 3D views are available when using optional Blue Chart g2 Vision preprogrammed SD cards. See page 16.

- **Mariner's Eye 3D**—displays a detailed, three-dimensional view from above and behind the boat for a visual navigation aid.
- **Fishing Chart**—removes navigational data from the chart and enhances bottom contours for depth recognition.
- **Fish Eye 3D—**provides an underwater view that visually represents the sea floor according to the chart's information.

The chartplotter selectively displays navigation data after you select the type of navigation you want.

Using the Navigation Chart

Use the Navigation chart to plan your course, to view map information, and as a navigational aid.

From the Home screen, touch **Charts** > **Navigation Chart**.

Navigation Chart on a GPSMAP 5208

Zooming In and Out on the Map

The + and − keys control the zoom level, indicated by the scale at the bottom of the Navigation chart (0.2mi). The bar under the number represents that distance on the map.

Navigation Chart Settings

To access additional settings or options for the Navigation chart, touch **Menu**.

Waypoints & Tracks—view and add waypoints and tracks, and configure how they are displayed.

Other Vessels—view information about other vessels if your chartplotter is connected to an external Automatic Identification System (AIS) or Digital Selective Calling (DSC) device.

Stop Navigation—stop navigating to your destination (only available while navigating).

Chart Setup—customize the Navigation chart settings (page 11).

Data Bars—show or hide cruising, navigation, fishing, fuel, or sailing data.

- **Cruising**—turn the GPS Speed, GPS Heading, Depth, and GPS Position data bar on or off. Touch **Data Bar Setup** to configure the position of the data on the screen.
- **Navigation**—turn the Distance to Destination, Arrival, Off Course, and Bearing data bar on or off. If you touch **Auto**, the chartplotter turns the Navigation data bar on whenever you are navigating to a destination. Touch **Data Bar Setup** to configure the Route Leg, Next Turn, and Destination options.
- **Fishing**—turn the Depth, Water Temperature, and Water Speed data bar on or off.
- **Fuel**—turn the Fuel Rate, Remaining Fuel, Range, and Fuel Economy data bar on or off.
- **Sailing**—turn the Water Speed, Wind Speed, Wind Angle, and Wind Velocity Made Good (VMG) data bar on or off. Select **Wind** to toggle between True and Apparent wind speed and wind angle.

Understanding How Wind VMG and Waypoint VMG Are Displayed in the Data Bars

The chartplotter automatically switches between displaying Wind Velocity Made Good (VMG) and Waypoint VMG in the data bars.

Waypoint VMG is displayed under the following conditions:

- The Route Leg data bar displays Waypoint VMG when you are navigating a route or an automatic guidance line.
- The Sailing data bar displays Waypoint VMG when you are navigating a route or an automatic guidance line, and you turn the Route Leg data bar off.

Wind VMG is displayed under the following conditions:

- The Sailing data bar displays Wind VMG when you are not navigating a route or an automatic guidance line.
- The Sailing data bar displays Wind VMG when the Route Leg data bar is on and you are navigating a route.

Understanding Chart Data

BlueChart g2 and BlueChart g2 Vision charts use graphic symbols to denote map features, which follow the standards for US and international charts. Some common symbols you might see include, but are not limited to, the following:*


Dangerous Rock


Pilot Boarding Area


Anchorage Berth


Anchoring Prohibited


Exposed Wreck


Fishing Harbor


Fishing Prohibited


Information


Current Station


Exposed Rock


Airport/Seaplane Base


Precautionary Area


Radio Report Point


Recommended Anchorage


Rescue Station


Tide Station


Yacht Harbor


Marine Services


Beacon


Buoy

*Some symbols might appear differently on your Garmin chartplotter.

Other features common to most charts include depth contour lines (with deep water represented in white), intertidal zones, spot soundings (as depicted on the original paper chart), navigational aids and symbols, and obstructions and cable areas.

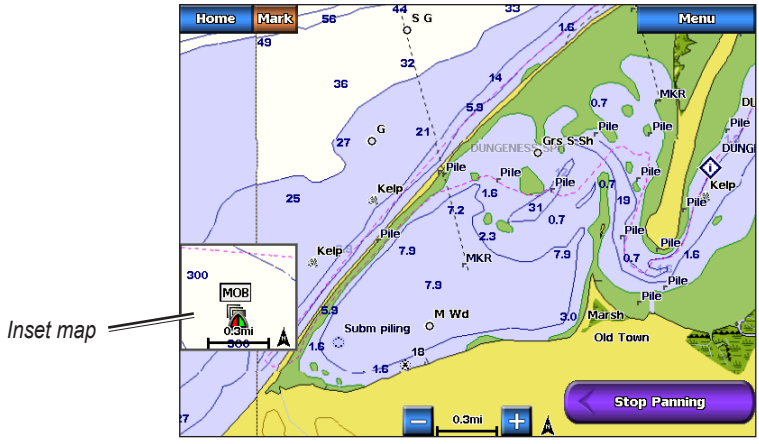
Navigating to a Point on the Chart

1. From the Home screen, touch **Charts**.
2. Touch **Navigation Chart**, **Fishing Chart**, or **Radar Overlay**.
3. Touch the point on the chart where you want to go.
4. Touch **Navigate To**.
5. Select an option:
   - Touch **Go To**.
   - Touch **Guide To** when using a preprogrammed BlueChart g2 Vision card for Automatic Guidance (page 28).
6. Follow the colored line on the screen to the destination.

To create a route to a point on the chart, see page 27.

Panning the Navigation Chart

You can pan away from your current location and to scroll to other areas on the Navigation chart. The position icon ( ) stays at your present location. If the position icon leaves the map when you pan, a small window (inset map) appears on the left of the screen so you can keep track of your current position.



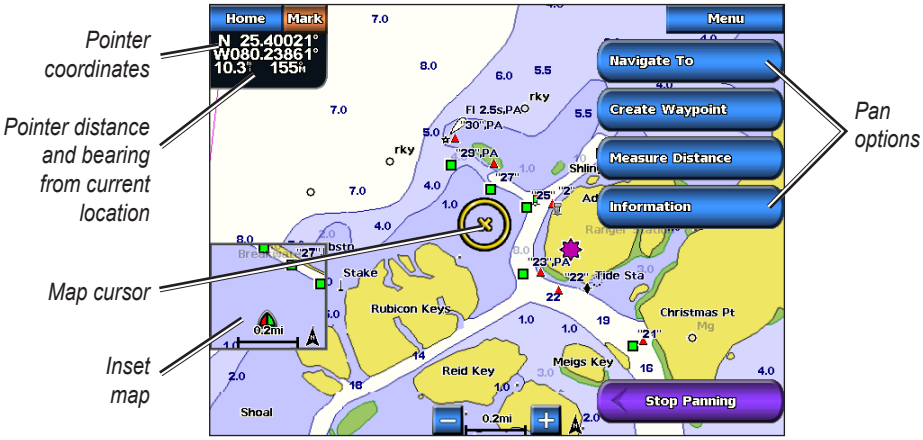
Panning on a Navigation Chart

1. Touch and drag the Navigation screen to pan the map.
2. Touch **Stop Panning** to stop panning and return the screen to your boat's current location.

Interacting With Objects on the Navigation Chart

When you touch a point on the Navigation screen without dragging, a cursor appears at that spot, and a list of options appear along the right side.

You can touch and drag the pointer to a new location. As you move the cursor, the coordinate location of the pointer is displayed in the upper-left corner of the map, along with the distance and bearing of the pointer from your current location.

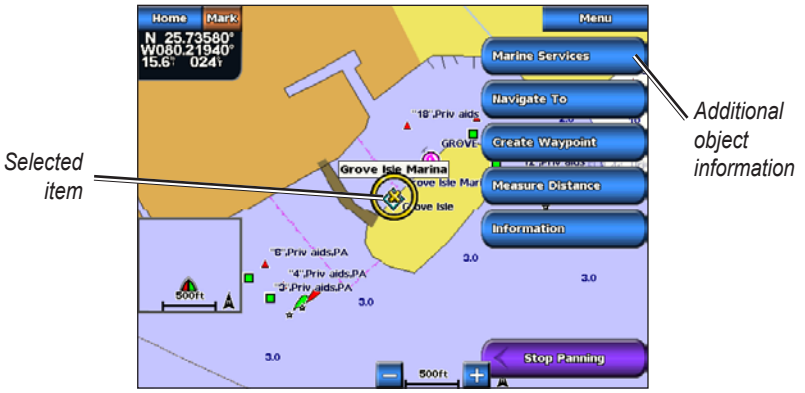


1. Touch a point on the Navigation chart.
2. Touch an option. The options that appear depend on the point you touched.
   - Touch **Review** to view details of objects in vicinity of the cursor. (**Review** does not appear if the cursor is not near an object—if the cursor is near only one object, the name of the object appears.).
   - Touch **Navigate To** to navigate to the selected location (page 8).

- Touch **Create Waypoint** to mark a waypoint at the cursor location (page 25).
- Touch **Measure Distance** to view the distance and bearing of the object from your current location. The information is displayed in the upper-left corner of the screen. Touch **Set Reference** to measure from a location other than your current location.
- Touch **Information** to view tide (page 30), current (page 30), celestial (page 31), or local services information near the cursor.

Accessing Additional Object Information

1. Touch an item on the screen to view information about on-screen map items, waypoints, and charts.
2. Touch the button with the name of the item to view the information.



Object Selected on a GPSMAP 5208

Viewing Tide-Station Information

Tide-station information appears on the chart with a detailed icon showing the relevant tide level. You can view a detailed graph for a tide station to help predict the tide level at different times or on different days. For more information about tides, see page 30.

Tide Station Selected on a GPSMAP 5208

1. Touch a tide station icon ( ).
2. To view a detailed tide graph:
   - Touch the button with the station name.
   - Touch **Review** if more than one item is in the vicinity, and then touch the button with the station name.

Changing the Navigation Chart Settings

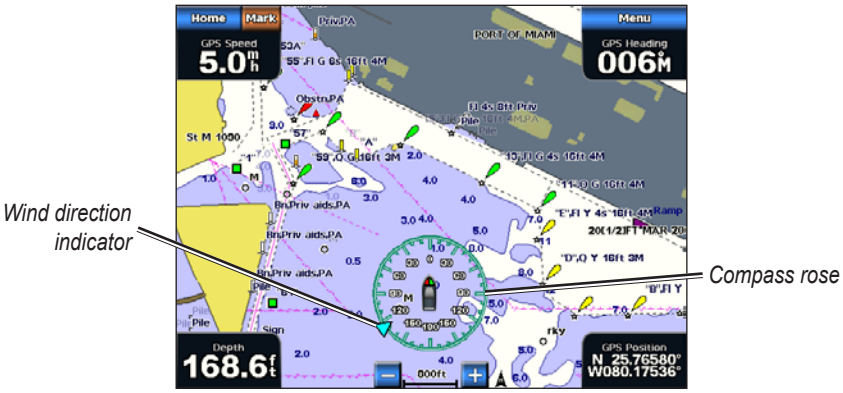
From the Home screen, touch **Charts** > **Navigation Chart** > **Menu** > **Chart Setup**.

Photos—sets the high-resolution satellite images to **Off**, **Land Only**, or **Photo Map**. High-resolution satellite imagery is only available while using a BlueChart g2 Vision SD card (page 18).

Tides/Currents—turns the display of tides and currents on or off.

Service Points—turns the display of marine service points on or off.

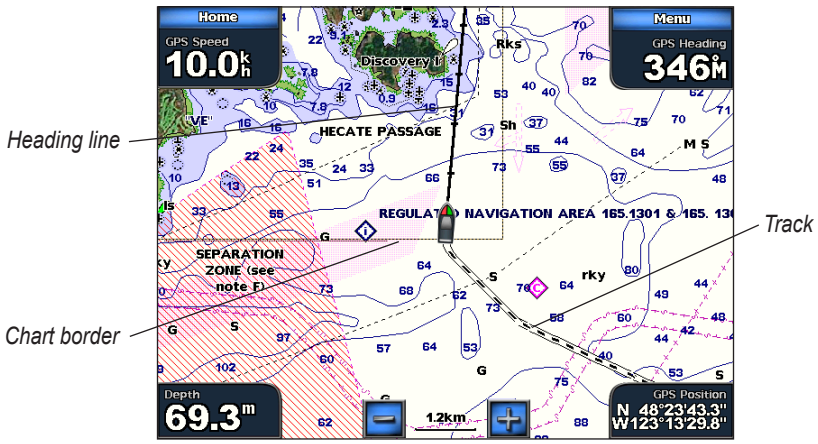
Roses—displays a compass rose around your boat, indicating compass direction. True wind direction or apparent wind direction can be displayed if the chartplotter is connected to a compatible marine wind sensor.



Wind Compass Rose

Changing the Chart Appearance

From the Home screen, touch **Charts** > **Navigation Chart** > **Menu** > **Chart Setup** > **Chart Appearance**.



Orientation—changes the perspective of the map display.

- **North Up**—sets the top of the map display to a north heading.
- **Head Up**—sets the map display to the current track heading.
- **Course Up**—sets the map so the direction of navigation is always up. The heading line appears vertically on the screen if shown.

Detail—adjusts the amount of detail shown on the map at different zoom levels.

Heading Line—draws an extension from the bow of the boat in the direction of travel.

- **Off**—turns the heading line off.
- **Distance**—sets the distance to the end of the heading line.
- **Time**—sets the amount of time until you reach the end of the heading line.

World Map—displays either a basic world map or displays satellite imagery (when **Full World Map** is selected).

Inset Map—turns the inset map on or off when panning away (page 9). Touch **Auto** to turn the inset map on only when the boat symbol is no longer visible.

Spot Depths—turns spot soundings on or off and sets a dangerous depth.

Safety Shading (with supported BlueChart g2 Vision cards)—Areas with depths shallower than the specified value are shaded in blue, while areas with depths greater than the specified value are shaded in white. The contour is always drawn at or deeper than the selected depth.

Symbols—changes symbol preferences.

- **Navaid Size**—adjusts the size of the navaid symbols shown on the map.
- **Navaid Type**—selects the navaid symbol set (NOAA or IALA).
- **Land POIs**—turns the display of land POIs (points of interest) on or off.
- **Light Sectors**—turns the sector in which a navigational light is visible on or off. Selecting **On** filters out light sectors depending on the zoom level.
- **Chart Borders**—turns chart borders on when using a BlueChart g2 Vision SD card and you want to see what area the maps cover.

Photo Points—turns camera icons on or off when using a BlueChart g2 Vision SD card.

Using Perspective 3D

Perspective 3D provides a view from above and behind the boat (according to your course), and provides a visual navigation aid. This view is helpful when navigating tricky shoals, reefs, bridges, or channels, and is beneficial when trying to identify entry and exit routes in unfamiliar harbors or anchorages.

Perspective 3D

Navigation Chart

1. From the Home screen, touch **Charts** > **Perspective 3D**.

2. Use the + and − buttons to adjust the view:
   - Touch the + button to move the view closer to your boat and lower to the water.
   - Touch the − button to move the view away from the boat.

   The view is momentarily indicated by the scale (39%) at the bottom of the screen.

To view details about navaids such as beacons, lights, and obstructions:

1. Use the touchscreen to point to the navaid. When the cursor is over the navaid, an option is displayed, such as Beacon or Light.
2. Touch the option for the navaid to view details.

Perspective 3D Settings

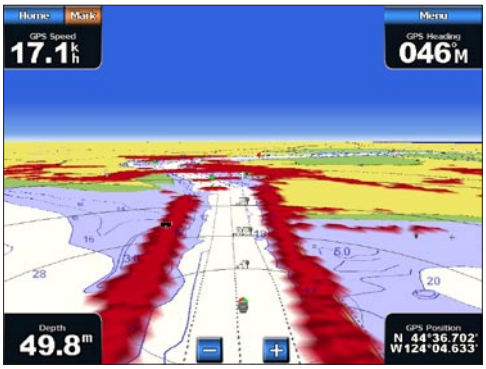
To access additional settings or options from the Perspective 3D screen, touch **Menu.**

Waypoints & Tracks—view and add waypoints and tracks, and configure how they are displayed.

- **Tracks**—turn tracks on or off (page 14).
- **Waypoints**—view, sort, or filter existing waypoints, or create new ones (page 25).
- **New Waypoint**—edit, delete, or create a new waypoint (page 25).
- **Active Tracks**—manage tracks (page 14).
- **Saved Tracks**—view a list of tracks that have been saved.

Other Vessels—view information about other vessels. To view information about other vessels, your chartplotter must be connected to an external Automatic Identification System (AIS) or Digital Selective Calling (DSC) device.

Surface Radar—display radar returns from the surface of the water when the chartplotter is connected to a marine radar (page 48).



Perspective 3D With Surface Radar Information

Data Bars—show or hide cruising, navigation, fishing, fuel, or sailing numbers (page 7).

Chart Appearance—customize the Perspective 3D chart.

- **Range Rings**—toggles the range rings on or off. The range rings help you to visualize distances on the map.
- **Safe Depth**—adjusts the safe depth for your boat. If the chartplotter is connected to an optional sonar module and the shallow water alarm is activated (page 72), an alarm will sound when your boat enters water shallower than this setting.
- **Lane Width**—adjusts the width of the course line drawn when navigating. This setting also affects routes (Route To), but does not affect automatic guidance (Guide To).

Using Radar Overlay

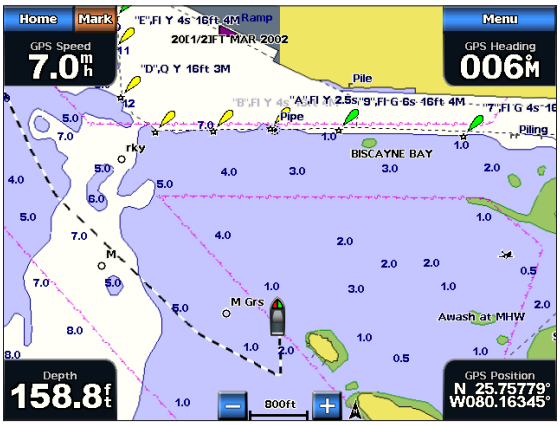
When you connect your chartplotter to an optional Garmin marine radar, you can use Radar Overlay to overlay radar information on the Navigation chart (page 48).

Using Tracks

A track is a recording of your path. The track currently being recorded is the active track. An active track can be saved.

To turn the track log on:

From the Navigation or Perspective 3D chart, touch **Menu** > **Waypoints & Tracks** > **Tracks** > **On**. A trailing line on the chart indicates your track.



To save the active track:

1. From the Home screen, touch **Information** > **User Data** > **Tracks** > **Save Active Track**.
2. Select an option: the time the current track began or **Midnight**, if shown; or **Entire Log**.
3. Touch **Edit Track** to name the track, to change the color of the track, or to save it as a route.

To clear the active track:

From the Home screen, touch **Information** > **User Data** > **Tracks** > **Clear Active Track**. The track memory is cleared; the current track continues to be recorded.

To retrace the active track:

1. From the Home screen, touch **Information** > **User Data** > **Tracks** > **Follow Active Track**.
2. Select either the time the current track began or **Entire Log**.
3. Follow the colored line on the screen.

To edit or delete a saved track:

1. From the Home screen, touch **Information** > **User Data** > **Tracks** > **Saved Tracks**.
2. Select a track to edit or delete.
3. Select an option:
   - Touch **Edit Track** to change the name or color of the track.
   - Touch **Delete** to delete the track.
   - Touch **Next Page** to view information about the track.

To set active Track Options:
From the Home screen, touch **Information** > **User Data** > **Tracks** > **Active Track Options**.

Record Mode—touch **Off**, **Fill**, or **Wrap**.

- **Off**—does not record a track log.
- **Fill**—records a track log until the track memory is full.
- **Wrap**—continuously records the track log, replacing the oldest track data with new data.

Interval—defines the frequency at which the track plot is recorded. Recording more-frequent plots is more accurate but fills the track log faster.

- **Interval**—sets whether the interval is determined by distance, time, or resolution. (Touch **Change** to set the quantity.)
  - **Distance**—records the track based on a distance between points.
  - **Time**—records the track based on a time interval.
  - **Resolution**—records the track plot based on a variance from your course. This setting is recommended for the most-efficient use of memory. The distance value (**Change**) is the maximum error allowed from the true course before recording a track point.
- **Change**—sets the value of the interval.

Track Color—sets the color of the track plot.

Using BlueChart g2 Vision

Optional BlueChart g2 Vision preprogrammed SD cards allow you to get the most out of your chartplotter. In addition to detailed marine charting, BlueChart g2 Vision has the following features:

- **Mariner's Eye 3D**—provides a view from above and behind the boat for a three-dimensional navigation aid. The BlueChart g2 Vision Mariner's Eye 3D is more detailed than the preloaded data.
- **Fish Eye 3D**—provides an underwater, three-dimensional view that visually represents the sea floor according to the information on the chart.
- **Fishing Charts**—displays the chart with enhanced bottom contours and without navigational data. This chart works well for offshore deep-sea fishing.
- **High Resolution Satellite Imagery**—provides high resolution satellite images for a realistic view of the land and water on the Navigation chart.
- **Aerial Photos**—displays marinas and other navigationally significant aerial photos to help you visualize your surroundings.
- **Detailed Roads and POI data**—displays roads, restaurants, and other points of interest (POIs) along the shore.
- **Auto Guidance**—uses specified boat safe depth and chart data to determine the best course to your destination.

Using a BlueChart g2 Vision SD Card

You can insert or remove a BlueChart g2 Vision SD card while your chartplotter is on or off. See page 3 for insertion and removal instructions.

BlueChart g2 Vision SD cards are not waterproof. When you are not using the card, keep it in the original packaging for safekeeping and store it away from exposure to sun and rain.

BlueChart g2 Vision SD cards are susceptible to damage from static electricity. In low humidity environments, you should ground yourself on a large metal object before handling the card.

NOTE: You cannot transfer BlueChart g2 Vision data from the SD card to your computer for backup or viewing purposes. You can use the SD card only on BlueChart g2 Vision-compatible Garmin GPS units.

Using Mariner's Eye 3D

A BlueChart g2 Vision SD card offers Mariner's Eye 3D, which provides a detailed, three-dimensional view from above and behind the boat (according to your course) and provides a visual navigation aid. This view is helpful when navigating tricky shoals, reefs, bridges, or channels, and when trying to identify entry and exit routes in unfamiliar harbors or anchorages.

Mariner's Eye 3D

Navigation Chart

1. From the Home screen, touch **Charts** > **Perspective 3D**.
2. Use the + and − buttons to adjust the view:
   - Touch the + button to move the view closer to your boat and lower to the water.
   - Touch the − button to move the view away from the boat.

   The view is momentarily indicated by the scale (58%) at the bottom of the screen.

To view details about navaids such as beacons, lights, and obstructions:

1. Use the touchscreen to point to the navaid. When the cursor is over the navaid, an option is displayed, such as as **Beacon** or **Light**.
2. Touch the option for the navaid to view details.

Mariner's Eye 3D Settings

To access additional settings or options from the Mariner's Eye 3D screen, touch **Menu.**

For settings and options related to Waypoints & Tracks, Other Vessels, Surface Radar, and Data Bars, see "Perspective 3D Settings" on page 13.

To customize the appearance of the Mariner's Eye 3D screen, touch **Menu** > **Chart Appearance**.

Style—select how chart data is displayed over 3D terrain.

- **Classic**—use color schemes to indicate 3D terrain.
- **Charts**—provide chart information in a 3D view.
- **Photos**—provide satellite photo imagery in addition to chart information.

Hazard Colors—turns hazard colors on or off. The **Off** setting shows the land as seen from the water. The **On** setting indicates shallow water and land with a color scale. Blue indicates deep water, yellow is shallow water, and red is very shallow water.

Mariner's Eye 3D, Normal Colors

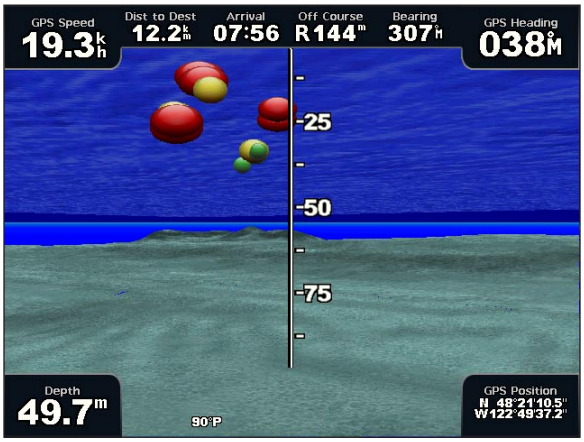
Mariner's Eye 3D, Hazard Colors

For settings and options related to Range Rings, Safe Depth, and Lane Width, see page 11.

Using Fish Eye 3D

Using the depth contour lines of the BlueChart g2 Vision cartography, Fish Eye 3D provides an underwater view of the sea floor or lake bottom. The + and − buttons adjust the view in the same way as the Mariner's Eye 3D.

Suspended targets (such as fish) are indicated by red, green, and yellow spheres. Red indicates the largest targets and green indicates the smallest.



Fish Eye 3D

Fish Eye 3D Settings

To access additional settings or options for the Fish Eye 3D screen, touch **Menu.**

View—selects a fish-eye view of Fore, Aft, Port, or Starboard.

Sonar Cone—turns a cone on or off that shows the area covered by your transducer.

Sonar Data—visually shows the sonar readings received by your transducer for the best combination of sonar and mapping.

Tracks—turns the track log on or off.

Data Bars—shows or hides cruising, navigation, fishing, fuel, or sailing numbers (page 11).

Using Fishing Charts

Use the fishing chart for a detailed view of the bottom contours and depth soundings on the chart.

Fishing Chart

Navigation Chart

The fishing chart uses detailed bathymetric data on a preprogrammed BlueChart g2 Vision SD card, and is best for offshore deep-sea fishing.

Enabling High Resolution Satellite Imagery

You can overlay high-resolution satellite images on the land, the sea, or both portions of the Navigation chart when using a preprogrammed BlueChart g2 Vision SD card.

NOTE: When enabled, the high resolution satellite images are only present at lower zoom levels. If you cannot see the high resolution images in your BlueChart g2 Vision region, either zoom in further by touching the + and − buttons, or set the detail level higher by touching **Menu** > **Chart Setup** > **Chart Appearance** > **Detail**.

To enable satellite imagery:

1. While viewing the Navigation chart, touch **Menu** > **Chart Setup** > **Appearance** > **Photos**.
2. Select an option:
   - **Off**—standard chart information is shown on the map.
   - **Land Only**—standard chart information is shown on water with photos overlaying the land.
   - **Photo Map**—photos overlay both the water and the land at a specified opacity. The higher you set the percentage, the more the satellite photos will cover both land and water.

Photo Overlay Off

Land Only Photo Overlay

Photo Map at 50%

Photo Map at 100%

Viewing Aerial Photos

Preprogrammed BlueChart g2 Vision SD cards contain aerial photographs of many landmarks, marinas, and harbors. Use these photos to help orient yourself to your surroundings or to acquaint yourself with a marina or harbor prior to arrival.

1. On the Navigation chart, touch a camera icon.
   - A standard camera icon ( ) indicates an overhead photo.
   - A camera icon with a cone ( ) indicates a perspective photo. The photo was taken from the location of the camera, pointed in the direction of the cone.
2. Select **Aerial Photo**.

NOTE: Touch + and − to zoom in and out while viewing the aerial photo on the full screen.

Viewing Current Station Information

If current stations are available in your BlueChart g2 Vision region, they appear on the Navigation chart as a highlighted arrow. These detailed icons show the direction and speed of the current at a glance.

Current Station icon

Touch **Review** or the name of the station to display a current graph. See page 30 for instructions on viewing current station information.

Detailed Road and POI Data

BlueChart g2 Vision contains detailed road and POI data, which includes highly detailed coastal roads and points of interest (POIs) such as restaurants, lodging, local attractions, and more. For instructions on searching for and navigating to these POIs, see the "Where To?" section on page 23.

Using Automatic Guidance

Automatic Guidance automatically creates and suggests passage based on available BlueChart g2 Vision chart information. See page 40 for instructions on setting up Automatic Guidance for your boat. See page 28 to use Automatic Guidance.

Using Combinations

The Combinations screen displays a combination of different screens at the same time. The number of options available on the Combinations screen depends on the optional network devices you have connected to your GPSMAP 5000 series chartplotter and whether you are using an optional BlueChart g2 Vision SD card. You can combine two, three, or four screens. After you select a combination, you can customize it.

Selecting a Combination

1. From the Home screen, touch **Combinations**. A list of possible screen combinations is displayed.
2. Touch a combination.

Interacting with the Combinations Screen

You can view a combination screen at full screen and change the data field pane on the right side of the screen.

To add additional data fields:

1. From the Combinations screen, touch an unused data field. A list of digital items displayed.
2. Touch the digital item to be displayed on the Combinations screen. Available options vary, based on the chartplotter and network configuration.

Adding a Data Field

To edit an existing data field:

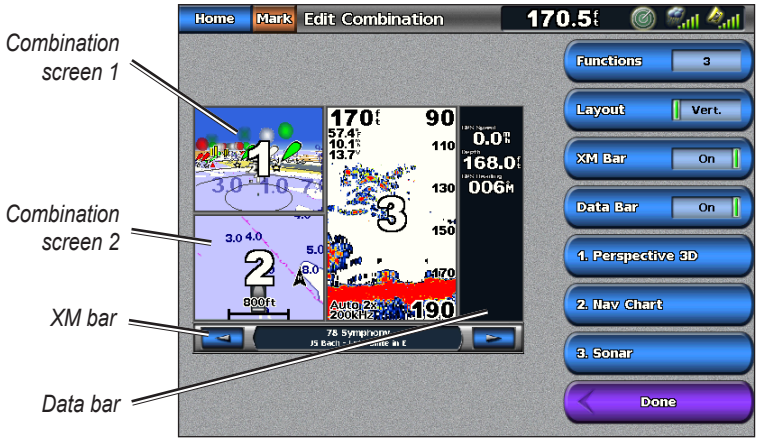
1. While viewing the Combinations screen, touch a data field.
2. Touch the item to be displayed.

To change to full-screen view:

1. Touch a screen.
2. Select an option to return to the Combination screen:
   - From the radar screen, touch **Stop Pointing**.
   - From the chart screen, touch **Stop Panning**.
   - From the sonar or video screen, touch **Back**.

Editing the Combination Screen

1. Complete one of the following actions to access the Edit Combinations screen:
   - While viewing a combinations screen, touch **Menu** > **Change Combination.**
   - From the Home screen, touch **Combinations** > **Unused Combo** (if one is available).



2. Select an option to customize the Combinations screen:

NOTE: You can only choose from the options available to your chartplotter. To increase the number of screens available, use a BlueChart g2 Vision SD card or add network devices, such as sonar and radar.

- Touch **Functions** to select the number of combination screens.
- Touch **Layout** to change to vertical or horizontal layout.
- Touch **XM Bar** to toggle the XM bar on or off.
- Touch **Data Bar** to toggle the data bar on or off.
- Touch a numbered option, such as **1. Nav Chart** or **2. Nav Chart** in the example above, to select the combination screen to view.

To change the function of a screen:

1. Touch **Menu** > **Change Combination**. The charts are numbered, with a corresponding button on the right of the screen.
2. Touch the numbered button of the screen you want to change.
3. Touch the function that you want to appear in that screen.

Where To?

Use the **Where To?** option on the Home screen to search for and navigate to nearby fuel, repairs, and other services, as well as waypoints and routes.

NOTE: You must create waypoints and routes before you can navigate to them.

You can navigate to a destination using one of three methods: Go To, Route To, or Guide To.

- **Go To**—takes you directly to the destination.
- **Route To**—creates a route from your location to a destination, allowing you to add turns to the route.
- **Guide To**—searches BlueChart g2 Vision chart data to suggest the best path to your destination. You must be using a BlueChart g2 Vision SD card for this option to appear.

CAUTION: Guide To does not assure obstacle and bottom clearance. For safety, always resolve any discrepancies or questions before continuing navigation.

Navigating to a Destination

To begin navigating:

1. From the Home screen, touch **Where To?**.
2. Touch the marine service category to which you want to navigate. The chartplotter shows the list of the 50 nearest locations and the distance and bearing to each.

3. Select a destination. A screen containing information about the selected marine service appears.

NOTE: Touch **Next Page** to view additional information or to display the location on a chart.

4. Touch **Navigate To**.

5. Select an option:
   - Touch **Go To**.
   - Touch **Guide To** when using a preprogrammed BlueChart g2 Vision card to use Automatic Guidance.
6. Follow the colored line on the screen to the destination.

Go To Screen

Guide To Screen (with g2 Vision Card)

To stop navigating:
From the Navigation chart, touch **Menu** > **Stop Navigation**.

To search for a destination by name:
1. From the Home screen, touch **Where To?** > **Search by Name**.
2. Touch characters to spell at least a portion of the name of your destination.

3. Touch **Done**. The 50 nearest destinations that contain your search criteria are displayed.

4. Touch the location.
5. Select an option:
   - Touch **Navigate To** > **Go To**.
   - Touch **Route To**.
   - Touch **Guide To** when using a preprogrammed BlueChart g2 Vision card.

Creating and Using Waypoints

You can store up to 1,500 waypoints with a user-defined name, symbol, depth, water temperature, and comment for each waypoint.

To mark your current location as a waypoint:

From the Home screen, touch **Mark**. The waypoint information screen displays for a few seconds.

- **Edit Waypoint**—designate a specific name, symbol, water depth, water temperature, or make a comment about the waypoint.
- **Delete**—delete the waypoint.
- **Move**—change the location of the waypoint, either by selecting a different location on the map or by entering grid coordinates.
- **Man Overboard**—designate the current location as a Man Overboard location.
- **Next Page/Previous Page**—switch between waypoint information and the Navigation chart.
- **Back**—save the waypoint and returns to the Navigation chart.

NOTE: Touching **Mark** creates a waypoint only at your present location.

To create a new waypoint:

1. From the Home screen, touch **Charts** > **Navigation Chart**.
2. Touch the location you want to designate as a waypoint. A cursor marks the waypoint.
3. Touch **Create Waypoint**.

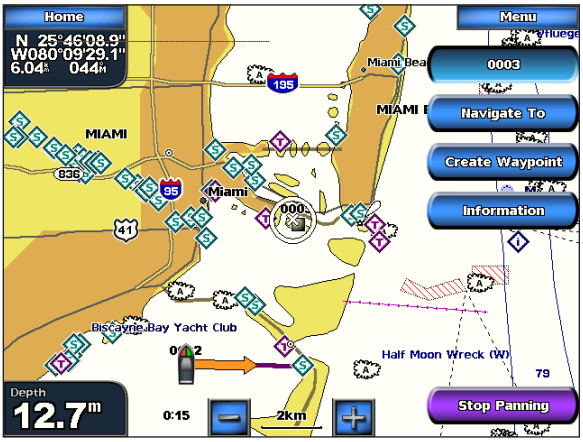
To mark a Man Overboard (MOB) location:

When you mark a waypoint, you can designate it as an MOB (Man OverBoard). This marks the point and sets a course back to the marked location. When an MOB is active, an MOB waypoint with an international MOB symbol is created and the chartplotter begins active navigation to that point.

1. From the Home screen, touch **Man Overboard.**
2. Touch **Yes** to begin navigating to the MOB location.

To edit an existing waypoint on the Navigation screen:

1. Complete one of the following actions to access waypoints:
   - Touch the waypoint on the Navigation chart.
   - From the Home screen, touch **Information** > **User Data** > **Waypoints**.
2. Touch the button for the waypoint you want to edit. If there are multiple waypoints, touch **Review**.



3. Touch **Edit**.
4. Touch the waypoint attribute you want to change (**Name**, **Symbol**, **Depth**, **Water Temp**), or touch **Comment** to add a comment.

To move the waypoint on the Navigation chart:

1. Touch the waypoint on the Navigation chart.
2. If there are multiple waypoints in the vicinity, touch **Review**.
3. Touch the button for the waypoint you want to edit.
4. Touch **Move**.
5. Touch **Use Chart** or **Enter Position**.
6. Complete one of the following actions to indicate a new location for the waypoint:
   - If entering position coordinates, use the screen keyboard to enter the new coordinates for the waypoint.
   - If using the chart, touch the new location and then touch **Move Waypoint**.

To view a list of all waypoints:

From the Home screen, touch **Information** > **User Data** > **Waypoints**.

To delete a waypoint or MOB:

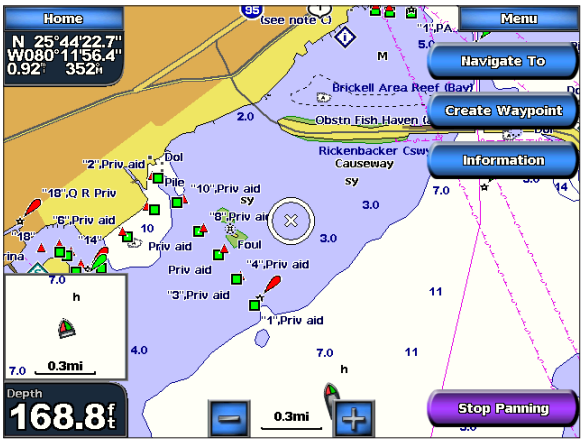
1. Complete one of the following actions to access waypoints:
   - Open the Navigation chart.
   - From the Home screen, touch **Information** > **User Data** > **Waypoints**.
2. Touch the waypoint or MOB you want to delete.
3. Touch **Review** > **Delete**.

Creating and Using Routes

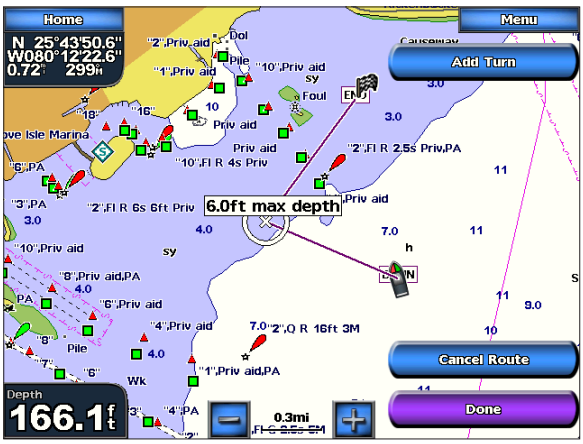
You can create and store up to 20 routes, with up to 250 waypoints each.

To create a route from your present location:

1. From the Navigation chart, touch your destination. The destination is indicated by a cursor .



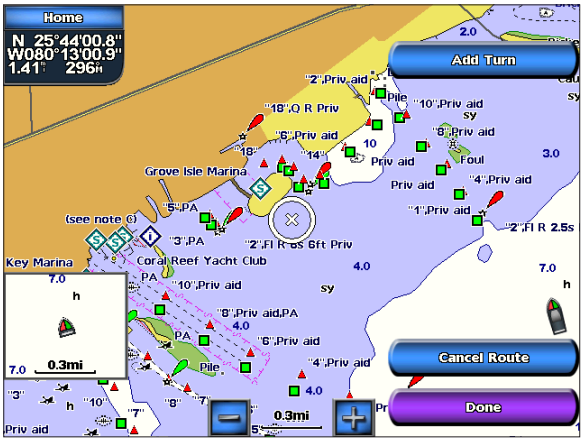
2. Touch **Navigate To** > **Route To**.
3. Touch the location where you want to make the last turn toward your destination.
4. Touch **Add Turn**.



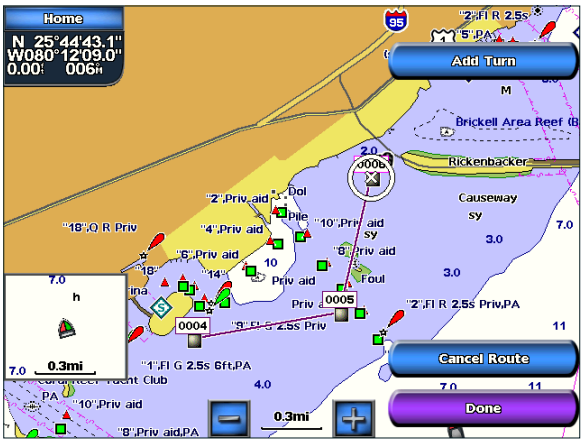
5. To add additional turns, continue to touch the location where you want to make a turn (working backward from the destination) and then touch **Add Turn**.
6. Touch **Done** to finish the route or **Cancel Route** to delete the route.

To create a route in another location:

1. From the Home screen, touch **Information** > **User Data** > **Routes** > **New Route**.
2. Complete one of the following actions to select the starting point of the route:
   - Touch **Use Chart** and touch the screen at the location of the first waypoint on the route. The waypoint is indicated by the cursor .
   - Touch **Use Waypoint List** and select the first waypoint on the route.



3. Touch **Add Turn** to mark the starting point of the route.
4. Touch the location of the first turn and then touch **Add Turn**. Repeat until the route is complete.



5. Touch **Done.**

To create a route using Automatic Guidance:

Automatic Guidance is available with a preprogrammed BlueChart g2 Vision SD card.

1. From the Navigation chart or the **Where To?** menu, touch your destination.
2. Touch **Navigate To** > **Guide To**. Your route is calculated.

NOTE: To change the automatic guidance path to a route, touch the end of the path and then touch **Navigate To** > **Route To**. The automatic guidance path stays on the screen, allowing you to trace it while creating a route.

To edit a route:

1. From the Home screen, touch **Information** > **User Data** > **Routes**.
2. Touch the route to edit.
3. Touch **Review** > **Edit Route**. You can edit the route name or edit the route turns.

To delete a route:

1. From the Home screen, touch **Information** > **User Data** > **Routes**.
2. Touch the route to edit.
3. Touch **Review** > **Delete**.

To bypass a waypoint on a route:

1. Create a route as previously described.
2. From the Navigation chart, touch the waypoint that follows the waypoint you are bypassing.
3. Touch **Route To**.

Navigating with a Garmin Autopilot

When you start any type of navigation (**Go To**, **Route To**, **Guide To**, or **Follow Track**), if you are connected to a compatible Garmin autopilot (such as a GHP™ 10), you will be prompted to engage the autopilot.

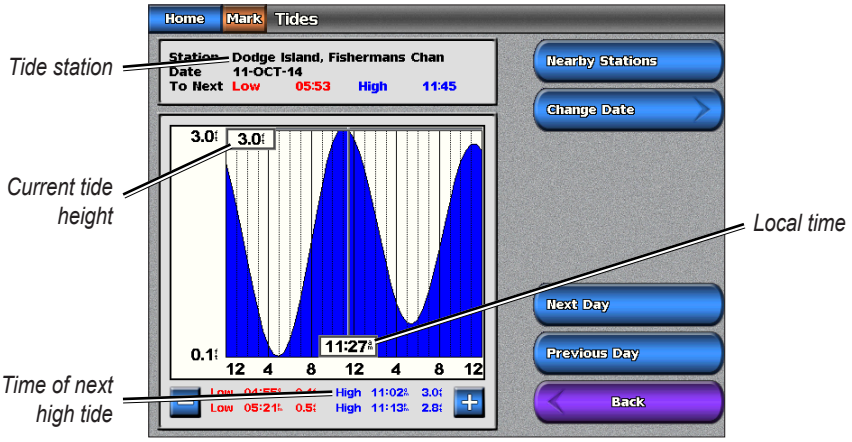
Viewing Information

Use the Information screen to access information about tides, currents, celestial data, user data, other boats, gauges, and video.

You can also select tide, current, and celestial information for a specific station directly from the Navigation chart. Touch near the desired station, select **Information**, and then select either **Tides**, **Currents**, **Celestial,** or **Chart Notes**.

Viewing Tide Station Information

1. From the Home screen, touch **Information** > **Tides/Currents** > **Tides**. Information for the most-recently viewed tide station is shown.



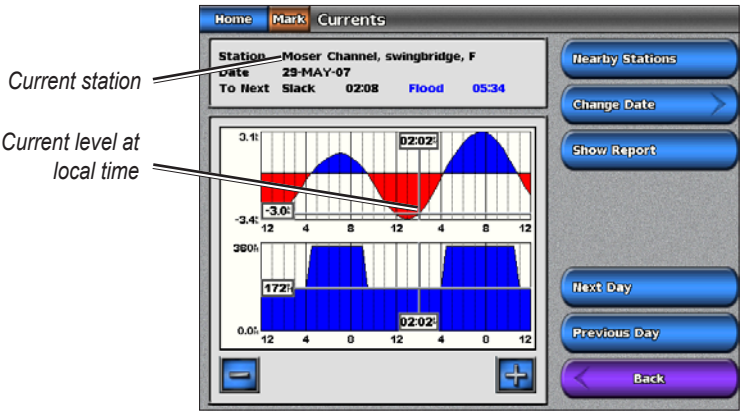
2. Select an option:
   - Touch **Nearby Stations** to view other stations close to the one you selected.
   - Touch **Change Date** > **Manual** to view tide information for a different date.

Viewing Current Information

NOTE: You must use a BlueChart g2 Vision card to view Current Station information.

Use the Currents screen to view information for currents.

1. From the Home screen, touch **Information** > **Tides/Currents** > **Currents**. Information for the most-recently viewed current station is shown.

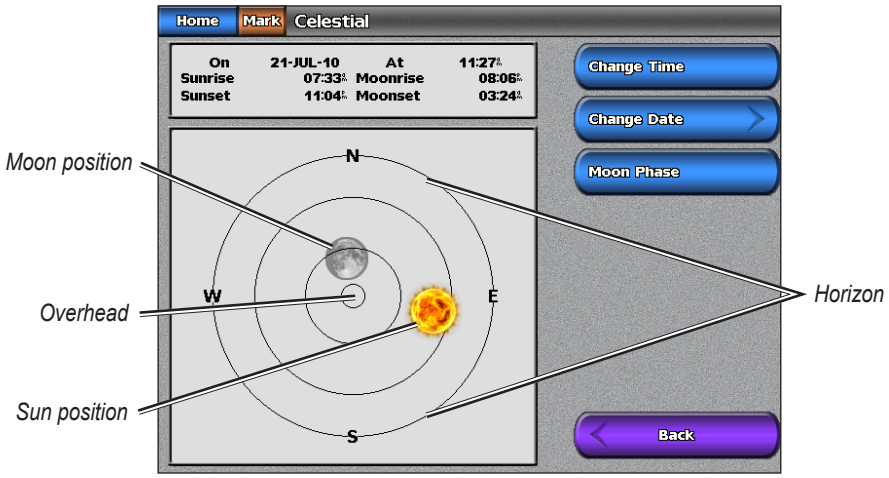


2. Select an option:
   - Touch **Nearby Stations** to view other current stations close to your current location.
   - Touch **Change Date** > **Manual** to view tide information for a different date.
   - Touch **Show Report** to view the Current Report for the selected station.

Viewing Celestial Information

Use the Celestial screen to view celestial data for sunrise, sunset, moonrise, moonset, moon phase, and approximate sky view location of the sun and moon. By default, the chartplotter displays celestial information for the current date and time.

From the Home screen, touch **Information** > **Tides/Currents** > **Celestial**.



To change the date, time, or view the moon phase:

1. From the Home screen, touch **Information** > **Tides/Currents** > **Celestial**.
2. Select an option:
   - Touch **Change Date** > **Manual** to view information for a different date.
   - Touch **Change Time** to view information for a specified time on that date.
   - Touch **Moon Phase** to view the moon phase at the specified date and time.

Viewing User Data

1. From the Home screen, touch **Information** > **User Data**.
2. Select an option:
   - Touch **Waypoints** to display a list of all saved waypoints (page 25).
   - Touch **Routes** to display a list of saved routes (page 27).
   - Touch **Tracks** to view and manage tracks (page 14).
   - Touch **Data Transfer** to transfer waypoints, routes, and tracks to and from an SD card or network.
   - Touch **Clear User Data** to erase all user waypoints, routes, and tracks.

To copy or merge MapSource® data to your chartplotter:

1. Insert an SD card into your chartplotter to allow it to place a file on the SD card. This file provides information to MapSource to format its data. This only needs to be done the first time you copy or merge MapSource data to your chartplotter from a specific SD card.
2. Check your MapSource version on your computer by clicking **Help** > **About MapSource**. If the version is older than 6.12.2, update to the most current version by clicking Help > Check for Software Updates, or check the Garmin Web site at www.garmin.com.
3. Insert the SD card into an SD card reader that is attached to the computer.
4. From within MapSource, click on **Transfer** > **Send to Device**.
5. Select the drive for the SD card reader and the types of data you want to copy to your chartplotter.
6. Click **Send**.
7. Insert the SD card into your chartplotter.
8. From the Home screen on your chartplotter, touch **Information** > **User Data** > **Data Transfer** > **Card**.
9. Complete one of the following:
   - Touch **Merge From Card** to transfer data from the SD card to the chartplotter and combine it with existing user data.
   - Touch **Replace From Card** transfer data from the SD card to the chartplotter and overwrite existing user data on the chartplotter.
10. Touch the file name from the list.
11. Touch **Merge from Card** or **Replace from Card**.

To transfer waypoints, routes, and tracks to an SD card:

1. Insert an SD card into the SD card slot on the front of the chartplotter.
2. From the Home screen, touch **Information** > **User Data** > **Data Transfer** > **Card** > **Save To Card**.
3. Complete one of the following actions to indicate the name of the new file:
   - Select the file name from the list.
   - Touch **Add New File** to create a new file. Enter the file name using the on-screen keyboard and touch **Done**.
4. Touch **Save To Card** to save waypoints, routes, and tracks to the SD card. The file name is saved with an .ADM extension.

To transfer waypoints, routes, and tracks from an SD card:

1. Insert an SD card into the SD card slot on the front of the chartplotter.
2. From the Home screen, touch **Information** > **User Data** > **Data Transfer** > **Card**.

3. Select an option to indicate how existing data on the chartplotter is handled:
   - Touch **Merge From Card** to transfer data from the SD card to the chartplotter and combine it with existing user data.
   - Touch **Replace From Card** transfer data from the SD card to the chartplotter and overwrite existing user data on the chartplotter.
4. Touch the file name in the list.
5. Touch **Merge from Card** or **Replace from Card**.

To copy the built-in maps to an SD card:

1. Insert an SD card into the SD card slot on the front of the chartplotter.
2. From the Home screen, touch **Information** > **User Data** > **Data Transfer** > **Card**.
3. Touch **Copy Built-In Map** to copy the maps loaded onto your chartplotter to the SD card.

To transfer waypoints, routes, and tracks to or from a network:

1. Connect the chartplotter to a Garmin Marine Network using the network port on the back of the chartplotter and a Garmin network cable.
2. From the Home screen, touch **Information** > **User Data** > **Data Transfer** > **Network**.
3. Select an option to indicate how data is handled:
   - Touch **Clone User Data** to transfer data from the chartplotter to the other chartplotters connected to the network. Existing data is overwritten on those chartplotters.
   - Touch **Merge User Data** to transfer data between all the chartplotters connected to the network. Unique data is combined with existing data on every chartplotter.

To back up data to a computer:

1. Insert an SD card into the SD card slot on the front of the chartplotter.
2. From the Home screen, touch **Information** > **User Data** > **Data Transfer** > **Card** > **Save to Card**.
3. Complete one of the following actions to indicate the name of the file to be backed up:
   - Select the file name from the list.
   - Touch **Add New File** to create a new file. Enter the file name using the on-screen keyboard and touch **Done**.
4. Select **Save To Card**. The file name is saved with an .ADM extension.
5. Remove the SD card from the chartplotter and insert it into an SD card reader attached to a computer.
6. From Windows® Explorer, open the Garmin\UserData folder on the SD card.
7. Copy the backup file on the card and paste it to any location on the computer.

To restore backup data to your chartplotter:

1. Copy a backup file from your computer to an SD card in a folder named Garmin\UserData.
2. Insert the SD card into your chartplotter.
3. From the Home screen on your chartplotter, touch **Information** > **User Data** > **Data Transfer** > **Card** > **Replace From Card**.

To delete all waypoints, routes, and tracks:

1. From the home screen on your chartplotter, touch **Information** > **User Data** > **Clear User Data**.
2. Select **Waypoints**, **Routes**, **Saved Tracks**, or **All**.
3. Select **OK** or **Cancel**.

Viewing the DSC List

NOTE: Your chartplotter must be connected to a VHF radio that supports DSC (Digital Selective Calling) in order to view the DSC List.

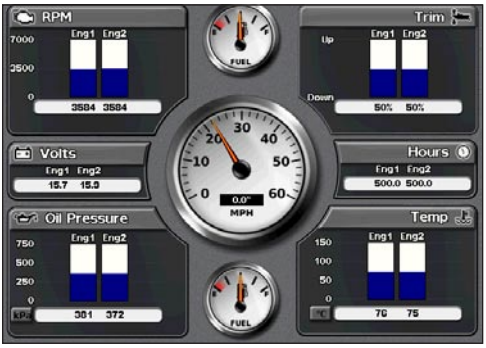
The DSC List is a log of the most-recent DSC calls and other DSC contacts you have entered. The DSC List can contain up to 100 entries. The DSC List shows the most-recent call from a boat. If a second call is received from the same boat, it replaces the first call in the Call List. For more information on DSC, see page 55.

To view the DSC List, from the Home screen, touch **Information** > **DSC List**.

Viewing Gauges

NOTE: You must be connected to a NMEA (National Marine Electronics Association) 2000 network capable of sensing engine data to view the gauges. See the *GPSMAP 4000/5000 Series Installation Instructions* for details.

From the Home screen, touch **Information** > **Dashboard Gauges**.



To select analog or digital gauges:

NOTE: For more than two engines, you can only use the digital gauges. For one or two engines, you can switch between analog and digital gauges.

1. To view the Gauges from the Home screen, touch **Information** > **Dashboard Gauges** > **Engine** > **Menu**.
2. Select **Digital** or **Analog**.

Viewing Fuel Gauges

NOTE: To view fuel information, your chartplotter must be connected to an external fuel sensor, such as the Garmin GFS™ 10.

From the Home screen, touch **Information** > **Dashboard Gauges** > **Fuel**. Fuel flow for each engine, total fuel flow, fuel level in each tank, total fuel remaining, fuel economy, engine trim, boat speed, engine RPM, and the range for your boat are displayed.

To synchronize your fuel gauges with your fuel:

1. From the Home screen touch **Information** > **Dashboard Gauges** > **Fuel**.
2. Touch **Menu**.
3. Select an option:
   - **Fill Up All Tanks**—select when your tank is full. An estimate of the total fuel is shown. Adjust if necessary.

- **Add Fuel To Boat**—select when you have added less than a full tank. An estimate of the fuel added is shown. Adjust if necessary.
- **Set Total Fuel Onboard**—select to specify the total fuel in your tanks.
- **Fuel Economy**—select either **GPS Speed** or **Water Speed** (using data from a speed wheel) for the fuel economy calculation.

Viewing Video

Your chartplotter can display video if you are connected to a video source (or sources) using the supplied video cable. See the *GPSMAP 4000/5000 Series Installation Instructions* for details.

From the Home screen, touch **Information** > **Video**.

Touch **Menu** to setup the following:

- **Source**—selects the video device (Video 1 or Video 2) that displays the video. If you have two video sources and wish to alternate between the two, touch **Alternate** to define the amount of time each video screen is displayed.
- **Aspect**—switches between the standard aspect ratio and a stretched aspect ratio. The video cannot be stretched beyond the dimensions provided by the connected video device, and may not fill the entire of the GPSMAP 5212/5215.
- **Brightness**—adjusts the brightness of the video feed up or down. Touch **Auto** to allow the chartplotter to automatically adjust the brightness.
- **Saturation**—adjusts the color saturation up or down. Touch **Auto** to allow the chartplotter to automatically adjust the saturation.
- **Contrast**—adjusts the contrast up or down. Touch **Auto** to allow the chartplotter to automatically adjust the contrast.
- **Standard**—selects the video format used by the source (PAL or NTSC). Touch **Auto** to let the chartplotter automatically select the source format.

Configuring the Device

Use the Configure screen to configure chartplotter settings.

Configuring System Settings

From the Home screen, touch **Configure** > **System**.

Simulator—turn Simulator Mode **On** or **Off**. Touch **Setup** to set Simulator options. (If you set the chartplotter into a Store Demonstration mode during the initial chartplotter setup, this setting is named **Demo.**)

Auto Power Up (GPSMAP 5215 only)—turn Auto Power Up **On** or **Off**. When **On** is selected, the chartplotter automatically turns on whenever power is applied. When **Off** is selected, the chartplotter must be turned on with the **Power** key.

NOTE: If Auto Power Up is **On** and the chartplotter is turned off using the **Power** key, and power is removed and then reapplied within less than 2 minutes, you may have to press the **Power** key to restart the chartplotter.

Beeper/Display—set Beeper options, Backlight, and Color Mode.

- **Beeper**—touch **Beeper** to set when the chartplotter makes audible sounds. The settings are **Off**, **Alarms Only** (default), and **Key and Alarm** (keys and alarms).
- **Backlight**—touch **Backlight** to adjust the intensity of the backlight. Touch **Auto** to allow the chartplotter to automatically adjust the backlight based on ambient light.
- **Color Mode**—touch **Color Mode** to select **Day Colors** or **Night Colors**, or touch **Auto** to allow the chartplotter to adjust the colors.
- **Screenshot Capture**—turn the screenshot capture feature on or off (page 68).

GPS—view GPS satellites.

System Information—view system information, restore factory settings, view the status of networked devices (page 43), and display the event log. The event log displays a list of system events. Select the event to view additional information. The **Save to Card** option is provided as a troubleshooting tool; a Garmin Product Support representative may ask you to use this to retrieve data about the marine network.

Radar Diagnostics (if radar is connected)—a troubleshooting tool used by installers.

Changing the System Language

1. From the Home screen, touch **Configure** > **Preferences** > **Language**.
2. Select the language.

Configuring Navigation Preferences

From the Home screen, touch **Configure** > **Preferences** > **Navigation**.

Route Labels—for saved routes, this determines whether route turns are indicated by number (Turn 1, Turn 2, and so on) or by waypoint name, or whether the description of turns is hidden.

Turn Transition—set how much time or how far before a turn in a route that you transition to the next leg. Raising this value can help improve the accuracy of the autopilot when navigating a route or automatic-guidance line with many frequent turns or at higher speeds. For straighter routes or slower speeds, lowering this value can improve autopilot accuracy.

Speed Sources—specify the sensor used for Wind numbers and Fuel Economy. Touch **Wind** or **Fuel Economy** to toggle between Water (from a water-speed sensor) and GPS (from the calculated GPS speed).

Auto Guidance—sets the Automatic Guidance parameters for your boat:

- **Safe Depth**—sets the minimum depth (chart depth datum) to allow when calculating an automatic guidance path. A safe depth of less than one meter is not allowed when using Automatic Guidance.
- **Safe Height**—sets the minimum height (chart height datum) of a bridge that your boat can safely travel under.
- **Shoreline Distance**—set how close you want to travel near the shore: **Nearest**, **Near**, **Normal**, **Far**, or **Farthest**. This is used by the automatic guidance calculation to determine how close to the shoreline you want the automatic-guidance line to be. Changing this while navigating an automatic-guidance line will recalculate the path.

Configuring Units of Measure

From the Home screen, touch **Configure** > **Preferences** > **Units**.

System Units—global setting that defines individual units of measure at the same time. **Statute** (mh, ft, ºF), **Metric** (kh, m, ºC), **Nautical** (kt, ft, ºF), or **Custom**. Touch **Custom** to individually define units of measure for:

- **Depth**—individually set the units of measure for depth to **Feet**, **Fathoms**, or **Meters**.
- **Temperature**—individually set the units of measure for temperature to **Fahrenheit (ºF)** or **Celsius (ºC)**.

NOTE: You must be receiving NMEA Sonar depth data or using a Garmin sounder module to view depth and temperature information.

- **Distance**—individually set the units of measure for distance readings (**Miles**, **Kilometers**, or **Nautical Miles**).
- **Speed**—individually set the units of measure for speed readings (**Miles Per Hour**, **Kilometers Per Hour**, or **Knots**).
- **Elevation**—individually set the units of measure for elevation readings (**Feet** or **Meters**).
- **Volume**—individually set the units of measure for volume readings (**Liters**, **US Gallons**, or **UK Gallons**).
- **Pressure**—individually set the units of measure for gauge (**kPa** or **psi**) and atmospheric (**Millibars** or **Inches of Mercury**) pressure readings.

Heading—set the reference used in calculating heading information.

- **Auto Mag Var (**Automatic Magnetic Variation)—automatically set the magnetic declination for your location.
- **True**—set true north as the heading reference.
- **Grid**—set grid north as the heading reference (000º).
- **User Mag Var**—set the magnetic variation value.

Position Format—set the coordinate system in which a given location reading appears. Do not change the position format unless you are using a map or chart that specifies a different position format.

Map Datum—set the coordinate system in which the map is structured. The default setting is WGS 84. Do not change the map datum unless you are using a map or chart that specifies a different position format.

Time—set the time options.

- **Time Format**—select **12-hour**, **24-hour**, or **UTC** time format.
- **Time Zone**—set the time zone displayed for time readings.
- **Daylight Saving Time**—select **Off**, **On**, or **Auto**. The **Auto** setting automatically turns daylight saving time on or off, depending on the time of year.

Configuring Communications Settings

From the Home screen, touch **Configure** > **Communications**.

NMEA 0183 Setup—enable or disable NMEA 0183 output sentences for sounder, route, system, and Garmin NMEA settings.

- **Port Types**—configure the input/output format for each port to use when connecting your chartplotter to external NMEA devices, a computer, or other Garmin devices. **NMEA Std.** supports the input or output of standard NMEA 0183 data, DSC, and sonar NMEA input support for the DPT, MTW, and VHW sentences. **NMEA High Speed** supports the input or output of standard 0183 data for most AIS receivers. The Garmin option supports the input or output of Garmin-proprietary data for interfacing with Garmin software.
- **Output Sentences**—configure how the chartplotter sees NMEA 0183 output sentences. See page 69 for information on configuring these sentences.
- **Posn. Precision**—adjust the number of digits (**Two Digits**, **Three Digits**, or **Four Digits**) to the right of the decimal point for transmission of NMEA output.
- **Waypoint IDs**—determine how the chartplotter outputs waypoint identifiers (**Names** or **Numbers**).
- **Defaults**—reset NMEA 0183 settings to their default settings.
- **Diagnostics**—a tool used by installers to verify that NMEA 0183 data is being sent across the system.

NMEA 2000 Setup—View and configure the devices connected to the NMEA 2000 network and set bridging to **On**, **Off**, or **Auto**.

- **Device List**—lists the NMEA 2000 devices on your network. If a NMEA 2000 device has configuration options or settings, select the device for a list of options.
- **Output Bridging**—Output bridging occurs when a chartplotter takes NMEA 0183 data it receives from any source, formats it into NMEA 2000 data, and then sends it over the NMEA 2000 bus. Touch **On** or **Off** to enable or disable this function for the chartplotter. Touch **Auto** to allow the chartplotters on the network to negotiate with each other to determine which chartplotter will perform this function. Only one chartplotter on the network will bridge NMEA 0183 data over the NMEA 2000 bus at a time.

Marine Network—Review all connected Garmin Marine Network devices (page 43).

Wireless Devices—Allow wireless devices, such as a remote control or optical mouse to communicate with the chartplotter.

Preferred Sources—Assign a preferred device when more than one source is available for the same function.

Setting Alarms

You can set the chartplotter to sound an audible alarm when certain conditions are met. By default, all alarms are turned off.

To set an alarm:

1. From the Home screen, touch **Configure** > **Alarms**.
2. Touch an alarm category.
3. Touch **On** to turn the alarm on and then use the touch screen keyboard to specify alarm information.

Setting Navigation Alarms

From the Home screen, touch **Configure** > **Alarms** > **Navigation**.

Arrival—set an alarm to sound when you are within a specified distance or time from a turn or destination waypoint.

- **Type**—select whether you want arrival alarms to sound only when nearing destinations or when nearing turns and destinations. Set to **Off** to disable arrival alarms.
- **Activation**—select whether the arrival alarm triggers based on time to arrival or based on distance to arrival.
- **Change Time/Change Distance**—if you have Activation set to **Time**, touch **Change Time** to set the number of minutes before arrival that the alarm should sound. If you have Activation set to **Distance**, touch **Change Distance** to set the distance before arrival that the alarm should sound. Use the on-screen keyboard to change the time or distance.

Anchor Drag—sets an alarm to sound when you exceed a specified drift distance.

Off Course—sets an alarm to sound when you are off course by a specified distance.

Setting System Alarms

From the Home screen, touch **Configure** > **Alarms** > **System**.

Clock—sets an alarm using the system (GPS) clock. The chartplotter must be on for the clock alarm to work.

Battery—sets an alarm to sound when the battery reaches a specified low voltage.

GPS Accuracy—sets an alarm to sound when the GPS location accuracy falls outside the user-determined value.

Setting Sonar Alarms

NOTE: You must have an optional sonar module and a transducer connected using NMEA 0183 or the Garmin Marine Network to receive sonar information.

From the Home screen, touch **Configure** > **Alarms** > **Sonar**.

Shallow Water—set an alarm to sound when the depth is less than the specified value.

Deep Water—set an alarm to sound when the depth is greater than the specified value.

Water Temp—sets an alarm to sound when the transducer reports a temperature that is 2°F (1.1°C) above or below the specified temperature.

Fish—sets an alarm to sound when the chartplotter detects a suspended target of the specified symbols.

 —sounds an alarm for all fish sizes.

 —sounds an alarm for medium and large fish only.

 —sounds an alarm for large fish only.

Setting Weather Alarms

NOTE: You must have a subscription to XM WX Weather and a Garmin XM WX Weather receiver (such as a GDL 30A) connected using the Garmin Marine Network to view weather information. Refer to page 53 for more information.

From the Home screen, touch **Configure** > **Alarms** > **Weather**. Turn the following alarms on or off:

- Marine
- Tornado
- Severe Storm
- Flood
- Flash Flood

Setting the Total Fuel Onboard Alarm

NOTE: To receive fuel-level information, your chartplotter must be connected to an external fuel sensor, such as the Garmin GFS 10.

You can configure your chartplotter to sound an alarm when the total amount of remaining onboard fuel reaches the level you specify.

To enable the Total Fuel Onboard alarm and set the fuel alarm level:

1. From the Home screen, touch **Configure** > **Alarms** > **Fuel** > **Total Fuel Onboard** > **On**.
2. Use the on-screen keyboard to indicate the fuel level at which the alarm should sound.

To disable the Total Fuel Onboard alarm:

From the Home screen, touch **Configure** > **Alarms** > **Fuel** > **Total Fuel Onboard** > **Off**.

Configuring My Boat

From the Home screen, touch **Configure** > **My Boat**.

Keel Offset—offsets the surface reading for the depth of a keel, making it possible to measure depth from the bottom of the keel instead of from the transducer location. Enter a positive number to offset for a keel. You can enter a negative number to compensate for a large vessel that may draw several feet of water.

Temp Offset—set the temperature offset for the temperature sensor of your transducer.

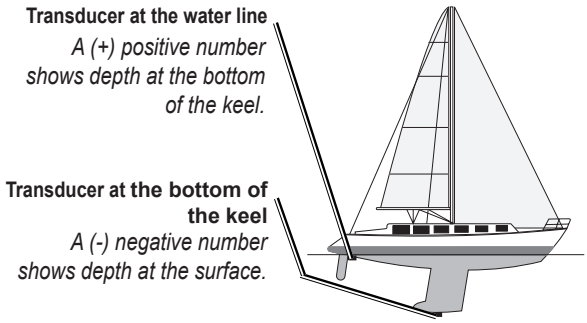
Calibrate Water Speed—calibrates a speed-sensing device. Follow the on-screen directions for calibration. If you do not have a speed-sensing transducer, this menu does not appear.

NOTE: If the boat is not moving fast enough or the speed sensor is not registering a speed, a "**Speed Too Low**" message appears. Touch **OK** and safely increase boat speed. If you get the message again, stop the boat and make sure the speed-sensor wheel is not stuck. If the wheel turns freely, check the cable connections. If you continue to get the message, contact Garmin Product Support.

Fuel Capacity—enter the total fuel capacity of all your engines.

To adjust the Keel Offset:

1. From the Home screen, touch **Configure** > **My Boat** > **Keel Offset**.
2. Using the on-screen keyboard, enter the measured distance from the transducer location to the water line or to the keel of the boat.
   - If you are measuring down to the keel (transducer installed at the water line), enter a (+) positive number. This shows the depth at the bottom of the keel.
   - If you are measuring up to the water line (transducer installed on the bottom of the keel), enter a (-) negative number. This shows the depth at the surface.
3. Touch **Done** to accept the number.



Keel Offset

Configuring Other Vessels

NOTE: To configure Automatic Identification System (AIS) or Digital Selective Calling (DSC) information for other boats, your chartplotter must be connected to an external AIS or DSC device.

From the Home screen, touch **Configure** > **Other Vessels**.

AIS—turn AIS on or off. AIS alerts you to area traffic by providing boat IDs, position, course, and speed for boats that are within range and equipped with a transponder.

DSC—turn DSC on or off.

Collision Alarm (AIS and MARPA only)—turn a safe zone around your boat on or off. This is used for collision avoidance and can be customized.

To customize safe-zone settings:

From the Home screen, touch **Configure** > **Other Vessels** > **Collision Alarm**.

- **Range**—change the measured radius of the safe zone ring to a specified distance from 500 ft. to 2.0 nm (or from 150 m to 3.0 km, or from 500 ft. to 2.0 mi.).
- **Time to (Safe Zone)**—sounds an alarm if AIS or MARPA determines that a target will intersect the Safe Zone within the defined time interval (ranging from 1 to 24 minutes).

Configuring XM Audio

NOTE: You must connect optional Garmin XM equipment (such as a GDL 30A XM receiver) to the Garmin Marine Network, and have a subscription to XM Radio to use XM audio features. For more information, refer to page 59.

From the Home screen, touch **Configure** > **XM Audio**.

Channel Guide—selects the specific XM channel within the currently selected category.

Channel Entry—allows you to enter a channel using the screen keyboard.

Save Preset—saves the current XM channel in the Presets list. Touch **Delete Preset** to remove the current channel from the list. Presets is displayed as a category in the category list.

Category—selects the category of channels that are displayed in the Channel Guide.

Mute—silences the audio.

Using the Marine Network

The Garmin Marine Network allows you to share data from Garmin peripheral devices to Garmin chartplotters quickly and easily. You can connect your GPSMAP 4000 series chartplotter to a Garmin Marine Network to receive data from and share data with other Marine Network-compatible devices and chartplotters. With the Garmin Marine Network, you can:

- Share GPS data from a GPS 17 or GPS 17x antenna wired to one chartplotter with every chartplotter connected to the Garmin Marine Network.
- Share NMEA 0183 data from devices wired to one chartplotter, with every chartplotter connected to the Marine Network.

NOTE: Both the GPS 17 or GPS 17X and any NMEA 0183 devices must be connected to the same chartplotter to achieve the best results when sharing data over the Garmin Marine Network.

NOTE: If you are using a GSD 21 wired to a GPSMAP 3006/3010 chartplotter, the data is shared with any GPSMAP 5000 series chartplotters connected to the network. All GSD 21 settings must be configured on the GPSMAP 3006/3010 chartplotter. A GSD 21 cannot be wired to a GPSMAP 5000 series chartplotter.

- Share data from Garmin Marine Network devices connected to any chartplotter in the Marine Network or to a GMS 10 Marine Network Port Expander, with every other chartplotter connected to the Marine Network. These devices include:
  - **GSD 22 Digital Sounder**—provides sonar data when connected to the Garmin Marine Network and an appropriate transducer. Sonar data is shared by all chartplotters on the network.
  - **GMR 21/41 Radome, GMR 18 Radome, and GMR 404/406 Open Array Radar**—provides radar data when connected to the Garmin Marine Network. Radar data is shared by all chartplotters on the network.
  - **GDL 30/GDL 30A**—provides XM WX weather and XM Radio data when connected to the Garmin Marine Network. XM WX weather data is shared by all chartplotters on the network. Connect the GDL 30A (the GDL 30 device provides only weather) to the audio input source on your boat to listen to XM audio. The station can be changed by any chartplotter on the network.

NOTE: Currently, the XM Satellite service is only available in North America. The GDL 30/30A functions only when used in North America.

- Share BlueChart g2 Vision cartography data from an SD card inserted in one GPSMAP 4000 or GPSMAP 5000 series chartplotter with every GPSMAP 4000/5000 series chartplotter connected to the Marine Network.

NOTE: BlueChart g2 Vision cartography is only compatible with GPSMAP 4000 and GPSMAP 5000 series chartplotters. Previous Garmin Marine Network-compatible chartplotter models (such as the GPSMAP 3010) can be connected to your network, but they cannot share BlueChart g2 Vision data.

- Transfer waypoint, route, and track information from one chartplotter connected to the Garmin Marine Network to every other chartplotter connected to the network. The data can be cloned from one chartplotter to every other connected chartplotter, or the data can be merged and shared with every connected GPSMAP 4000 and GPSMAP 5000 series chartplotter.

Viewing Connected Garmin Marine Network Devices

From the Home screen, touch **Configure > Communications > Marine Network**. Each connected device is listed along the left side of the screen.

Network Devices

To assign a name to one of the devices:

1. From the Home screen, touch **Configure > Communications > Marine Network**.
2. Touch the button for the device.
3. Touch **Review**.
4. Use the on-screen keyboard to name the device.
5. Touch **Done**.

Using Radar

When you connect your chartplotter to an optional Garmin marine radar such as a GMR 404/406 or a GMR 18/24, you can view more information about your surroundings. The radar connects through the Garmin Marine Network and shares radar data with all networked chartplotters.

The Garmin Marine Radar transmits a narrow beam of microwave energy as it rotates in a 360 pattern. When the transmitted energy contacts a target, some of that energy is reflected back to the radar.

WARNING: The marine radar transmits microwave energy that has the potential to be harmful to humans and animals. Before beginning radar transmission, verify that the area around the radar is clear. The radar transmits a beam approximately 12° above and below a line extending horizontally from the center of the radar. Avoid looking directly at the radar, because the eyes are the most susceptible part of the body.

To turn on the radar:

1. Power on the network. The radar warms up and a countdown is provided to alert you when the radar is ready.

NOTE: As a safety feature, the radar enters standby mode after it warms up. This gives you an opportunity to verify that the area around the radar is clear before beginning radar transmission. The microwave energy transmitted by the radar can potentially be harmful to humans and animals.

2. From the Home screen, touch **Radar > Cruising**. The “Ready to Transmit” message appears.
3. Complete one of the following actions:
   - Touch **Menu**.
   - Press and release the **Power** key on the chartplotter. Do not hold the key, or you may shut down the chartplotter.
4. Touch **Transmit Radar**. A “Spinning Up” message appears for a few moments, then the radar begins painting an image.

To turn off the radar:

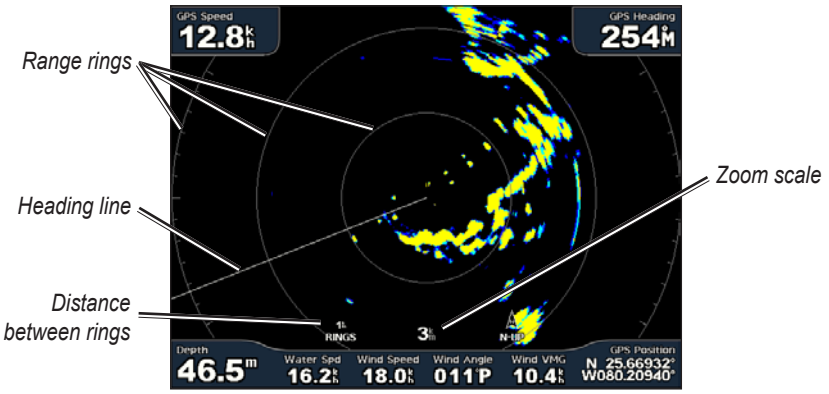
1. Complete one of the following actions:
   - Touch **Menu**.
   - Press and release the **Power** key on the chartplotter. Do not hold the key, or you may shut down the chartplotter.
2. Touch **Radar to Standby**.

Using Cruising Mode

Cruising mode is the standard radar operation. If you switch from Sentry mode (see Using Sentry Mode) to Cruising mode, the antenna will go into full-time transmission and will disable any guard zones.

To enable Cruising mode, touch **Radar** > **Cruising**.

Use the Cruising screen to view a full-screen image of the gathered radar information. Your position is in the center of the screen, and the rings provide distance measurements.



The zoom scale represents the distance from your position (the center) to the outermost ring. Each ring represents an even division of the zoom scale. For example, if the zoom scale is set at three miles, each ring represents one mile from the center out. Adjust the zoom scale using the + and − buttons.

Using Sentry Mode

NOTE: When Sentry mode is enabled, all MARPA targets are cancelled, and you cannot acquire MARPA targets until you exit Sentry mode.

Sentry mode allows you to put the radar antenna into timed-transmit mode, in which you can configure a transmit and standby cycle. You can also enable a guard zone in Sentry mode, which identifies a safe zone around your boat. An alarm sounds when a radar object enters this zone.

To enable Sentry mode, touch **Radar** > **Sentry**.

To enable timed-transmit mode:

From the Home screen, touch **Radar** > **Sentry** > **Menu** > **Sentry Setup** > **Timed Xmit**.

To set the standby and transmit times:

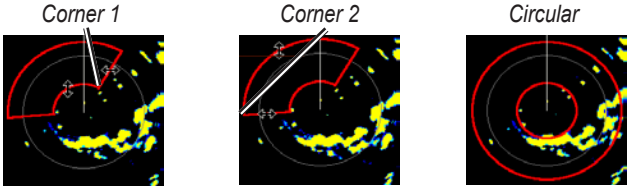
1. From the Radar screen, touch **Menu** > **Sentry Setup**.
2. Touch **Timed Xmit** if it is set to off, and then select **Stdby Time** or **Xmit Time**.
3. Enter the time in minutes using the on-screen keyboard and then touch **Done**.

To enable the guard zone:

From the Home screen, touch **Radar** > **Sentry** > **Menu** > **Sentry Setup** > **Enable Guard Zone**.

To adjust the guard zone boundaries:

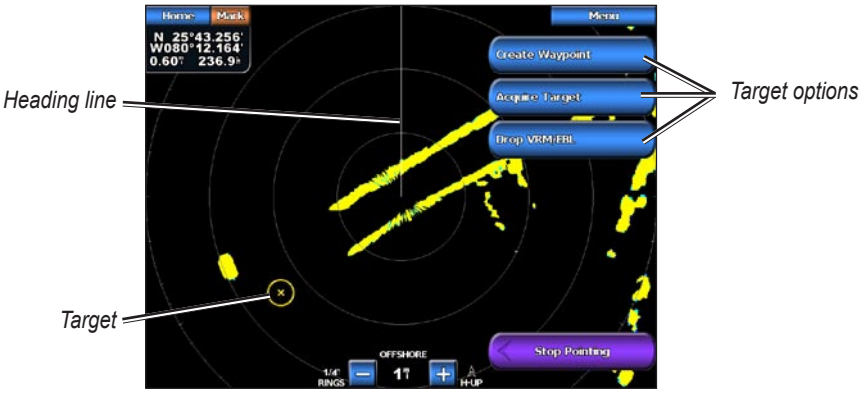
1. While the guard zone is on, from the Radar screen, touch **Menu** > **Sentry Setup** > **Adjust Guard Zone** > **Move Guard Zone**.
2. Select from the following options:
   - **Corner 1** (and **Corner 2**): Defines a guard zone that does not completely encompass the boat. Touch **Corner 1**, and then touch the point on the screen at which you want the first corner of the guard zone. Repeat this with Corner 2.
   - **Circular**: Joins the guard zone to completely encompass the boat. Use **Corner 1** or **Corner 2** to adjust the size.



Radar Targeting

NOTE: MARPA requires the use of a heading sensor. The heading sensor must output the NMEA 0183 sentence HDM or HDG.

1. From the Radar screen, touch the target location to begin targeting. As you move the target over objects on the radar, target options appear along the right side of the screen.



Cruising Screen - Targeting

2. Select an option:
   - Select **Create Waypoint** to mark a waypoint at the targeted object or location.
   - Select **Acquire Target** to assign a MARPA (Mini Automatic Radar Plotting Aid) tag to the targeted object.
   - Select **Drop VRM/EBL** to set the Variable Range Marker (VRM) and Electronic Bearing Line (EBL) to measure range and bearing to a target.

- Select **MARPA Target** to open the MARPA target information window. This option only appears when you are targeting a tagged MARPA object.

MARPA Targeting

3. To stop targeting, touch **Stop Pointing**.

Understanding the Radar Overlay Screen

Use the Radar Overlay option to overlay radar information on the Navigation chart.

To access the radar overlay screen:

1. From the Home screen, touch **Radar** > **Radar Overlay**. The radar picture appears in orange and overlays the Navigation chart.
2. Use the + and − buttons to zoom in and zoom out.

   Zooming while panning the map only affects the zoom scale of the map. The radar range remains the same. Zooming while the map is locked on the boat (not panning) affects the zoom scale of the map and the radar range.

To access additional settings or options for the radar overlay screen:

1. From the Home screen, touch **Radar** > **Radar Overlay** > **Menu** > **Setup**.
2. Select an option:
   - Touch **Chart Setup** to set chart options (page 11).
   - Touch **Radar Setup** to set radar options (page 50).

Obtaining Optimal Radar Display Performance

The gain controls the sensitivity of the radar receiver. The default setting for the gain, Auto, adjusts the gain automatically to provide the best performance.

To adjust the gain:

1. From the Radar screen, touch **Menu** > **Gain**.
2. Select an option to adjust the gain:
   - To return the gain to the default setting, touch **Auto**.
   - To manually adjust the gain, touch **Up** or **Down**.

Reducing Unwanted Noise

There are several options that adjust the gain to help reduce unwanted clutter on the radar screen.

1. From the Radar screen, touch **Menu** > **Noise Rejection**.
2. Select an option:
   - Touch **Rain Clutter** to adjust the gain for unwanted clutter caused by rain at close ranges. Touch **Up** or **Down** to adjust the rain clutter sensitivity.
   - Touch **Sea Clutter** to adjust the gain for clutter caused by choppy sea conditions. Touch **Rough**, **Medium**, or **Calm**. Touch **Up** or **Down** to manually adjust the sea clutter sensitivity.
   - Touch **Cross Talk** to filter out interference caused by another radar operating in close proximity.
   - Touch **FTC** (Fast Time Constant) to reduce unwanted clutter caused by rain at a distance. FTC has four presets (**Off**, **Low**, **Medium**, or **High**).

Adjusting the VRM and EBL

The Variable Range Marker (VRM) and Electronic Bearing Line (EBL) tools measure range and bearing to a target. You can adjust the diameter of the VRM and the angle of the EBL.

To show or hide the VRM and EBL:

The measured range and bearing are displayed in the upper-left corner of the screen.

- If the VRM and EBL are hidden, from the Radar screen, touch **Menu** > **Show VRM/EBL**.
- If the VRM and EBL are shown, from the Radar screen, touch **Menu** > **Adjust VRM/EBL** > **Hide VRM/EBL**.

To select the VRM/EBL target location:

1. On the Radar screen, touch the location you want to set the VRM/EBL marker.
2. Touch **Drop VRM/EBL**.

To adjust the VRM/EBL target location:

1. From the Radar screen, touch **Menu** > **Adjust VRM/EBL** > **Move VRM/EBL**.
2. Touch the new location where you want to set the marker.
3. Touch **Done**.

Configuring Other Vessels on the Radar Screen

You can configure which other vessels are displayed on the radar screen. From the Radar screen, touch **Menu** > **Other Vessels**.

NOTE: To configure Automatic Identification System (AIS) information for other boats, your chartplotter must be connected to an external AIS device.

List—display a list of AIS and MARPA threats. Touch **Show** to select between displaying **AIS** or **MARPA** threats, or **All Threats**.

Display Setup—configure how other vessels are displayed on the Radar screen.

- **Display Range**—set the distance from your location that AIS vessels are displayed.
- **Details**—show or hide details for each vessel.
- **Proj. Heading**—set the projected heading time.

Collision Alarm (AIS and MARPA only)—turn a safe zone around your boat on or off. This is used for collision avoidance, and can be customized.

To customize safe-zone settings for the Collision Alarm:

1. From the Radar screen, touch **Menu** > **Other Vessels** > **Collision Alarm**.
2. Select from the following options:
   - **Range**—change the measured radius of the safe zone ring to a specified distance from 500 ft. to 2.0 nm (or from 150 m to 3.0 km, or from 500 ft. to 2.0 mi).
   - **Time To** (Safe Zone)—sounds an alarm if AIS or MARPA determines that a target will intersect the Safe Zone within the defined time interval (ranging from 1 to 24 minutes).

Advanced Radar Configuration

To access advanced radar settings, from the Radar screen, touch **Menu** > **Radar Setup**.

Rotation Speed (GMR 18/24/404/406 series models only)—set the rotation speed of your radar to **Normal Speed** or **High Speed**. High Speed increases the speed at which the antenna rotates, which increases the speed at which the screen updates.

Front of Boat—offset the front of the boat if you mount the radar at an angle.

Data Bars—show or hide cruising, navigation, fishing, fuel, or sailing numbers (page 7).

Appearance—configure radar display options.

- **Color Scheme**—change the colors used for the radar display.
- **Orientation**—change the perspective of the radar display.
- **Look-Ahd Spd**—shift your current location toward the bottom of the screen as your speed increases. Enter your top speed for the best results.
- **Heading Line**—show or hide a line in the direction of travel.
- **Rings**—show or hide the radar range rings.
- **Nav Lines**—show or hide a colored line that indicates the route you are currently navigating.
- **Waypoints**—show or hide waypoints that are within the range displayed on the Radar screen. Touch **Navigation Only** to display only waypoints associated with the currently active route.

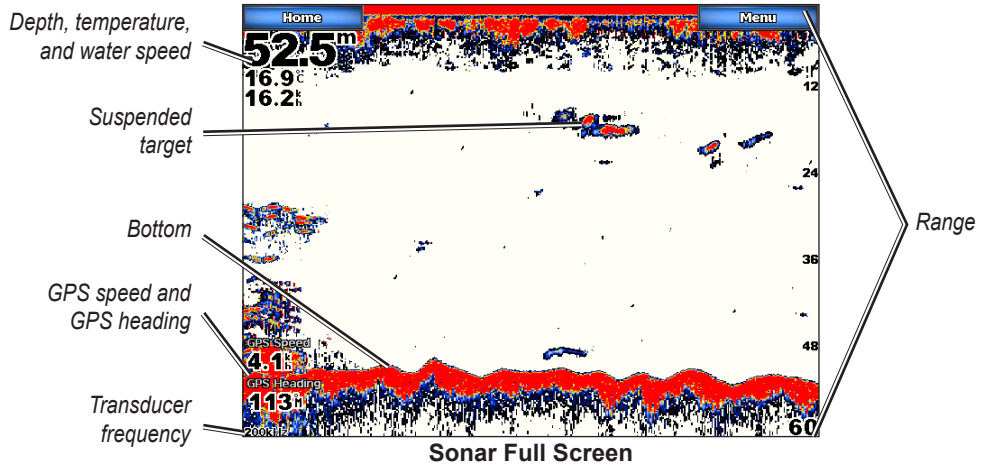
Using Sonar

When connected to an optional Garmin GSD 22 sounder module and a transducer, your chartplotter can be used as a fishfinder. The GSD 22 connects through the Garmin Marine Network and shares sonar data with every chartplotter connected to the network.

Understanding the Full Screen

Use the Full Screen to view a full-screen graph of the transducer's sonar readings.

From the Home screen, touch **Sonar** > **Full Screen**. The range scale along the right side of the screen shows the depth of detected objects as the screen scrolls from the right to the left.

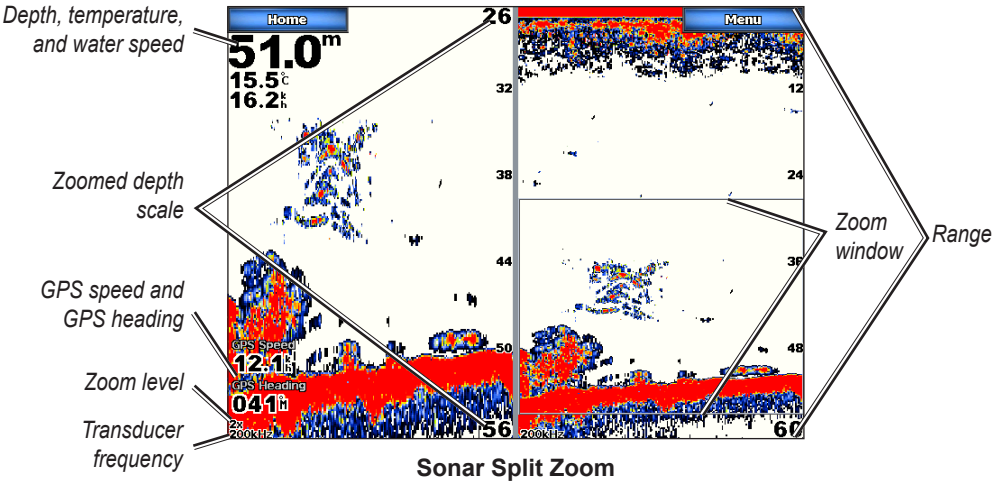


Sonar Full Screen

Understanding the Split Zoom Screen

Use the Split Zoom screen to view the full sonar data from the graph and a zoomed in portion on the same screen.

From the Home screen, touch **Sonar** > **Split Zoom**.

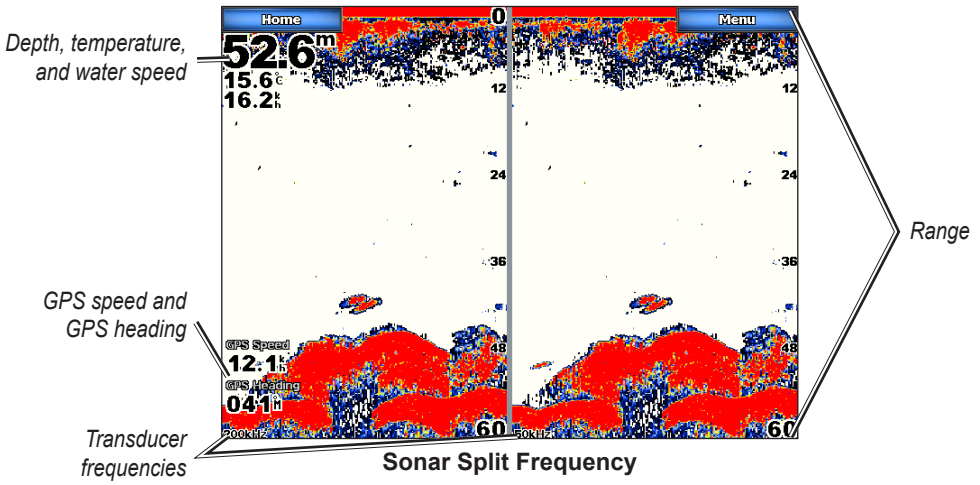


Sonar Split Zoom

Understanding the Split Frequency Screen

Use the Split Frequency screen (dual-frequency transducer only) to view both the 50kHz and 200kHz frequencies on the same screen.

From the Home screen, touch **Sonar** > **Split Frequency**. A 200kHz frequency graph appears on the left; a 50kHz frequency graph appears on the right.



Sonar Split Frequency

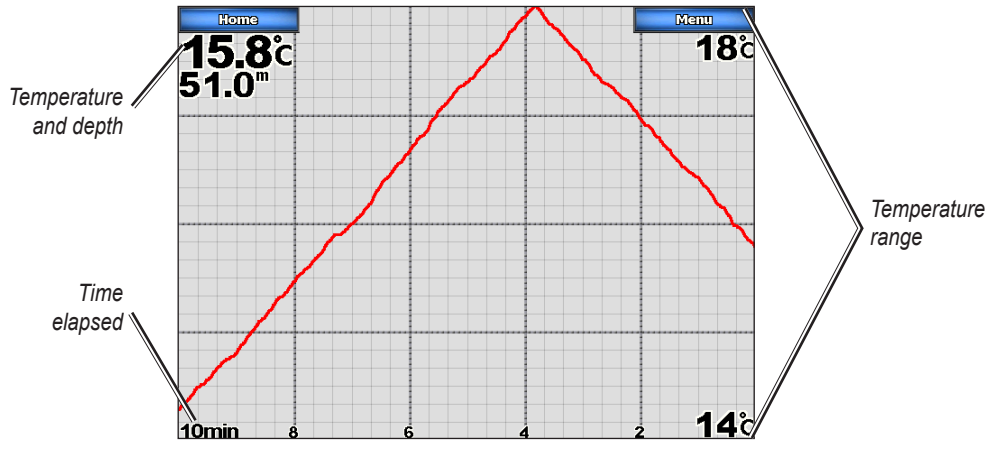
Understanding the Temp Log

If you are using a temperature-capable transducer, the Temp Log screen keeps a graphic log of temperature readings over time.

1. From the Home screen, touch **Sonar** > **Temp Log**. The current temperature and depth are shown in the upper-left corner.

   The temperature appears along the right side and the time elapsed appears along the bottom. The graph scrolls to the left as information is received.

2. Touch **Menu** to access the following scale settings:
   - Touch **Duration** to set the time elapsed scale.
   - Touch **Scale** to set the temperature range scale.



Transducer Temperature Log

Setting Up Sonar

Use the Sonar Setup screen to define and adjust settings for all sonar screens.

From the Home screen, touch **Sonar** > **Sonar Setup**.

Scroll Speed—adjusts the rate at which the sonar scrolls from right to left (**Ultrascroll**™, **Fast**, **Medium**, or **Slow**). If you are using a speed-capable transducer, touch **Auto** to have the scroll speed automatically adjust to the water speed of your boat.

Surface Noise—shows or hides the sonar returns near the surface of the water. Hide surface noise to help reduce clutter.

Depth Line—quickly reference a specific depth (**Show** or **Hide**). When **Show** is selected, touch and drag the line to set the depth of the reference line.

A-Scope—creates a vertical flasher along the right side of the screen (**On** or **Off**).

Overlay Numbers—shows or hides water temperature, battery voltage, water speed (if your transducer is capable), and navigation. If **Auto** is selected and the transducer is capable, the data is shown.

Configuring Sonar Appearance

From the Home screen, touch **Sonar** > **Sonar Setup** > **Appearance**.

Fish Symbols—sets how the sonar interprets suspended targets.

The chartplotter does not interpret the sonar return data (default).

Suspended targets appear as symbols. Background sonar information appears, making the distinction between fish and structure easier.

Suspended targets appear as symbols with background information shown. The target depth of each symbol is also indicated.

Suspended targets appear as symbols. No background information appears.

Suspended targets appear as symbols with no background information shown. The target depth of each symbol is indicated.

Whiteline—highlights the strongest signal from the bottom to help identify its hardness or softness.

- **Off**—(default) Whiteline is disabled.
- **High**—the most sensitive setting. Almost all strong returns are highlighted in white.
- **Medium**—many strong returns are highlighted in white.
- **Low**—the least sensitive setting. Only the strongest returns are highlighted in white.

Color Scheme—choose white (black, if using night mode colors) or blue. This affects the background on all sonar screens, but does not change the Temp Log screen.

Advanced Sonar Settings

To adjust advanced sonar settings, touch **Menu** while viewing a sonar screen.

Gain—control the sensitivity of the sonar receiver. Touch **Auto** or touch **Up** or **Down** (or drag the adjustment bar) to manually adjust the gain. To see more detail, increase the gain. If the screen is cluttered, decrease the gain.

Pause Sonar—select to stop scrolling. Touch **Create Waypoint** to save the location as a waypoint, and touch **Resume** to continue scrolling in real time. For more information on waypoints, see page 25.

Frequency—select how the frequencies appear on screen (**200kHz**, **50kHz**, or **Dual**) when using a dual frequency transducer.

Zoom—zoom in to a section of the Full screen. The zoom is off (**No Zoom)** by default. Three other options are available:

- **2x Zoom**—twice the magnification. Touch **Up**, **Down**, or **Auto** to set the depth range of the magnified area.
- **4x Zoom**—four times the magnification. Touch **Up**, **Down**, or **Auto** to set the depth range of the magnified area.
- **Bottom Lock**—lock the zoom window to the bottom. Touch **Up** or **Down** to set the depth range of the magnified area.

Range—adjust the range of the depth scale on the right side of the screen. Touch **Auto** or touch **Up** or **Down** (or drag the adjustment bar) to manually adjust the range.

Sonar Setup—open the Sonar Setup screen (page 53).

Digital Selective Calling (DSC)

Using the Chartplotter with a VHF Radio

The following table indicates the features that are available when you connect your chartplotter to a VHF radio over a NMEA 0183 network or a NMEA 2000 network.

Feature	NMEA 0183 VHF Radio	NMEA 2000 VHF Radio	Garmin NMEA 0183 VHF Radio	Garmin NMEA 2000 VHF Radio
The chartplotter can transfer your GPS position to your radio. If your radio is capable, GPS position information is transmitted with DSC calls.	X	X	X	X
The chartplotter can receive DSC distress and position information from the radio (page 56).	X	X	X	X
The chartplotter can track the positions of vessels sending position reports (page 57).	X	X	X	X
Quickly set up and send individual routine call details to your Garmin VHF radio (page 58).				X
When you initiate a man-overboard distress call from your radio, the chartplotter displays the man-overboard screen and prompts you to navigate to the man-overboard point (page 56).				X
When you initiate a man-overboard distress call from your chartplotter, the radio displays the Distress Call page to initiate a man-overboard distress call (page 56).				X

To turn DSC on or off:

1. From the Home screen, touch **Configure** > **Other Vessels**.
2. Touch **DSC** to turn it on or off.

If you are using radar, see page 45 for information on configuring how DSC information displays on the radar screen.

Adding a DSC Contact

You can make calls to a DSC contact from the chartplotter. See page 58 for information on making an individual routine call.

1. While viewing a chart, touch **Menu** > **Other Vessels** > **DSC List** > **Add Contact**.
2. Use the on-screen keyboard to enter the Maritime Mobile Service Identity (MMSI) number of the vessel and then touch **Done**.
3. Use the on-screen keyboard to enter the name of the vessel and touch **Done**.

The contact is now available in the DSC list.

Viewing the DSC List

The DSC list is a log of the most-recent DSC calls and other DSC contacts you have entered. The DSC list can contain up to 100 entries. The DSC list shows the most-recent call from a boat. If a second call is received from the same boat, it replaces the first call in the call list.

From a chart screen, touch **Menu** > **Other Vessels** > **DSC List**.

Receiving Distress Calls

If your Garmin chartplotter and VHF radio are connected using NMEA 0183 or NMEA 2000, your chartplotter alerts you when your VHF radio receives a DSC distress call. If position information was sent with the distress call, that information is also available and recorded with the call.

The symbol designates a distress call in the DSC List and marks the position of a vessel on the Navigation chart at the time a DSC distress call is sent.

When you receive a DSC distress call:

1. Touch **Review** to view details about the call.
2. Select from the following options:
   - Select **Call with Radio** to set up an individual routine call with the radio to call the vessel in distress (page 58). This option is only available if you are using a Garmin NMEA 2000-compatible VHF radio.
   - Select **Edit** to edit the vessel name and add a comment. If your radio is tracking the position of the vessel, touch **Trail** to show or hide the trail line for the vessel, and touch **Trail Line** to change the line color.
   - Select **Clear Report** to delete the call report.
   - Select **Navigate To** to Go To or Route To the position sent with the distress call (page 23). The symbol marks the position of the vessel on the Navigation chart at the time a DSC distress call is sent.
   - Select **Create Waypoint** to set a waypoint at the position sent with the distress call.
   - Select **Next Page** or **Previous Page** to toggle between details related to the distress call and a Navigation chart marking the position sent with the distress call.

Man-Overboard Distress Calls Initiated from a VHF Radio

When your Garmin chartplotter is connected to a Garmin NMEA 2000-compatible radio, and you initiate a man-overboard DSC distress call from your radio, your Garmin chartplotter displays the man-overboard screen and prompts you to navigate to the man-overboard point. If you have a Garmin autopilot system connected to the network, your chartplotter prompts you to start a Williamson's turn to the man-overboard point.

If you cancel the man-overboard distress call on the radio, the chartplotter screen prompting you to activate navigation to the man-overboard location is no longer displayed.

Man-Overboard Distress Calls Initiated from the Chartplotter

When your Garmin chartplotter is connected to a Garmin NMEA 2000-compatible radio and you activate navigation to a man-overboard location, the radio displays the Distress Call page to initiate a man-overboard distress call

On the radio, press and hold the **DISTRESS** key for at least three seconds to send the distress call.

For information on placing distress calls from your radio, see your *Garmin VHF Radio Owner's Manual*. For information on activating navigation to a man-overboard location, see page 25.

Position Tracking

When you connect your Garmin chartplotter to a VHF radio using NMEA 0183, you can track vessels that send position reports. This feature is also available with NMEA 2000, provided that the vessel sends the correct PGN data (PGN 129808; DSC Call Information).

Every position report call received is logged in the DSC list (page 34).

To view a list of position reports:

1. From the Home screen, touch **Information** > **DSC List**.
2. Select an item from the list, and then select **Review** for the following options:
   - Select **Call with Radio** to set up an individual routine call (page 58) with the radio to call the vessel that sent the position report. This option is only available if you are using a Garmin NMEA 2000-compatible VHF radio.
   - Select **Edit** to edit the vessel name and add a comment. If your radio is tracking the position of the vessel, touch **Trail** to show or hide the trail line for the vessel, and touch **Trail Line** to change the line color.
   - Select **Clear Report** to delete the call report.
   - Select **Navigate To** to Go To or Route To the location sent with the position report (page 23).
   - Select **Create Waypoint** to set a waypoint at the location sent with the position report.
   - Select **Next Page** or **Previous Page** to toggle between details of the position report and a Navigation chart marking the location.

Configuring Vessel Trails on the Navigation Chart

If you have your chartplotter configured to show trails, the Navigation chart displays a black dot for each reported position, a black line indicating the path of the vessel, and a Blue Flag symbol indicating the last reported position.

Vessel Trail

To set the duration of displayed trail points:

1. From a chart screen, touch **Menu** > **Other Vessels** > **DSC** > **DSC Trails**.
2. Select the number of hours to show tracked vessels on the Navigation chart. For example, if you select **4 Hours**, all trail points (less than four hours old) for tracked vessels are displayed.

To turn trail lines off for tracked vessels:

1. From a chart screen, touch **Menu** > **Other Vessels** > **DSC** > **DSC Trails**.
2. Touch **Off** to turn trails off for every vessel.

To show or hide the trail line for a specific vessel that is sending position reports:

1. From the Home screen, touch **Information** > **DSC List**.
2. Select the vessel from the list, and then touch **Review**.
3. Touch **Trail** to show or hide the trail for the vessel on the Navigation chart.

To change the symbol and color of the trail line for a vessel:

1. From the Home screen, touch **Information** > **DSC List**.
2. Select any call from that vessel from the list, and then touch **Review** > **Edit**.
3. Select an option:
   - Touch **Symbol** to edit the symbol.
   - Touch **Trail Line** to edit the line color.

Placing an Individual Routine Call

When you connect your Garmin chartplotter to a Garmin VHF NMEA 2000-compatible radio, you can use the chartplotter interface to set up an individual routine call. When setting up an individual routine call from your chartplotter, you can select one of the following channels on which you want to communicate. The radio transmits this request with your call.

The selection of a DSC channel is limited to those channels that are available in all frequency bands: 6, 8, 9, 10, 13, 15, 16, 17, 67, 68, 69, 71, 72, 73, or 77.

NOTE: The default channel is 72. Select **Channel** to select a different channel from the list. If you select a different channel, the chartplotter will use that channel for subsequent calls until you call using a different channel.

To make an individual routine call:

1. While viewing a chart, touch **Menu** > **Other Vessels** > **DSC List**.
2. Select the station to call from the list.
3. Touch **Review** > **Call with Radio**.
4. Touch **Send** to send the information about the call to the radio.
5. On your Garmin VHF radio, select **Call**.

NOTE: When initiating a call from the chartplotter, if the radio does not have an MMSI number programmed, the radio will not receive call information.

Calling an AIS Target

When you connect your Garmin chartplotter to a Garmin VHF NMEA 2000-compatible radio, you can use the chartplotter interface to set up an individual routine call to an Automatic Identification System (AIS) target. For more information on selecting a channel other than the default channel (Channel 72), see "Placing an Individual Routine Call."

To make an individual routine call to an AIS target:

1. While viewing a chart, touch an AIS target .
2. Touch **AIS Vessel** > **Call with Radio**.
3. Touch **Send** to send the information about the call to the radio.
4. On your Garmin VHF radio, select **Call**.

Using XM WX Weather and Audio

In order to use XM Weather, you must have a Garmin XM WX weather receiver and an activated XM weather subscription. To use XM Audio, you must have a Garmin XM audio receiver and an XM Audio subscription. Visit http://www8.garmin.com/xm/ for more information. To connect the XM antenna and receiver and for subscription instructions, refer to the Owner's Manual for your XM equipment.

If you do not have a receiver and a subscription to XM WX Weather, the weather features described in this section work only when the chartplotter is in Simulator Mode. Simulator Mode does not supply live weather data.

Using XM WX Weather

The Garmin XM receiver and antenna receives XM WX Weather data and shows it on your chartplotter's Navigation chart and other screens throughout the chartplotter. The weather data for each feature comes from reputable weather data centers such as the National Weather Service and the Hydrometerological Prediction Center. (See the XM WX Satellite Weather Web site at http://weather.xmradio.com/weather for more information.)

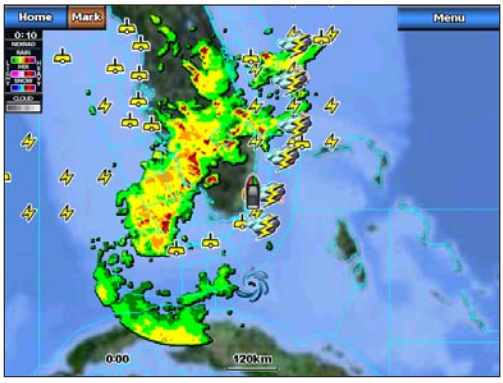
NOTE: Any weather feature can change in appearance or interpretation if the source that provides the information changes.

XM WX Weather data is broadcast at set rates. For example, NEXRAD (**NEX**t Generation Weather **RAD**ar) data is broadcast at five minute intervals. When the Garmin receiver is turned on or when a new feature is selected, the receiver has to receive new data before it can be shown. You might experience a delay before weather data or a new feature appears on the map.

Viewing NEXRAD Precipitation Information

Precipitation shows NEXRAD radar, storm cells, lighting strikes, and hurricane warnings. NEXRAD shows very light rain and snow up to strong thunderstorms in varying shades and colors. The time stamp in the upper-left corner of the screen indicates the elapsed time since the National Weather Service last updated the information. You can view NEXRAD information as an image of the latest update, or as an animated loop of the latest updates. NEXRAD is shown independently or with a variety of other weather information.

From the Home screen, touch **Weather** > **Precipitation**.



To display an animated loop:

From the Home screen, touch **Weather** > **Precipitation** > **Menu** > **NEXRAD Loop** > **On**.

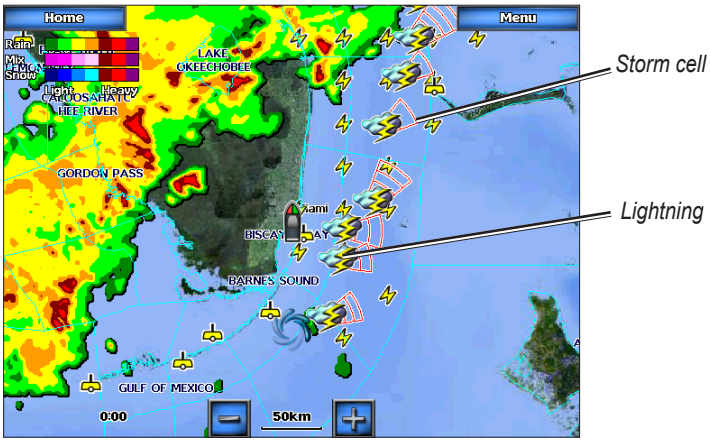
To turn cloud cover on or off:

From the Home screen, touch **Weather** > **Precipitation** > **Menu** > **Cloud Cover** > **Hide** or **Show**.

Understanding Storm Cell Information

The storm cells show storms as well as the storm's projected path in the immediate future.

The direction of the red cone indicates the projected path of the storm cell. The red bars that appear in the cone indicate where the storm will most likely be in the future. Each bar represents 15 minutes.



Understanding Lightning Information

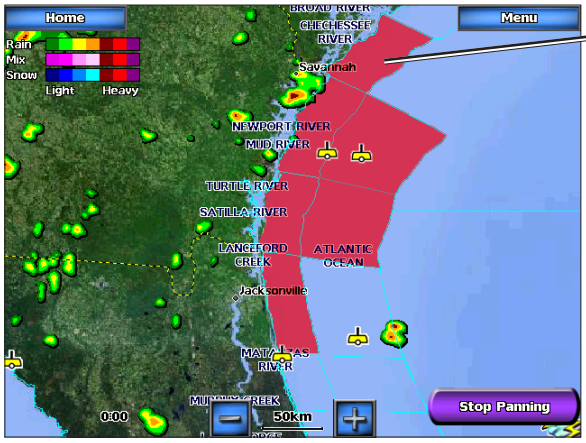
Lightning strikes are represented by lightning bolt icons. Lightning appears on the map if strikes were detected within the last seven minutes. The ground-based lightning detection network only detects cloud-to-ground lightning.

Understanding Hurricane Information

The Hurricanes feature shows the current position of a hurricane, tropical storm, or tropical depression, as well as its projected path (indicated by a red line). The darkened dots on the red line display the projected locations received from the National Hurricane Center. The center provides four forecasts at 12-hour intervals (12 Hrs, 24 Hrs, 36 Hrs, and 48 Hrs), as well as the current conditions (Now).

Understanding Marine Warnings

When a Marine Warning is issued, the area for the warning is highlighted in red. To view information about the warning, touch the warning area. The light blue lines on the chart indicate marine weather warning zones.



Understanding County Warnings

When the National Weather Service issues a weather warning for a county, the county is highlighted with the color corresponding to the warning. To view information about the warning, touch the county.

Tornado Warning

Severe Thunderstorm Warning

Flood Warning

Flash Flood Warning

Viewing Forecast Information

Forecasts show the weather conditions including fronts and precipitation.

From the Home screen, touch **Weather** > **Forecast**.

To view the forecast for another time period:

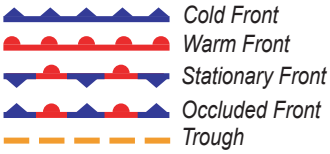
1. From the Home screen, touch **Weather** > **Forecast**.
2. Touch **Next Forecast**. The forecasted weather for the next 12 hours is shown.
3. Touch **Next Forecast** again to view forecasts for the next 24, 36, and 48 hours.

To view forecast information for another location:

Touch and drag the screen until the screen displays the location you want.

Understanding Fronts

The Fronts show lines indicating the leading edge of an air mass. This feature also shows pressure centers.



Indicates a low-pressure center. A low-pressure center is an area where the measured pressure is lowest relative to the surrounding area. Moving away from a low-pressure center in any horizontal direction results in increased pressure. Winds flow counterclockwise around low-pressure centers in North America.

Indicates a high-pressure center. A high-pressure center is an area where the measured pressure is highest relative to the surrounding area. Moving away from a high-pressure center in any horizontal direction results in decreased pressure. Winds flow clockwise around high-pressure centers in North America.

Understanding City Forecasts

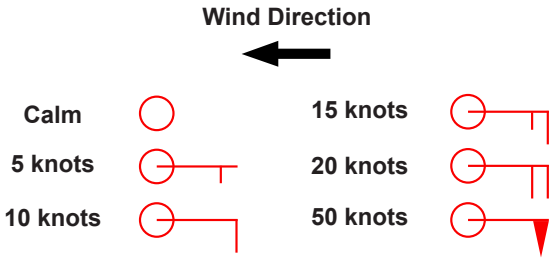
City forecasts appear as standard weather symbols. The forecast is viewed in 12-hour increments for the next 48 hours.

Viewing Sea Conditions

Sea Conditions provide surface conditions including winds, wave height, wave period, and wave direction. To view sea conditions, from the Home screen, touch **Weather** > **Sea Conditions**.

Understanding Surface Winds

Wind barbs indicate from which direction the wind is coming. The wind barb is a circle with a tail. Wind speed is indicated by the different combination of flags that are attached to the tail.



Understanding Wave Height

The Wave Height feature shows wave heights. The wave heights for an area are shown in color intensities.

Understanding Wave Period

The Wave Period feature provides the time (in seconds) between successive waves.

Understanding Wave Direction

The Wave Direction feature shows the direction in which a wave is moving, as indicated by the direction of the red arrow.

Viewing Fishing Information

The Fishing view contains current water temperature, surface pressure conditions, and fishing forecasts.

From the Home screen, touch **Weather** > **Fishing**.

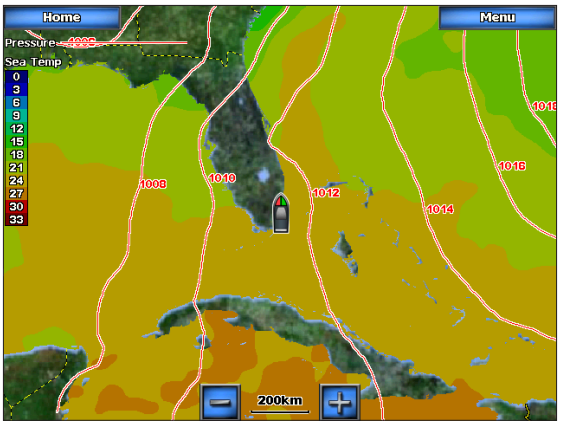
Understanding Surface Pressure

This feature shows pressure isobars and pressure centers. The isobars connect points of equal pressure. Pressure readings can help determine weather and wind conditions in an area. High pressure areas are generally associated with fair weather. Low pressure areas are generally associated with clouds and the chance of precipitation. Isobars packed closely together show a strong pressure gradient. Strong pressure gradients are associated with areas of stronger winds.

Pressure units are shown in Millibars (mb), Inches of Mercury (in), and Hectopascals (hPa).

Understanding Water Temperature Data

The Water Temperature feature indicates the water's surface temperature, as indicated by the legend on the left of the screen. The temperature breaks are indicated by isotherm lines.



Viewing Fish Forecasting

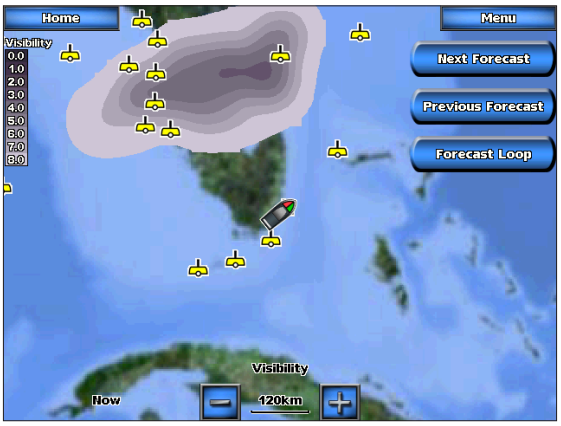
This feature shows areas that contain optimal weather conditions for specific species of fish.

1. From the Home screen touch **Weather** > **Fishing > Menu > Fish Species**.
2. Touch a species of fish. Shaded areas indicate optimal fishing areas.

Viewing Visibility Information

Visibility is the forecast maximum horizontal distance that can be seen at the surface, as indicated by the legend on the left of the screen. Contour lines on the Visibility feature show the forecasted change in surface visibility.

From the Home screen touch **Weather** > **Visibility**.



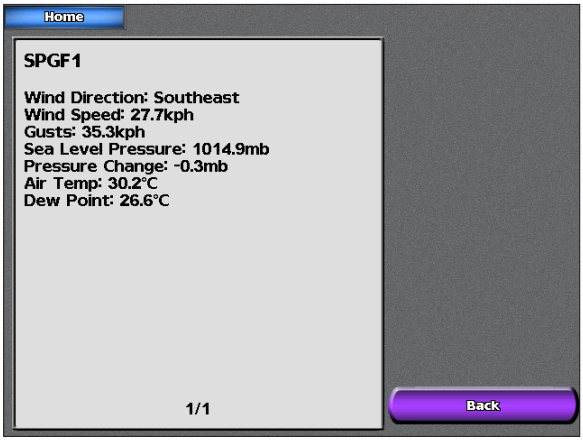
To view the forecasted visibility for another time period:

1. Touch **Next Forecast**. The forecasted visibility for the next 12 hours is shown.
2. Touch **Next Forecast** again to view forecasts for the next 24 and 36 hours.

Viewing Buoy Reports

Report readings are taken from buoys and coastal observation stations. These readings are used to determine air temperature, dew point, water temperature, tide, wave height and period, wind direction and speed, visibility, and barometric pressure.

To view a buoy report, touch a buoy on the screen. Touch **Buoy**.



Using XM Audio

When a Garmin XM Audio receiver and antenna is connected to the Garmin Marine Network and to the audio input of your boat, you can listen to XM Audio channels.

To display the XM Audio interface while navigating:

From the Navigation screen, touch **Menu** > **Data Bars** > **XM Audio** > **On**.

To select an XM Audio Channel:

Touch the right or left channel select arrows to change to the next channel in the current category.

To use the XM Audio Guide:

Touch the channel display bar.

Channel Guide—selects the specific XM channel within the currently selected category.

Channel Entry—allows you to enter a channel using the screen keyboard.

Save Preset—saves the current XM channel in the Presets list. Press **Delete Preset** to remove the current channel from the list. Presets is displayed as a category in the category list.

Category—selects the category of channels that are displayed in the Channel Guide.

Mute—silences the audio.

Appendix

Specifications

Physical Specifications

Size: GPSMAP 5208: 6⅞ in. H × 10⅛ in. W × 4⅛ in. D (173.5 × 256 × 105.9 mm)
GPSMAP 5212: 9½ in. H × 13 in. W × 4¾ in. D (240.5 × 330 × 119.2 mm)
GPSMAP 5215: 11⅝ in. H × 15½ in. W × 5⅝ in. D (295.8 × 394.9 × 143.8 mm)

Weight: GPSMAP 5208: 5 lb., 15 oz. (2.7 kg)
GPSMAP 5212: 9 lb., 8 oz. (4.3 kg)
GPSMAP 5215: 12 lb., 14 oz. (5.4 kg)

Display: GPSMAP 5208: 5 in. H × 6¾ in. W (128.2 × 170.9 mm)
GPSMAP 5212: 7⅛ in. H × 9¼ in. W (180.5 × 236 mm)
GPSMAP 5215: 9 in. H × 12 in. W (228.1 × 304.1 mm)

Case: Fully Gasketed, high-impact plastic and aluminum alloy, waterproof to IEC 529-IPX-7

Temp. Range: from 5°F to 131°F (from -15°C to 55°C)

Compass Safe Distance: GPSMAP 5208: 31½ in. (80 cm)
GPSMAP 5212: 39½ in. (1 m)
GPSMAP 5215: 15¾ in. (40 cm)

(Hg) - LAMPS INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE, OR FEDERAL LAWS.

For more information go to:
www.garmin.com/aboutGarmin/environment/disposal.jsp.

GPS Performance

Receiver: Differential-ready 12 parallel channel WAAS-capable receiver

Acquisition Times:
Warm: 15 seconds
Cold: 45 seconds
AutoLocate®: 2 minutes

Update Rate: 1/second, continuous

GPS Accuracy:
Position: <15 m (49 ft.), 95% typical
Velocity: 0.05 meters/second steady state

WAAS Accuracy:
Position: <3 m (9.8 ft.), 95% typical
Velocity: 0.05 meters/second steady state
Dynamics: 6gs

Power:

Source: 10-35 VDC

Usage: 5208: 35 W max. at 10 VDC
5212: 40 W max at 10 VDC
5215: 60 W max at 10 VDC

Fuse: 7.5 A, 42 V fast-acting

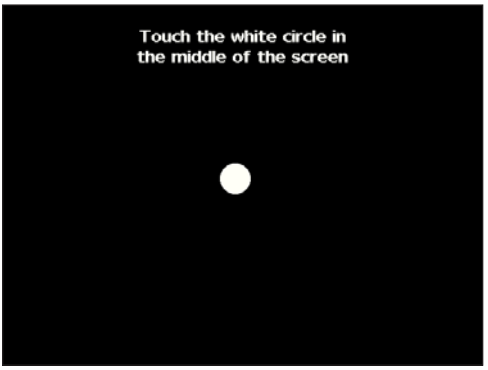
NMEA 2000 Specifications:

Load Equivalency Number (LEN): 2
Unit Draw: 75 mA max

Calibrating the Touchscreen

Your chartplotter's touchscreen does not normally require calibration. However, if the buttons do not seem to be responding properly, use the following process to calibrate the screen.

1. While the chartplotter is turned off, press the **Power** key.
2. When the Warning screen appears (with the **I Agree** button), touch anywhere on the black portion of the screen for approximately 15 seconds until the Calibration screen is displayed.



3. Follow the instructions on the screen until "Calibration is complete" is displayed.
4. Touch **OK**.

Capturing Screenshots

NOTE: To capture screenshots, you need the optional Garmin RF Wireless Remote Control.

You can capture a screenshot of any screen displayed on your chartplotter as a bitmap (.BMP) file and then transfer it to your computer.

To capture screenshots:

1. Insert an SD card into the SD card slot on the front of the chartplotter.
2. Touch **Configure** > **System** > **Beeper/Display**.
3. Touch **Screenshot Capture** to turn screenshot captures **On**.
4. When you are on a screen you want to capture, press the **HOME** button on the Garmin RF Wireless Remote Control for at least six seconds.
5. Touch **OK** when the Screenshot Taken window is displayed.

To copy the screenshots to your computer:

1. Remove the SD card from the chartplotter and insert it into an SD card reader that is attached to a computer.
2. From Windows Explorer, open the Garmin\scrn folder on the SD card.
3. Copy the appropriate .BMP file on the card and paste it to any location on the computer.

NMEA 0183 and NMEA 2000

A GPSMAP 5000 series chartplotter can accept data from both NMEA 0183 compliant devices and certain NMEA 2000 devices connected to an existing NMEA 2000 network on your boat.

NMEA 0183

The NMEA 0183 data cable included with GPSMAP 5000 series chartplotters supports the NMEA 0183 standard, which is used to wire various NMEA 0183-compliant devices, such as VHF radios, NMEA instruments, autopilots, wind sensors, and heading sensors.

The GPSMAP 5000 series chartplotter can receive data from up to four NMEA 0183-compliant devices and send GPS data to up to six NMEA 0183-compliant devices.

To wire the GPSMAP 5000 series chartplotter to optional NMEA 0183-compliant devices, see the *GPSMAP 4000/5000 Series Installation Instructions*.

Approved NMEA 0183 Sentences

GPBWC, GPRMC, GPGGA, GPGSA, GPGSV, GPGLL, GPBOD, GPRMB, GPRTE, GPVTG, GPWPL, GPXTE, and Garmin proprietary sentences PGRME, PGRMM, and PGRMZ.

This chartplotter also includes support for the WPL sentence, DSC, and sonar NMEA 0183 input with support for the DPT (depth) or DBT, MTW (water temp), and VHW (water temp, speed, and heading) sentences.

To enable or disable NMEA 0183 output sentences:

1. From the Home screen, touch **Configure** > **Communications** > **NMEA 0183 Setup** > **Output Sentences**.
2. Select a setting (**Sounder**, **Route**, **System**, or **Garmin**).
3. Select the NMEA 0183 output sentence.
4. Touch **Off** to disable, or touch **On** to enable, the NMEA 0183 output sentence.

NMEA 2000

GPSMAP 5000 series chartplotters are NMEA 2000 certified, and can receive data from a NMEA 2000 network installed on the boat to show specific information on the Information screen, such as depth, speed, water temperature, wind speed and direction, and engine data.

To connect a GPSMAP 5000 series chartplotter to an existing NMEA 2000 network and to see a list of supported NMEA 2000 PGN numbers, see the *GPSMAP 4000/5000 Series Installation Instructions*.

All GPSMAP 5000 series units are NMEA 2000 certified.

Messages and Alarms

AIS: Dangerous Target—an AIS target currently presents a collision threat.

Alarm Clock—the alarm clock alarm has sounded.

Anchor Drag Alarm—boat has drifted out of the user-set distance range.

Antenna Input is Shorted—there is a short in the wiring to the GPS 17 antenna.

Approaching Waypoint <name>—boat is a specified alarm distance from the destination waypoint.

Arrival Alarm <name>—arriving at destination waypoint.

Auto-guidance unable to calculate route—(BlueChart g2 Vision) auto-guidance cannot calculate the route.

Auto-guidance unable to calculate route. Ending position not within safe depth—(BlueChart g2 Vision) auto-guidance cannot calculate the route; choose an end point within the specified safe depth.

Auto-guidance unable to calculate route. Starting position not within safe depth—(BlueChart g2 Vision) auto-guidance cannot calculate the route; travel to water within the specified safe depth.

Auto-guidance unable to calculate route, please shorten route—(BlueChart g2 Vision) auto-guidance cannot calculate the route, choose closer end point.

Battery Alarm—user-set battery alarm has sounded.

Boat is not Moving Fast Enough to Calibrate—(speed sensor) appears during water speed calibration. Check speed wheel for blockage and calibrate again. If wheel is clear, calibrate again and increase speed.

Calibration is complete—touchscreen calibration successful.

Can't Read User Card—cannot read card when attempting a user data transfer.

Can't Read Voltages That High, Limited To Top Of Range—entering a battery alarm voltage higher than the chartplotter can read.

Can't Read Voltages That Low, Limited To Bottom Of Range—entering a battery alarm voltage lower than the chartplotter can read.

Can't Unlock Maps—maps are locked and cannot be used on this chartplotter.

Can't Write User Card—cannot write card when attempting a user data transfer.

Cartography Service Incompatible. Software Update Required—a software update is needed. Contact product support for assistance updating your chartplotter software.

Check XM Antenna—XM antenna not connected. Check connectivity.

Cooling Fan Voltage Too High—the chartplotter's cooling fan voltage is higher than expected. Contact product support.

Cooling Fan Voltage Too Low—the chartplotter's cooling fan voltage is lower than expected. Contact product support.

Database Error—general database error. Contact product support.

Deep Water Alarm—(sonar) boat has entered user-defined value for deep water.

Directory Item With This MMSI Already Exists—MMSI number already in directory.

Directory Memory is Full Can't Create Entry—DSC directory is full, no more entries can be created.

Distress Call Received from <name>—distress call has been received by the DSC module.

Drift Alarm—boat has moved a user-defined distance.

DSC Position Report Received From <name>—a position report has been received by the DSC module.

Entering Target Water Temperature—(temperature sensor/transducer) the water temperature is inside the user-defined target temperature zone.

Flash Flood Warning Alarm—(XM WX weather) there is a flash flood warning in effect.

Flood Warning Alarm—(XM WX weather) there is a flood warning effective.

GPS Accuracy Alarm—the GPS accuracy has fallen outside the user-set value.

GPS Antenna Has Lost Its Stored Settings—The GPS antenna's memory has been cleared. Contact product support.

GPS Service Incompatible. Software Update Required—a GPS service software update is needed. Contact product support for assistance updating your chartplotter software.

GPS Service Lost—the chartplotter has lost communications with the remote GPS device. Check the network and the antenna wiring.

Incompatible Device, Software Update Required—an incompatible device is attached that requires a software update. Contact product support for assistance updating your network.

Invalid Date—an invalid date was entered.

Invalid Device Instance. Enter a number between (0 - 252)—invalid NMEA 2000 Device instance.

Invalid Entry. Default value selected.—an invalid entry was entered.

Invalid MMSI—an invalid DSC MMSI was entered.

Invalid System Instance. Enter a number between (0 - 15)—invalid NMEA 2000 System instance.

Leaving Target Water Temperature—(temperature sensor/transducer) the water temperature is outside the user-defined target temperature zone.

Lost Heading Sensor Connection— (radar/NMEA) the chartplotter has lost communications with the heading sensor. Check wiring.

Lost Remote GPS Connection—lost connection to the remote GPS. Check the network and the antenna wiring.

Lost Satellite Reception—the chartplotter has lost satellite reception. Make sure you have a clear view of the sky.

Low Fuel Alarm—(NMEA 2000) low fuel reported by the NMEA 2000 network.

Map Format Is Not Supported—a map format on a preprogrammed SD card is not supported.

Marine Weather Warning—(XM WX weather) there is a weather warning in effect.

MARPA: Dangerous Target—(radar) a MARPA target has become dangerous.

MARPA: Target Lost—(radar) unable to track a marpa target any longer.

MDB Waypoint Memory is Full, Can't Create Waypoint—MDB waypoint memory is full. Erase existing MDB waypoints to make room.

NMEA Depth Is Below Transducer—(sonar) the NMEA depth input is using the DBT sentence which does not include keel offset.

No DGPS Position—chartplotter lost differential GPS reception (WAAS). Make sure you have a clear view of the sky.

No Proximity Waypoints Found—no proximity waypoints found while attempting a user data transfer.

No Routes Found—no routes found while attempting a user data transfer.

No Tracks Found—no tracks found while attempting a user data transfer.

No User Waypoints Found—no user waypoints found while attempting a user data transfer.

No XM Signal—(XM WX weather) no XM satellite signal detected. Make sure you have a clear view of the sky.

Not All Maps Fit, Some Maps Will Not Be Drawn—there are more maps present on the SD card than what the chartplotter can support. Some of the maps on the card will not be drawn or used to find map features.

Off Course Alarm—the boat has left the user-defined course.

Proximity Alarm—the boat has come close to a user-defined proximity point.

Proximity Alarm Memory is Full—the proximity waypoint memory is full. Erase existing proximity waypoints to make room.

Proximity Overlaps Another Proximity Waypoint—a proximity point is overlapping another proximity waypoint.

Radar Guard Zone Alarm—(radar) an object has been detected in the user-defined radar guard zone.

Radar Needs Repair Error Code—(radar) the radar needs repair. An error code will be listed to help diagnose the error.

Radar Service Incompatible. Software Update Required—a radar software update is needed. Contact product support for assistance updating your network.

Radar Service Lost—(radar) the chartplotter has lost communications with the remote radar device. Check the network and the radar wiring.

Route Already Exists—the named route already exists. Choose another name.

Route is Full—the individual route is full, no more waypoints can be added.

Route Memory is Full, Can't Create Route—the chartplotter's route memory as a whole is full, no more routes can be created. Erase existing routes to make room.

Route Truncated—some points on the end of the route have been discarded.

Severe Storm Warning—(XM WX weather) there is a severe storm warning in effect.

Shallow Water Alarm—(sonar) the boat has entered the user-defined shallow water depth.

Simulating Operation—the chartplotter is in simulator mode.

Sonar Failed, Unit Needs Repair—there has been a sonar failure and the unit needs to be sent in for repair. Contact product support.

Sonar Service Incompatible. Software Update Required—a software update is needed. Contact product support for assistance updating your network.

Sonar Service Lost—(sonar) the chartplotter has lost communications with the remote sonar device. Check the network and the sonar wiring.

Tide Alarm—tide has reached user-specified tide alarm range.

Tornado Warning Alarm—(XM WX weather) a tornado warning is in effect.

Track Already Exists—the named track already exists. Choose another name.

Track Log Full—there is no longer any space in the active track log storage.

Track Memory is Full, Can't Create Track—the saved track memory is full.

Track Truncated—some points on the end of the track have been discarded.

Transducer Disconnected, Sonar Turned Off—the transducer has been disconnected. Sonar has been turned off. Check transducer wiring.

Transfer Complete—user data transfer is complete.

Unknown bridge height within calculated auto-guidance route—(BlueChart g2 Vision) there is an unknown bridge height within auto-guidance route.

User Card Not Found—user data card transfer. Make sure an SD card is fully inserted.

Warning: Auto-guidance route starting position moved due to safe depth settings—(BlueChart g2 Vision) auto-guidance has calculated the route, but the starting point has been moved to deeper water.

Warning: Auto-guidance route ending position moved due to safe depth settings—(BlueChart g2 Vision) auto-guidance has calculated the route, but the end point has been moved to deeper water.

Water Speed Sensor is not Working—the water speed sensor is not working properly. Check the wheel for obstructions and check wiring.

Water Temperature Alarm—(temperature sensor/transducer) the water temperature has entered or left the user-defined water temperature alarm zone.

Waypoint Already Exists—the named waypoint already exists. Choose another name.

Waypoint Memory is Full, Can't Create Waypoint—the User Waypoint memory is full. Erase existing waypoints to make room.

Weather Service Incompatible. Software Update Required—an XM WX weather software update is needed. Contact product support for assistance updating your network.

Weather Service Lost—(XM WX weather) the weather service is no longer communicating. Make sure you have a strong XM signal. Check the network and the XM wiring.

XM Service Incompatible. Software Update Required—an XM service software update is needed. Contact product support for assistance updating your network.

Product Registration

Help us better support you by completing our online registration today. Go to http://my.garmin.com. Keep the original sales receipt, or a photocopy, in a safe place.

Contact Garmin

Contact Garmin Product Support if you have any questions while using your chartplotter. In the USA, go to www.garmin.com/support, or contact Garmin USA by phone at (913) 397.8200 or (800) 800.1020.

In the UK, contact Garmin (Europe) Ltd. by phone at 0808 2380000.

In Europe, go to www.garmin.com/support and click **Contact Support** for in-country support information, or contact Garmin (Europe) Ltd. by phone at +44 (0) 870.8501241.

Declaration of Conformity (DoC)

Hereby, Garmin, declares that this chartplotter is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

To view the full Declaration of Conformity, see the Garmin Web site for your Garmin product: www.garmin.com.

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