



ROSE POINT ECS

Reference Manual

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WARNINGS

Use Rose Point ECS at your own risk. Be sure to carefully read and understand the user's manual and practice operation prior to actual use.

Rose Point ECS depends on information from the Global Position System (GPS) and digital charts, both of which may contain errors. Navigators should be aware that GPS-derived positions are often of higher accuracy than the positions of charted data. Rose Point Navigation Systems, Inc. does not warrant the accuracy of any information presented by Rose Point ECS.

Rose Point ECS is intended to be used as a supplementary aid to navigation and must not be considered a replacement for official government charts, notices to mariners, tide and current tables, and/or other reference materials. The captain of a vessel is ultimately responsible for its safe navigation and the prudent mariner does not rely on any single source of information.

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Welcome to Rose Point ECS

Use this reference manual as a guide to help learn the features and controls of the software.

Initial Setup

After installing Rose Point ECS, charts can be installed and connected sensors can be configured.

Installing Charts

Rose Point ECS includes a US Charts Disc which you can use to get your chart collection started. Just insert the disc into your PC and Rose Point ECS will let you select which charts to install. Keep in mind, however, that charts are updated on a weekly basis, so by the time you install charts from a disc, they are quite possibly out of date already.

Rose Point ECS can also be used to select, download, and install several types of charts, including free US coverage. Use **Settings > Charts and Add-Ons > Store** to see what's available. Charts that are installed this way are automatically maintained and updates will be downloaded and installed during the "synchronization" process described later.

If your vessel is enrolled in Rose Point ECS Services, your fleet administrator may have configured fleet-wide chart and publication subscriptions. These charts and pubs will be installed automatically as part of the synchronization process


Configuring Your Electronics

If Rose Point ECS is being interfaced to a Rose Point GPS Sensor or a Rose Point Nemo Gateway, follow the setup instructions included with the device. Rose Point ECS will automatically detect these units.

For other devices, go to **Settings > Electronics** to configure Rose Point ECS to use them. To setup a new device, click the **Configure a New Device** button and either select **Auto Detect** or choose a port from the Communication Ports list to manually set its options.

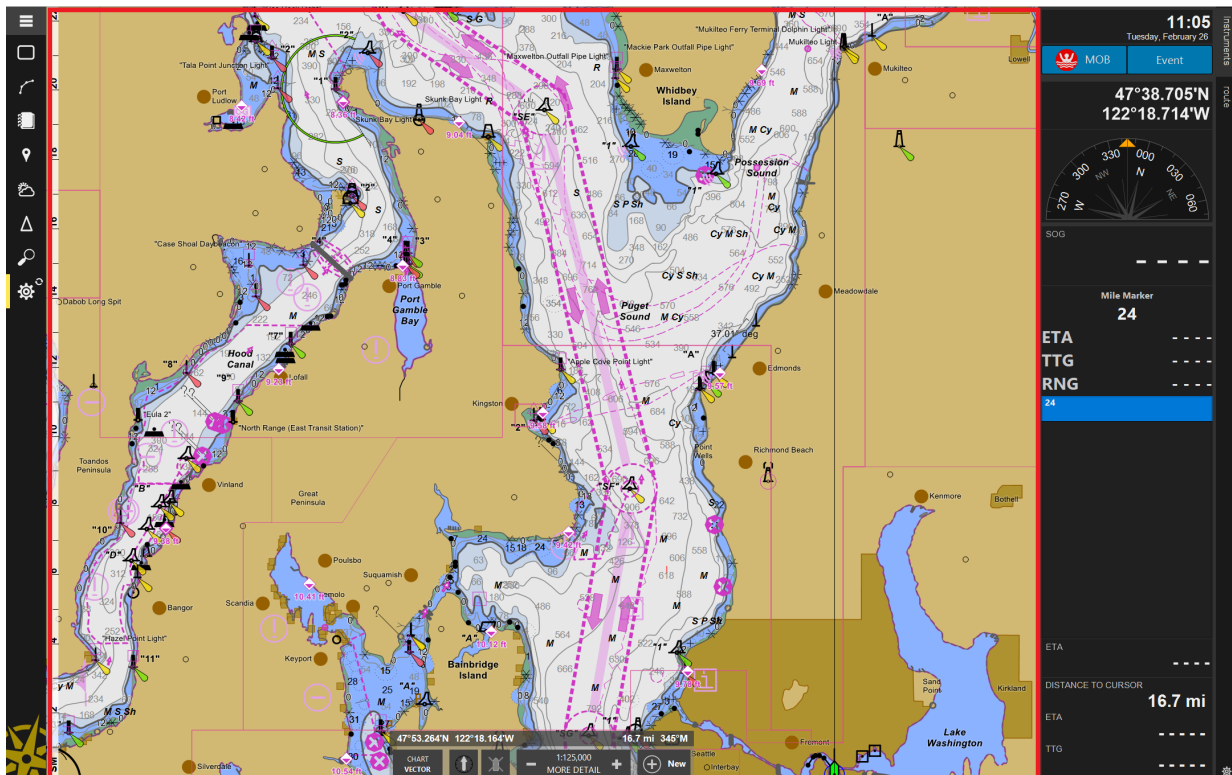
For optimum performance, Rose Point ECS needs to know the size and draft of your vessel as well as how your GPS and other electronics are connected to your PC and where they are located on the vessel. Use **Settings > Vessel** to set information about your vessel and use **Settings > Electronics** to adjust the positions of GPS antennas on your vessel

Upgrading from an older version?

If you are upgrading from a prior version of Rose Point ECS, you can find helpful information in the *What's New in Rose Point ECS 4* chapter to get acquainted with this version of Rose Point ECS. This can be found near the end of this reference manual as well as the Getting Started section of the software's embedded Help feature. To access Help, press F1 on your keyboard or select **Main Menu** > 

Using Rose Point ECS

The default Rose Point ECS window has three parts called the Browser, the Work Area, and the Instrument Panels.



The Work Area

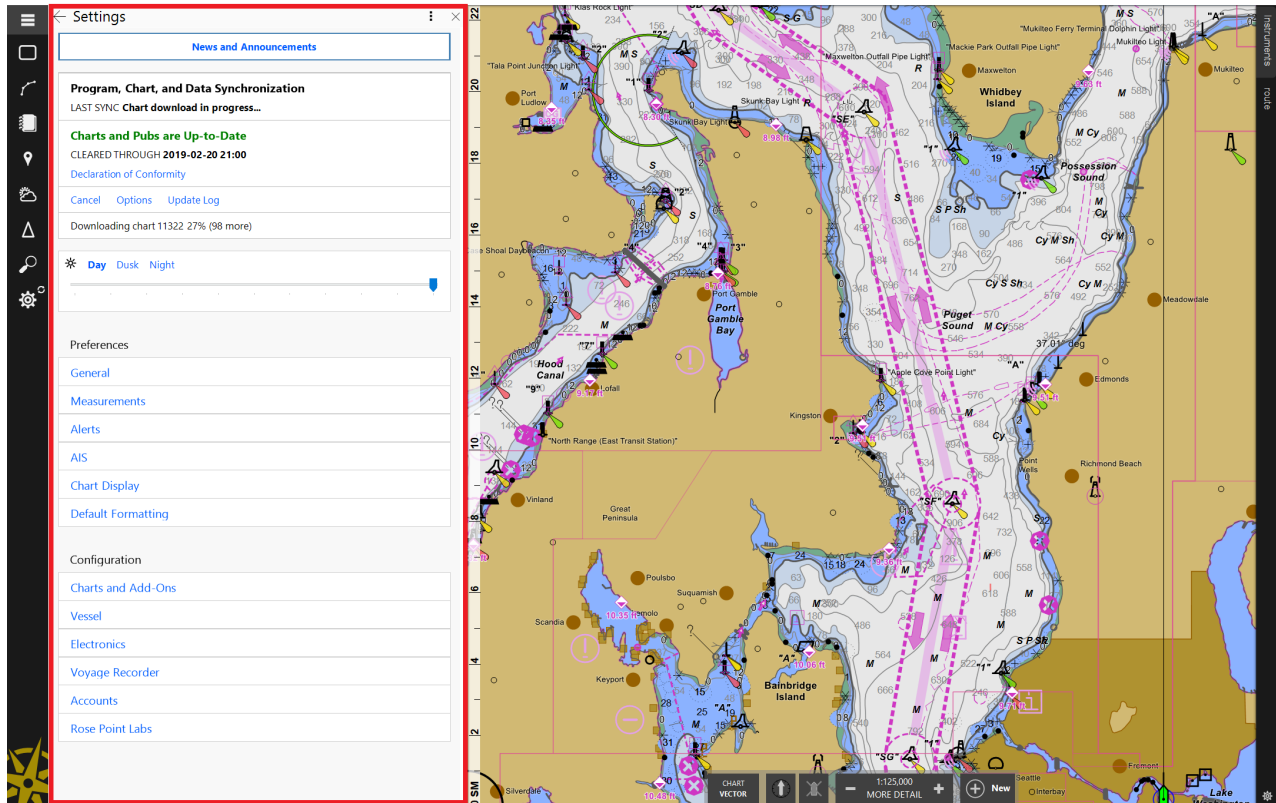
The Work Area, center area above, displays a chart by default, but can also show video, radar, sonar, or other information based on which add-ons are installed. The Work Area can also be split into multiple panels, each of which can show a chart, video, radar, or sonar image.

To customize the Work Area, refer to the "Screens Browser" section of this document.

The Browser

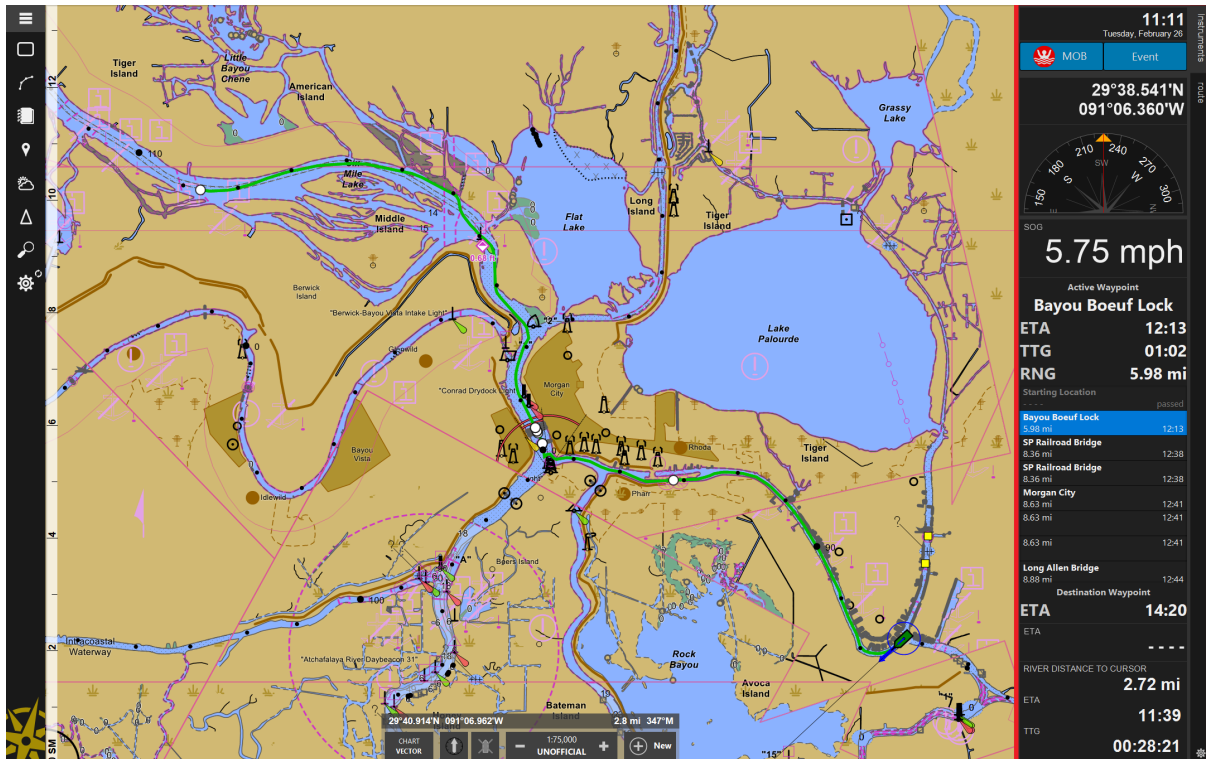
To the left of the Work Area, is the Browser which is used to show information not displayed in the Work Area and allows you to control various options. The Browser is normally "closed" and appears as a set of buttons which can be used to "open" the Browser to various areas of the program.

For a detailed look at the Browser features, refer to the "Using the Browser" section of this document.



The Instrument Panels

To the right of the Work Area are the Instrument Panels which show navigation and sensor information. The Instrument Panels are normally closed when not underway and open when underway. When they are closed, only the names of the panels appear at the far-right side of the screen. Clicking a name will open that Instrument Panel and clicking the name of the open panel will close it again. The Instrument Panels are customizable. There is no limit to how many Instrument Panels can be created.



For a detailed look at what the Instrument panel does, please refer to the “Using the Instrument Panels” section of this document.

Keeping Your Software, Charts, and Data Up to Date

In Rose Point ECS, "Synchronization" refers to the process of making sure that installed charts, ship's log data, guide book information, and the program itself are all up to date.

The Program, Chart, and Data Synchronization panel near the top of the Settings Browser provides information about synchronization activity, gives controls to start or cancel a synchronization, and provides options for adjusting synchronizing behavior.

What happens during Synchronization

When Synchronization is started, Rose Point ECS will use an available internet connection to:

- Find out the latest version of Rose Point ECS
- Find out the latest update dates of charts in user selected regions
- Send any Application Logs or Error Reports created to Rose Point

By default, when program or chart updates are found, they will be downloaded automatically. Settings can be adjusted to have the Sync window check for updates, then display a Download button, asking for permission to begin the download. Settings

for synchronization behavior can be configured by clicking the Options button in the Program, Chart, and Data Synchronization panel.

Regardless of download settings, after Program or Chart updates have been downloaded permission will be asked to install them. If the Sync panel is open, it will display Install buttons. Otherwise a message will appear at the top of the Rose Point ECS window containing an Install button. Click this button to start the installation. Keep in mind that Program updates will require Rose Point ECS to be restarted.

If the update(s) cannot be installed right away, and the message at the top of the screen disappears, open the Settings Browser to install anything that has already been downloaded using buttons in the Program, Chart, and Data Synchronization panel.

How to Synchronize

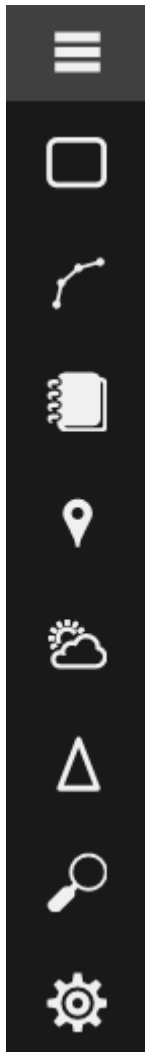
By default, a synchronization, or sync, happens each time Rose Point ECS is started. This can be disabled if internet connectivity is limited or if you prefer to manually manage control over access to the internet. Use the Options button to manage synchronization settings.

A sync can be triggered at any time by pressing the Sync Now button in Settings. If any program or chart updates are discovered, Download buttons will appear in the appropriate section. Click these buttons to begin the download.

After Program or Chart updates have been downloaded, Install buttons will appear. Click these buttons to begin installation. Program updates will require Rose Point ECS to be restarted.

The Settings Browser does not have to be open during Synchronization. Just click the Close button to hide the Settings Browser and continue using Rose Point ECS normally. Synchronization will continue in the background of the software. Sync status can be viewed at any time by clicking the Settings button again. When the download has completed, Rose Point ECS will display a completion message at the top of the program window.

Using the Browser



The Browser consists of panels that open beside the Work Area to show voyage plan information, navigation objects, guide book information, tide and current predictions, weather forecasts, and other useful data.

Buttons in the sidebar on the left side of the window provide quick access to the Browser panels. There is a button for each of the major areas of the program.

The top-most button shows three horizontal lines. Pressing this button will display an expanded sidebar with labels for each of the buttons as well as a few common commands such as Undo, Redo, and Help. Use the remaining buttons to select a Browser.

The first time a Browser is opened, it will show that Browser panel's "home" view. However, if a sub category in the panel is selected or the browser is closed, the next time the Browser sidebar button is selected the last panel viewed will be the panel displayed. Pressing the Browser sidebar button again will return the panel to its "home" view.

At times, one or more of the Browser Sidebar buttons will become highlighted with a colored bar on the left side of the button. This indicates that a component within the Browser requires attention. For example, the Settings button uses this to notify you that Program or Chart updates are available. When a highlighted sidebar button is clicked, a corresponding notification will be indicated within the Browser in a panel highlighted with the same color.

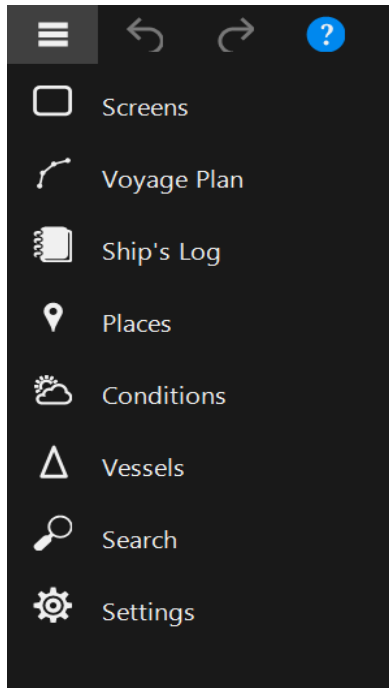
When a particular browser is open, an extra layer of symbols or additional content may appear on the chart. Clicking on any of these symbols will cause the browser to show information for that symbol. For example, when the Places Browser is open, symbols indicating the positions of places in the guide books will appear on the chart and clicking on those symbols will show those entries in the Browser.

Browser width can be adjusted by dragging the thin dividing bar between it and the Work Area.

Browsers have red Close buttons that can be used to close the panels. The Esc key can also be used to close these panels.

The Browser Categories

Each Browser category is covered by a separate chapter, but here are their basic descriptions:



Screens	Configure and select multiple custom screen layouts
Voyage Plan	Access document files, routes, marks, and other navigation objects
Ship's Log	Create and review log entries and access events, tracks, and Voyage Recordings
Places	Find facilities, anchorages, hazards, and local knowledge
Conditions	Get weather observations and forecasts, tide and current predictions, bulletins, and more
Vessels	Get information about other vessels
Search	Find places, vessels, and navigation objects, convert values between units, and lookup terms
Settings	Access configuration options and preferences, manage charts and add-ons, or check for updates

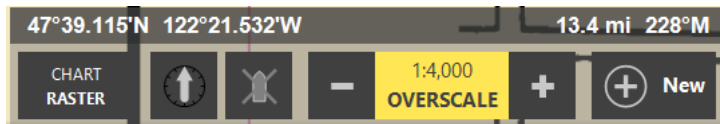
Property Panels

Property Panels are used extensively in Rose Point ECS and appear in the Browser. Just about anything selected in the Chart Panel will cause a tip to pop-up showing some information about the selection. These tips will include a Properties link to show additional details and options in the browser.

These panels can also be accessed by clicking the right-mouse button on the selection and choosing Properties from the menu that appears. The **Alt+Enter** hotkey will also cause the Property Panel to appear when an item is selected.

Using the Chart Panel

Most of the Rose Point ECS program window is usually used to show the chart. Along the bottom edge of the chart panel are several controls that look like this:



These tools include:

Chart Type – Select the type of chart to display and access other viewing options.

Orientation – Indicates the current chart orientation and allows selection between North Up, Course Up, and Heading Up.

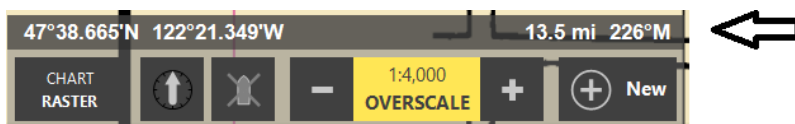
Follow Boat – Indicates the current auto-scroll mode and allows selection between Follow Boat and Look Ahead modes.

Scale – view and adjust the chart viewing scale. This option contains three buttons; one to zoom out, one to select specific charts or scales, and one to zoom in.

New – Create new marks, routes, and other navigation objects.

Status Bar

A status bar appears above the tools when the mouse is being used over a chart panel.



The status bar displays the following information:

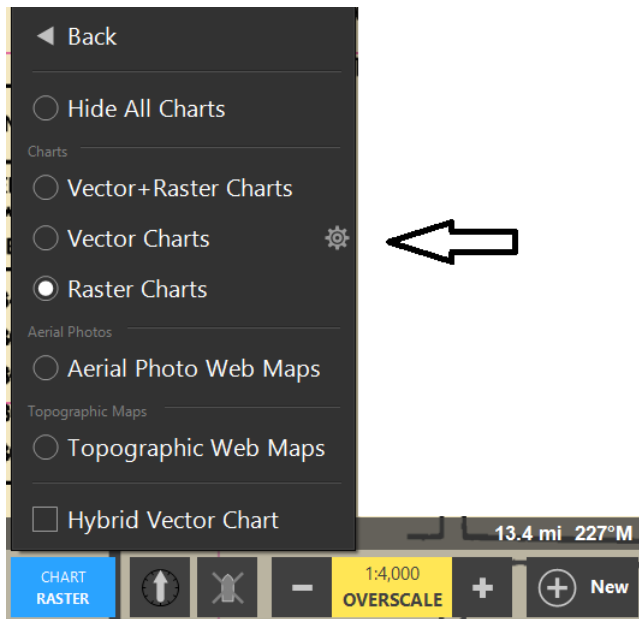
- The latitude and longitude at the mouse cursor.
- If the boat position is known, the range and bearing from the boat to the mouse cursor.

Chart Type: Selecting the Type of Chart to Display

Rose Point ECS can display Vector Charts, Raster Charts, photo charts, topographic maps or a combination of chart and map types.

To select chart types for display using the on-screen controls:

- Use the Chart Type menu option to select Hide All Charts, Vector+Raster Charts (both Vector and Raster charts), Vector Charts, Raster Charts, Photo Charts, Topographic Maps, or other options.



To select chart types for display using the keyboard

- Press the **V** key to show vector charts.
- Press the **R** key for raster charts.
- Press the **P** key for photo charts.
- Press the **O** key for topographic maps.

Hold down the **Shift** key when using **V** or **R** to turn just that type of chart on or off. Example: If vector charts are selected, to view both vector and raster charts, press **Shift+R** to turn raster charts on without turning vector charts off.

Hybrid Vector/Raster Chart Display

The water portion of a Vector Chart can be overlaid on top of the land portion of a Raster Chart, Aerial Photo Web Map, or Topographic Web map by using the Hybrid Vector Chart option (also the **H** key).

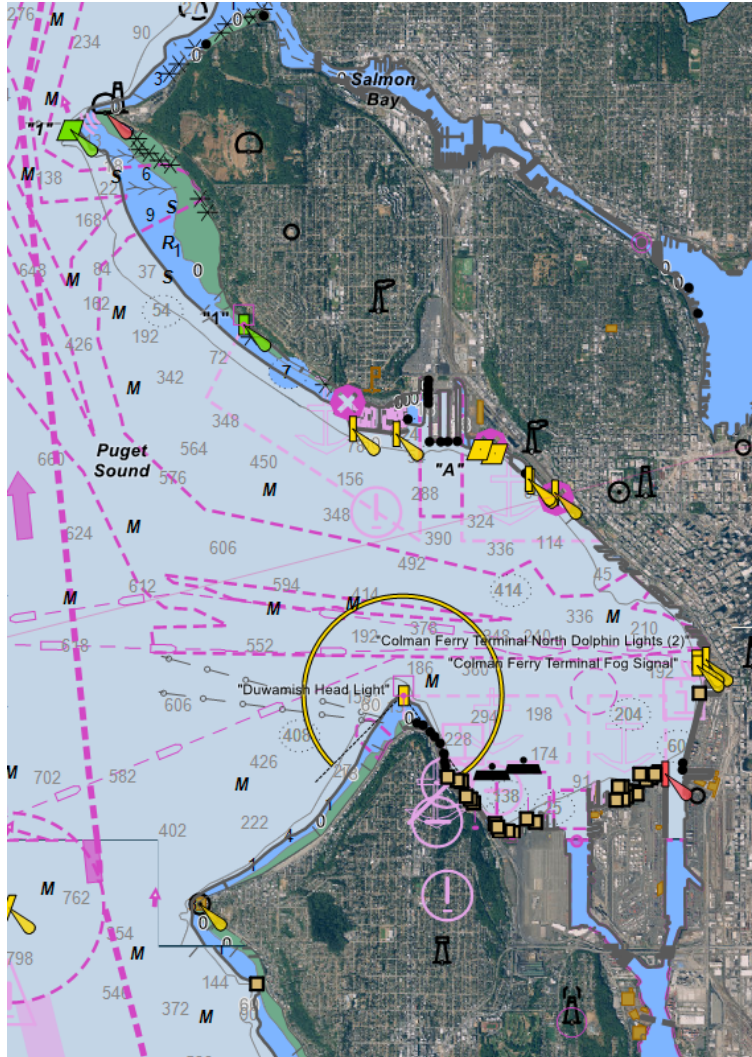


Chart Orientation

By default, Rose Point ECS displays charts with True North at the top of the screen but can also be set to display Heading Up or Course Up using the Chart Panel tools. The Course and Heading options will rotate the chart as the vessel's course or heading changes in order to keep them "up."

Pressing the **U** key will cycle the orientation between the available options.

Scrolling and Zooming

Scrolling and zooming are fundamental operations that are used frequently in Rose Point ECS. With the quilting feature turned on, Rose Point ECS will automatically select the best charts to show from its portfolio as the zoom level or scrolling of the chart panel changes. Because scrolling and zooming are so important, Rose Point ECS provides several ways of doing them using either the mouse or keyboard.

IMPORTANT NOTE



When the Chart Window is split, all the keyboard methods of scrolling and zooming will only affect the primary chart panel (normally the one on the right). The mouse methods will affect whatever chart panel the mouse is pointing at.

To scroll with the keyboard

- The **Arrow** keys will move the displayed chart area in the direction of the arrow.
- Holding down the **Shift** key while pressing an **Arrow** key will double the scrolling speed.
- Using the **Page Up** key will move the chart display in the direction of the vessel's heading, or in the direction of the next Waypoint when in Course Up mode. The **Page Down** key will move the chart display in the opposite direction.
- The **Home** key will move the chart display to the boat's location and resume the last used Auto Scrolling mode (Follow Boat, Look Ahead, etc.). Subsequent presses will cycle through the various Auto Scrolling modes.

To scroll with the mouse

- Point to the chart, press and hold the left mouse button, move the chart around, and release the button.

To scroll with a touch screen

- Touch and hold a finger to the chart, move it around to pan the chart.

To zoom in and out with the chart panel tools

- Press the Zoom In or Zoom Out buttons, or
- Click on the Chart Scale and select an option from the menu that appears.

To zoom in and out with the keyboard:

- Use the + key to zoom in.
- Use the - key to zoom out.

The main keyboard + and - keys will work as will the keys on the number pad (if keyboard is equipped). When using the keys on the main keyboard, it is not necessary to hold down the Shift key even if the + is normally a shifted character.

To zoom in and out with the mouse

- If a connected mouse has a scroll wheel, roll the wheel up and down to zoom in and out.

To zoom in and out with a multi-touch screen

- Touch the screen with two fingers and either move them closer together to zoom out, or farther apart to zoom in.

To scroll and zoom with the Chart Overview panel

- With the left mouse button, drag the viewing area outline around in the Chart Overview panel to scroll.
- While pointing the mouse cursor at the Chart Overview panel, use the mouse scroll wheel to zoom in and out.

Scale Warning

The scale button and indicator will sometimes provide a warning about the chart being viewed. These warnings include:

UNOFFICIAL

This indicates that the chart being displayed is not from an official source.

RCDS MODE

This indicates that the chart being displayed is raster and therefore Rose Point ECS is in the RCDS mode (Raster Chart Display System).

DATE DEP

This indicates that some chart objects that exist in the area are not being displayed because they are date dependent.

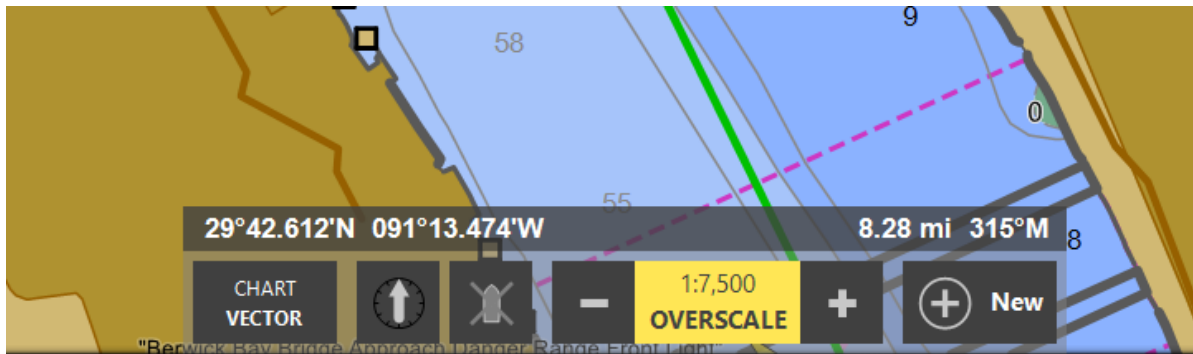
MORE DETAIL

This indicates that a more detailed chart is available covering the area being viewed. Zooming in will eventually show the most detailed chart, or you can click on the scale button to see a list of charts and then directly select the one with the largest scale.

OVERSCALE

Because Rose Point ECS allows the adjustment of chart viewing scale to anything between 1:1,000 and 1:100,000,000, there are times that the chart image displayed is

magnified to the point of implying more detail than is in fact provided. This is clear with Raster Charts as they start to look pixilated, but Vector Charts tend to look clear even at extreme magnifications.



WARNING: Zooming in on a chart past its scale is like using a magnifying glass on a paper chart; it might seem "bigger," but additional detail will not display. When the Overscale indicator appears, be sure not to rely on detail that is not actually present!

Bookmark

A "bookmark" can be set to quickly get back to a specific chart panel. Returning to the bookmark will restore the location, scale, and orientation that were in use when the bookmark was set.

To bookmark an area:

- Press the **F9** key to bookmark the currently displayed area.

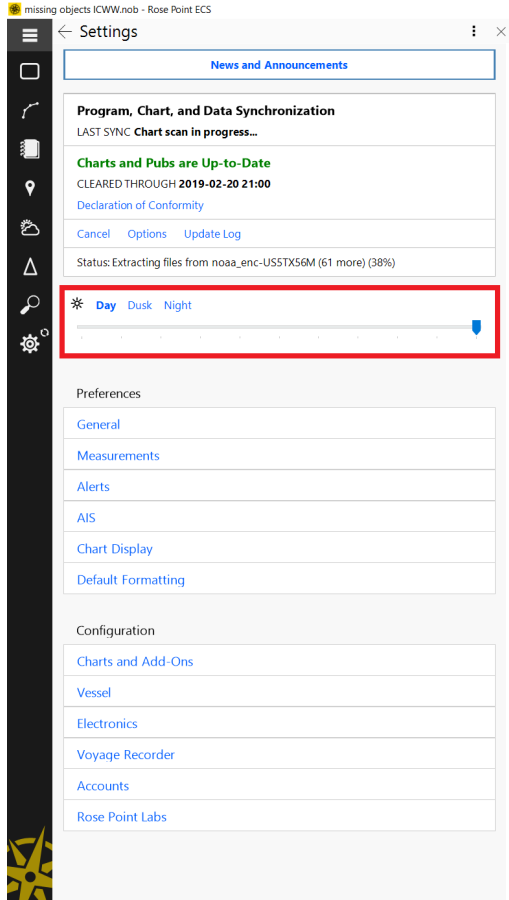
To return to a bookmark:

- Press the **F10** key to return to the bookmarked area.

Each time **F10 is pressed the chart** display will jump back and forth between the bookmarked area and the area you were looking at before going to the bookmark.

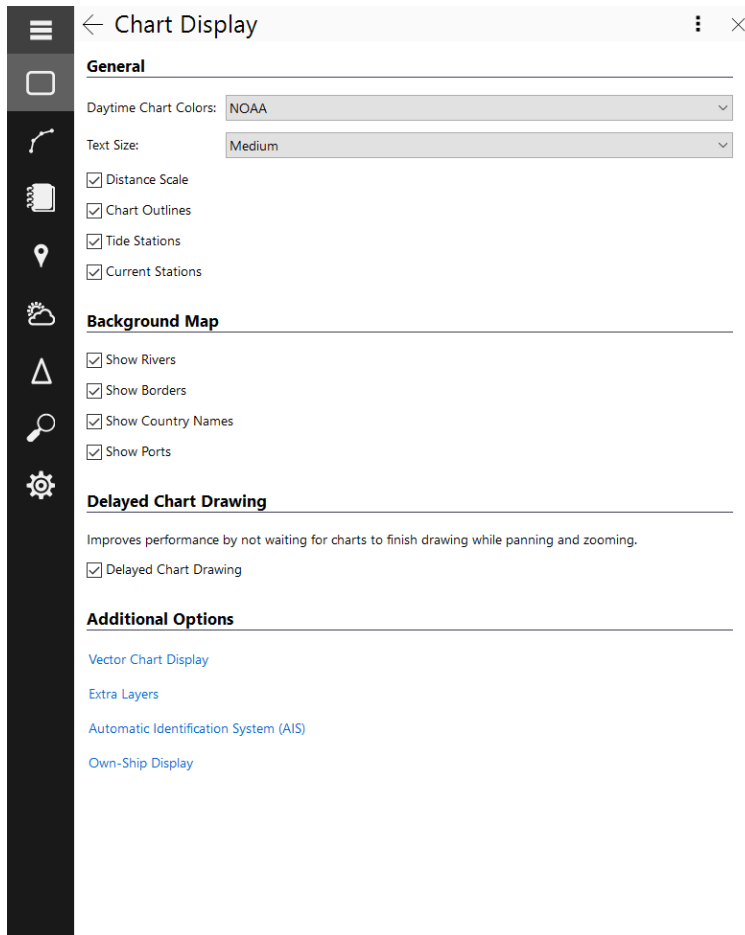
Controlling the Amount of Detail You See

The **Chart >Type > [gear]** panel contains many options to control how much detail is displayed on a vector chart. Vector Charts provide the most flexibility over the level of detail displayed as they are made up of individual objects that can be hidden or shown based on their type. The gear on the menu indicates that there are settings available for this option. Clicking the gear will open the browser with options that can be selected.



There are two other places where chart presentation can be controlled. The first is in the "home" view of the **Settings** Browser. This is the **Day/Dusk/Night mode** feature, which also contains a dimming slider control. These options are placed at the top level of settings as it is a frequently accessed feature.

The second chart presentation settings location can be found at **Settings > Chart display**.



In this panel controls are available for **Daytime Chart Colors, Text size, Background Map** features, **Delayed Chart Drawing** options and **Additional Options**.

Daytime Chart Colors change the chart color standards to NOAA, CHS or ECDIS.

Text Size may be adjusted for the overall size of text shown on the chart. (Since raster charts are just an image of the paper chart that is then "stretched" to display on the computer screen, these commands cannot change the size of text on those charts.)

The **Background Map** features can be set to show or hide on the chart display. The background map only shows when no other installed chart is available.

Delayed Chart Drawing can be enabled or disabled. This is a performance feature that allows for faster panning and zooming by not continually redrawing charts while these operations are in progress.

There are **Additional Options** panels that can be accessed through this browser panel. These are property panels for **Vector chart display, Extra layers, AIS** and **Own-Ship Display** properties. These panels are discussed in their respective sections in this guide.

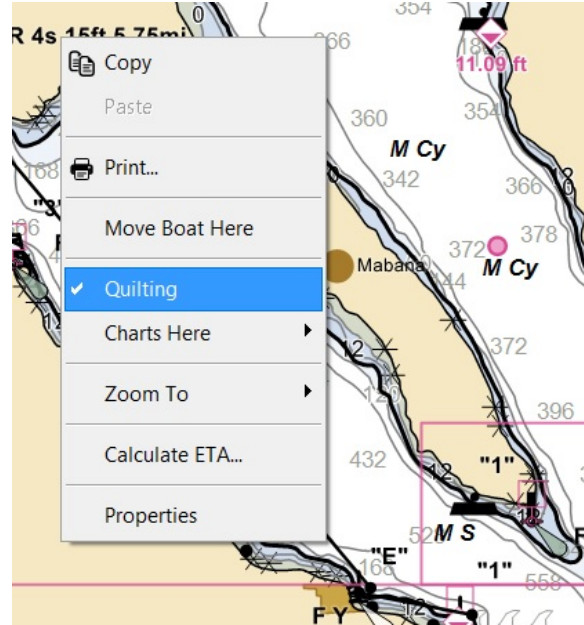
Quilting

Exploring an area or planning a trip usually requires multiple charts. "Quilting" is the technique of digitally "stitching" together multiple charts so that everything lines up correctly.

When Quilting is on, Rose Point ECS will search the chart portfolio for the most appropriate charts to display for the intended viewing area, the viewing scale being used, and the type of chart selected. It will then fill as much of the screen as possible with available and appropriate charts.

When Rose Point ECS is picking the charts to include in the quilt, it will only select charts that have scales that are reasonably close to the viewing scale. If a chart does not display in a particular area, zooming in or out may be required for it to appear.

When the **Chart Type > More Options > Chart Outlines** option is enabled, an outline of each chart is displayed, even if certain charts do not display in the quilt due to a substantial difference in scale. When the Zoom Controls are used on the Chart Panel Toolbar, the outlines of charts that are within range of the viewing scale are shown thicker than the other chart outlines.



Individual charts can be manually hidden or shown while the Quilting feature is still enabled. This is done by clicking the right mouse button on that chart, selecting the Charts Here option from the menu, and then selecting the chart from the menu of charts. Hidden charts need to be unhidden to be included in the automatic Quilting process. Restarting Rose Point ECS will un-hide hidden charts.

When Quilting is off, Rose Point ECS will use the best chart to cover the center of the screen and display only that chart. This can be overridden by clicking the right mouse button on the chart and selecting a chart from the Charts Here list. Selecting the Automatically Select Best Chart option will let Rose Point ECS decide which chart to display again.

Whether Quilting is on or off, the parts of the screen not covered by a real chart are filled with a base-map. Though it contains limited definition, the base map must not be used for navigation as it lacks the detail that is necessary. Nonetheless, the base map may be used to locate features with the Gazetteer and guide books or get an overview of Navigation Objects over a large area.

To turn the Quilting feature on or off:

- Right-Click on a Chart Panel
- Select the Quilting option.

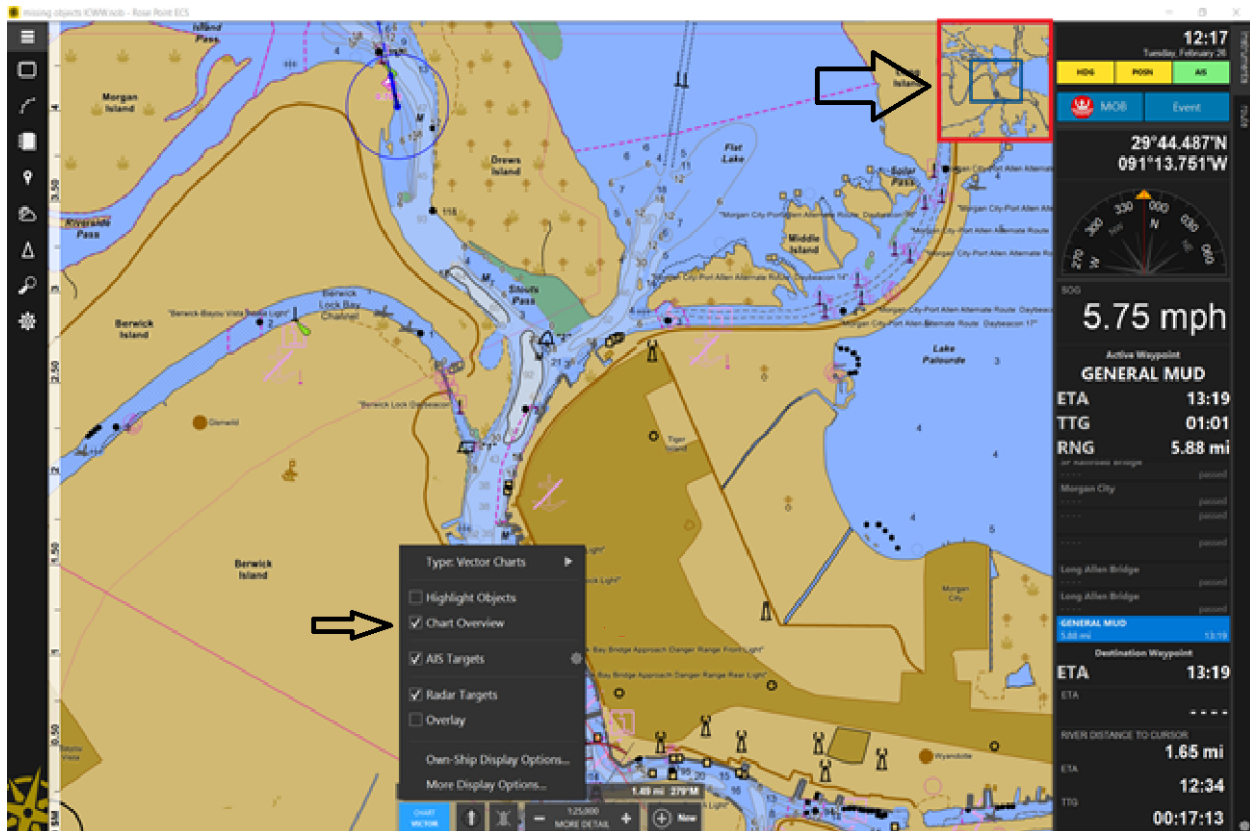
Chart Overview

The Chart Overview optionally appears in the top-right corner of each Chart Panel and displays an overview of what the chart panel is showing. The Chart Overview is always oriented North Up.

To hide or show the chart overview select the **Chart Type** button at the bottom of the screen and toggle the **Chart Overview** option.

Inside the Chart Overview is a rectangle that outlines the actual area displayed in the chart panel. One side of this rectangle has a dot on it to indicate which side is up in the chart panel.

The rectangle may be dragged around with the mouse to scroll the chart. Double-clicking in the rectangle will zoom in and double-clicking outside the rectangle will zoom out. If a mouse with a scroll wheel is available, using the scroll wheel while pointing at the Chart Overview will change the scale of the Chart Panel.

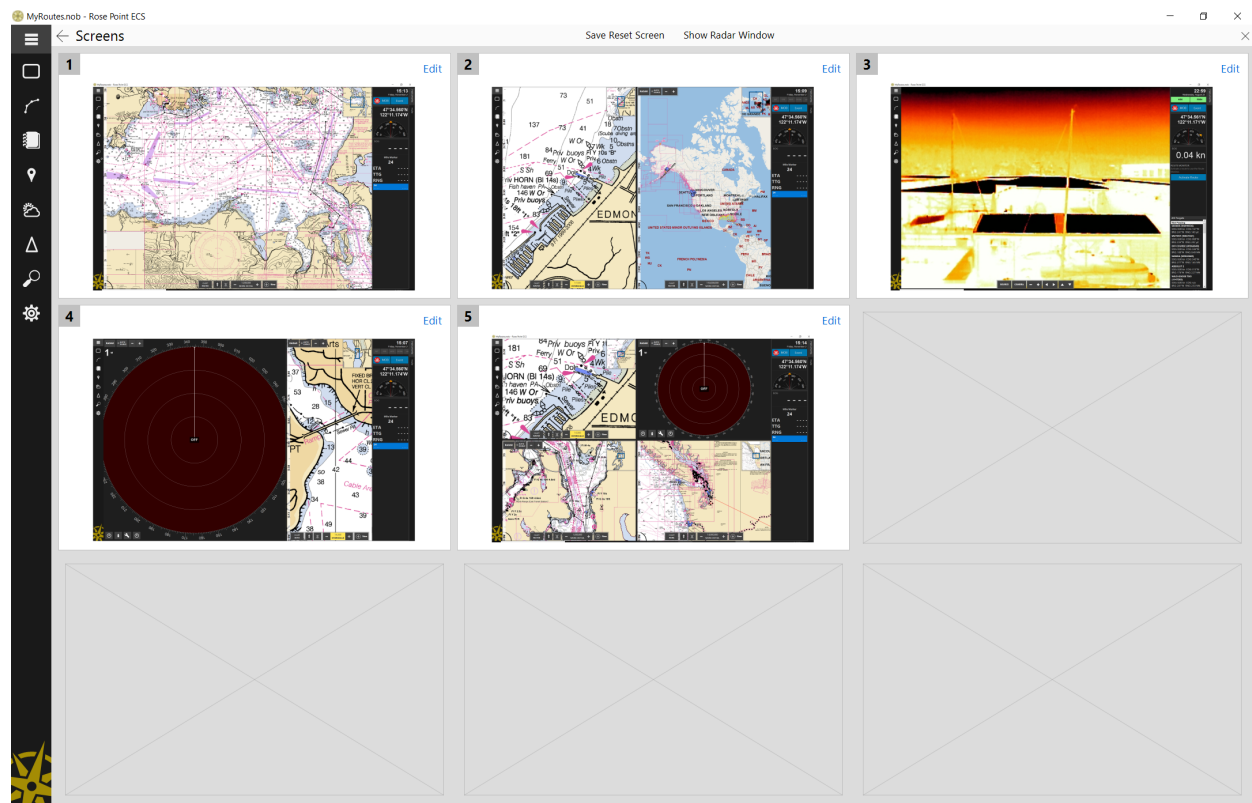


Screens Browser



The screens browser allows the configuration and selection of customizable screen layouts.

Rose Point ECS provides the ability to create nine customizable screens to choose from. Each of these screens can show various combinations of one or more chart, video, radar, sounder, or other panels. Chart and Video panels are standard while the other panels are made available with applicable add-ons.



If the system has the Rose Point Radar Add-On installed, a stand-alone radar window can be created to use on a secondary monitor. This window can be created using the Show Radar Window button on the Screens Browser toolbar. If the Rose Point Instrumentation Add-On is installed, that menu provides commands to create other new windows and to edit Instrument Panels.

To Select a Screen Layout to Use

- Go to Screens
- Click on the screen thumbnail image

Keys **1** through **9** on a keyboard can also be used to select one of the screens without using the Screens Browser.

To Customize a Screen

- Go to Screens
- Click the Edit button of the Screen in the corner of the thumbnail
- Make the desired changes:
- Use the **+Panel** button at the top to select a type of panel to add to the Screen
- Drag the panels around the Screen plan to position them
- Remove unwanted panels with the red **X** button

Click **Done** when all changes have been made.

Screen Options

Each Screen has several options available to control what happens when a Screen is selected. To access these options, use the Options button on the top toolbar while editing a Screen. This is what each of the options does:

The screenshot shows a dialog box titled 'Rose Point ECS' with a close button (X) in the top right corner. The dialog is divided into several sections:

- Screen Options**: Contains a 'Title:' text input field and a checkbox labeled 'Prevent changes to panel options and splitter from being saved'.
- Instrument Panels**: Contains the text 'When switching to this screen:' followed by three radio button options: 'Leave the instruments alone' (selected), 'Hide the instruments', and 'Select an instrument panel'. Below these is a dropdown menu labeled 'Instrument panel:'.
- Track**: Contains the text 'When switching to this screen:' followed by three radio button options: 'Do nothing with tracks' (selected), 'Stop tracking', and 'Start a new track'.
- Marks**: Contains the text 'When switching to this screen:' followed by a checkbox labeled 'Add a boundary circle alarm at boat's position' and a text input field labeled 'Radius:' with the value '0.1 NM'.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Title Set a title for a custom Screen. It will appear next to the screen's thumbnail in the Screen's browser. Pick a title that is relevant to the Screen's intended purpose (this is particularly important when any of the other options are set).

Prevent changes to panel options and splitter from being saved Rose Point ECS will normally save changes to some panel options, such as the chart type and scale, follow mode, orientation, and splitter positions automatically as those changes are made. Enabling this option will prevent that from happening and lock the screen configuration to how it was set in the editor.

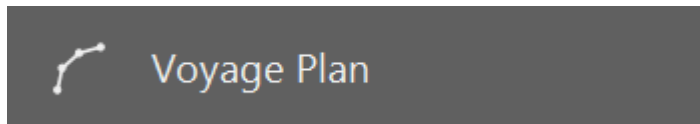
Instrument Panels Hide instrument panels or set a specific instrument panel to be selected when the screen is

activated.

Track Turn tracking off or start a new track when the screen is activated. It can be beneficial to stop tracking when creating a Docked Mode or start a new track when creating an Anchor Mode.

Marks Set a boundary circle alarm to be created at the current boat location when the screen is activated. This is useful for creating an Anchor Mode that sounds an alarm if you start dragging anchor.

Voyage Plan Browser



The Voyage Plan Browser provides several ways of working with your voyage plans.

Depart This page combines several features that you might need to use to begin navigation, including selecting a route, adjusting your vessel configuration, and updating your AIS transponder.

Files This page lets you create new voyage plan documents, save the current document to a new file, and open different voyage plan documents.

Routes This is a list of all the routes in the currently open Voyage Plan Document. Selecting Route Details on this page shows more information about a single route including a tabular view where each row represents one leg.

Marks This shows lists of marks and other navigation objects contained in the currently open Voyage Plan Document.

The Depart Page

The **Depart page** is the default (home) view in the Voyage Plan Browser.

The role of the depart page is three-fold:

- Selecting a destination and route for the voyage.
- Verifying the vessel configuration for the voyage.
- Updating voyage information and status in your AIS transponder.

In addition, If the Rose Point ECS +Inland Add-On is installed, tows can also be configured from this page.

The Destination section displays the destination and route.

If a Class A AIS transponder is connected, an AIS Information section will be displayed.

Start or Stop Navigations buttons will also display depending on navigation status.

Destination

The first thing to do when departing is to choose a destination and the route you intend to use to get there. When you open the Depart page, you will be prompted for a

destination and once that is selected, you will be prompted with any route options that are found or an option to make a new route if necessary.

If you already have the route you want to follow you can use its **Activate** command to bypass the route selection process on this page.

The most efficient use of this panel is to select a pre-existing route. If the destination changes and a route exists between the vessel's current location and the selected destination, the route will be suggested. The destination entered must be within one mile of the route's endpoint. The starting point of the route must be within one mile of the vessel's current position.

If a usable route doesn't already exist in the document, the Destination section of the panel may also be used to create a route and works similarly to the Add Route panel but with the origin point fixed to the vessel's current location.

A set destination can also be a specific latitude and longitude, the name of a mile marker, or the name of a place. When the destination box is modified, a search is performed, and the results are listed below the box. In the case of a latitude/longitude or mile marker only a single option may be listed, but in the case of a place name, several places may be listed.

Named places are limited to those found in the USCG "US/GUID" database which lists the official AIS destination encodings (see <https://www.navcen.uscg.gov/pdf/AIS/AISGuide.pdf>).

(Clicking on the chart will also select a destination. The generated destination marker (a red circle labeled "Destination") can be moved around the chart.)

Clicking on a place in the list will select that place as the Destination. When a place has been selected, the Destination box is replaced with the name of the place and a **Change** button. The search results list will stop displaying at this point. The **Change** button needs to be clicked in order to select new destination. Clicking on the **Change** button will reopen an edit box with the search results list.

Once a destination has been selected, a list of potential routes is displayed. This list will include any routes or tracks that are in the current voyage plan document, or in any background layers added by your administrator. If the +Inland Add-On is installed, and the vessel and destination are on the waterway network, an Automatic River Route is also offered in this list.

You can now select one of the routes from this list to use.

Once you have selected a route, the list of routes is replaced with information about the selected route and a button allowing you to change the destination or route.

← Voyage Plan Share ▾ ×

Depart Files Routes Marks **Route Details**

PIPELINE CONSTRUCTION & MAINTENANCE, SLIP AND WHARF

TOTAL DISTANCE **24.1 mi**
 PLANNED SPEED **6.90 mph**
 DEPARTURE TIME **14:14**
 ETA **17:44**
 TOTAL TIME **3 hours 30 mins**

[Change Departure Time and Speed](#)

ETA 14:14 HN 12.0 29°14.041'N 090°40.230'W Starting Location
24.1 mi
ETA 17:44 HN 36.0 29°33.993'N 090°42.870'W ⓘ CATEGORY Bascule Bridge HORIZONTAL CLEARANCE 125 ft VERTICAL CLEARANCE (CLOSED) 39.7 ft
ETA 17:44 HN 36.0 29°33.993'N 090°42.870'W ⓘ CATEGORY Fixed Bridge
ETA 17:44 HN 36.0 29°33.993'N 090°42.870'W ⓘ CATEGORY Swing Bridge HORIZONTAL CLEARANCE 125 ft VERTICAL CLEARANCE (CLOSED) 1 ft
ETA 17:44 HN 36.0 29°33.993'N 090°42.870'W ⓘ CATEGORY Bascule Bridge HORIZONTAL CLEARANCE 125 ft VERTICAL CLEARANCE (CLOSED) 39.7 ft
ETA 17:44 HN 36.0 29°33.993'N 090°42.870'W ⓘ CATEGORY Fixed Bridge
ETA 17:44 HN 36.0 29°33.993'N 090°42.870'W PIPELINE CONSTRUCTION & MAINTENANCE, SLIP AND WHARF

After selecting the route, you should review its details, including the planned departure time and check for obstacles along the route.

At this point the AIS information block will reflect the start and the end of the route with the proper USCG "US/GUID" encoding. When the **Start Navigation** button is clicked, Rose Point ECS will send the information to the AIS and set the vessel status to underway.

Vessel Configuration

In the Vessel Configuration area, you can adjust voyage-specific vessel parameters such as (and perhaps limited to) the draft and air-draft. This block will display the current set values and include a “change” button. If you change the draft or air draft values, the selected route will be re-checked for obstacles. The draft entered here will be used for the AIS block if appropriate.

If the Rose Point ECS +Inland Add-on is installed, your tow can also be changed in the Vessel Configuration section.

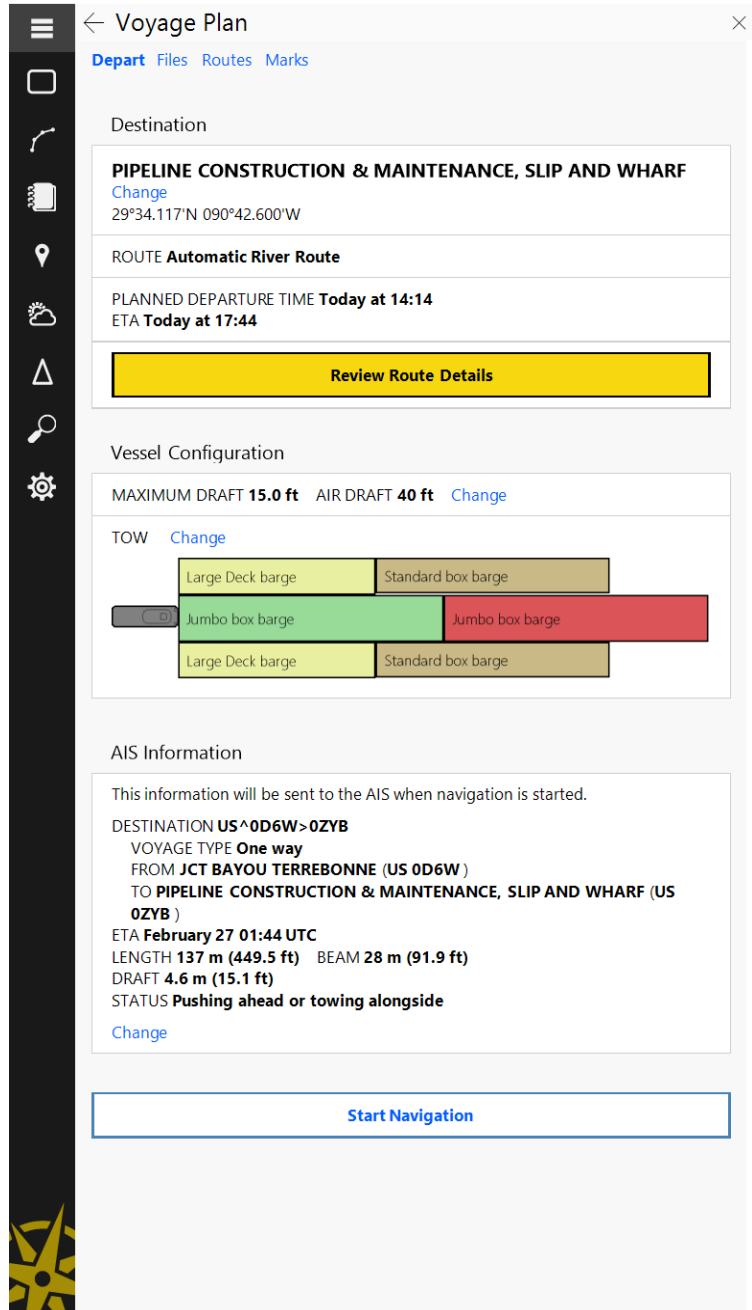
If you change the vessel configuration, the Review Route Details button will become highlighted as a reminder that you should double check the route for obstacles.

AIS Configuration

Next on the page will be the current AIS configuration. You can review and adjust this before it is sent to the transponder. (Note that the destination, ETA, and overall size will automatically get adjusted.)

Start Navigation

At the bottom of the page is a big button to Start Navigation. Pressing this will close the Browser, activate the route, start a new track, push the configuration to the AIS and set the appropriate underway status, create a log entry, and perform any other appropriate actions.



The screenshot displays the 'Voyage Plan' interface. On the left is a vertical navigation menu with icons for home, back, list, location, weather, warning, search, and settings. The main content area is titled 'Voyage Plan' and includes a close button. Below the title are tabs for 'Depart', 'Files', 'Routes', and 'Marks'. The 'Destination' section shows 'PIPELINE CONSTRUCTION & MAINTENANCE, SLIP AND WHARF' with a 'Change' link and coordinates '29°34.117'N 090°42.600'W'. The 'ROUTE' is 'Automatic River Route'. The 'PLANNED DEPARTURE TIME' is 'Today at 14:14' and 'ETA Today at 17:44'. A yellow 'Review Route Details' button is prominent. The 'Vessel Configuration' section shows 'MAXIMUM DRAFT 15.0 ft' and 'AIR DRAFT 40 ft', both with 'Change' links. The 'TOW' section shows a diagram of a tow configuration with 'Large Deck barge', 'Standard box barge', and 'Jumbo box barge' components. The 'AIS Information' section contains text: 'This information will be sent to the AIS when navigation is started. DESTINATION US^0D6W>0ZYB, VOYAGE TYPE One way, FROM JCT BAYOU TERREBONNE (US 0D6W), TO PIPELINE CONSTRUCTION & MAINTENANCE, SLIP AND WHARF (US 0ZYB), ETA February 27 01:44 UTC, LENGTH 137 m (449.5 ft) BEAM 28 m (91.9 ft), DRAFT 4.6 m (15.1 ft), STATUS Pushing ahead or towing alongside'. A 'Change' link is at the bottom of this section. A large blue 'Start Navigation' button is at the bottom of the page.

Stop Navigation

When a route is active, the very top of this page will show a **Stop Navigation** button. When navigation is stopped, you will be prompted to set a new AIS navigation status and will be given the option of starting a new track or disabling tracking.

The Files Page

The Files page is used to manage your Voyage Plan Document files as well exporting and importing routes and marks to and from other file formats.

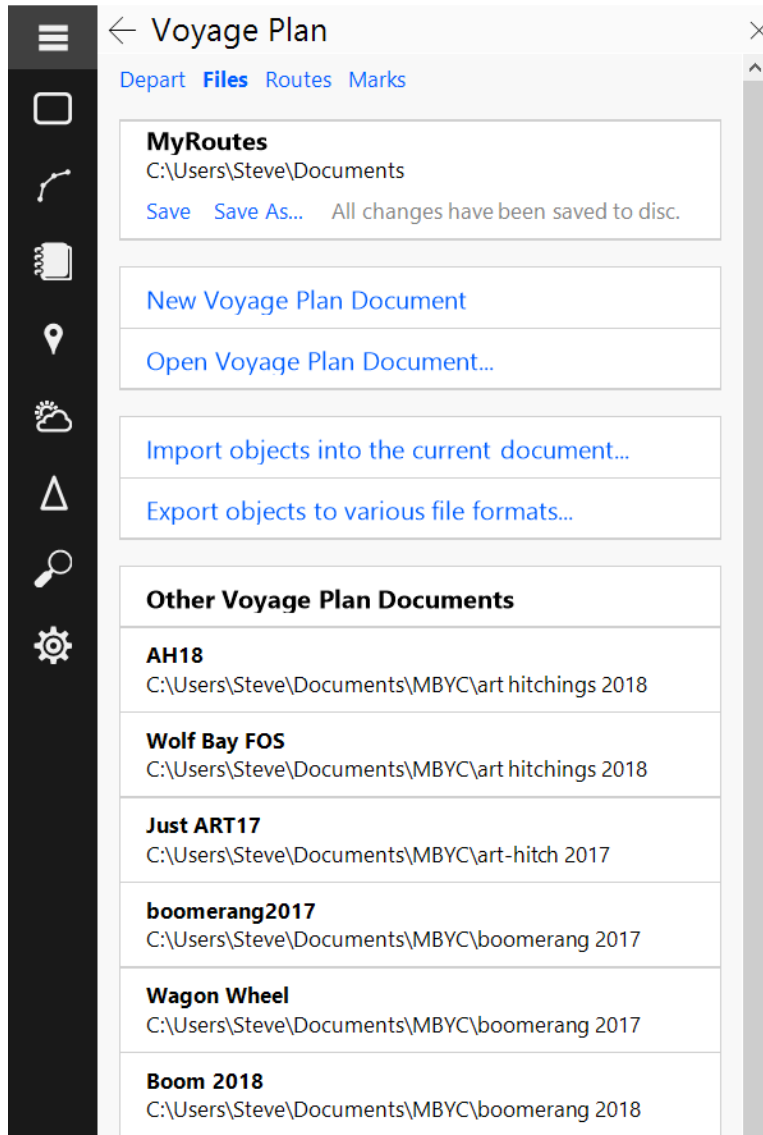
Using Documents

Unlike chart plotters and most other navigation software, Rose Point ECS uses document files to store your Navigation Objects. This allows for flexibility in how navigation objects are organized and provides some other features unique to Rose Point ECS.

The first time Rose Point ECS is started, an empty document called MyRoutes is created. There is no limit to how many routes or other navigation objects can be created and stored the document. It is also possible to create any number of documents and save them anywhere on the system.

One application of this ability is to create a new document for each voyage. The document could contain numerous routes, marks, and boundaries associated with that particular voyage. The document will also store the vessel's tracks if tracking is enabled. This document can then be kept in the PC's Documents folder (or anywhere else on the system) to be accessed at a later date. Meanwhile, a new document for a different voyage can be created without having previous voyages clutter the chart display.

In the event that everything is saved in one document but needs to be reorganized by cruising area, specific sets of information can be copied from the original document to a new one. To do this, load the original document in Rose Point ECS. Then drag a selection around all the objects in an area (Click and drag with the right mouse button). Use the Copy command (**Ctrl+C**) to copy all of those objects to the Windows Clipboard. Then use **Voyage Plan > Files > New** to create a new document. Use Paste (**Ctrl+V**) to



paste the objects from the clipboard into the new document. Then use **Voyage Plan > Files > Save As** to save the new document with a name appropriate for that region.

When cruising with other boats, a Voyage Plan can be shared with another Rose Point ECS user by sending them an email message with the Voyage Plan attached just as if it were a picture or other document. When the other vessel receives the email message, the attached file can be opened from the email program. Rose Point ECS will start and display the Voyage Plan.

Many users plan their voyages with one computer and then use another on their boat. Since Rose Point ECS uses normal document files, it is easy to transfer a Voyage Plan to another computer using a USB Flash Drive or other portable storage device.

Creating a New Document

A new document is created with the **Voyage Plan > Files > New Voyage Plan Document** command.

Opening an Existing Document

An existing document may be opened using **Voyage Plan > Files**. A list of recently used Voyage Plan documents will be displayed as well as a list of all documents found in within Windows Documents folder. There is also an option to Open Voyage Plan Document which allows you to select any Voyage Plan file on the system to open. The standard **Ctrl+O** key is a shortcut for that option.

When Rose Point ECS is started, it will automatically try to open the last document that was being used. If that document is missing (or you haven't had one open yet), a new empty document is created at start-up.

A document can also be open from Windows Explorer by double-clicking on its icon or by dragging the icon over the Rose Point ECS window and dropping it.

If a document is received as an e-mail attachment, using the e-mail program's Open Attachment command will prompt Rose Point ECS to open the document. PLEASE NOTE: By using an e-mail program's Open Attachment command, the document will likely be placed in a temporary folder by the e-mail program. Therefore, it is recommended to use the **Voyage Plan > Files > Save As** command in Rose Point ECS to save the document in a known place.

Saving a Document File

A document is saved to a file with the **Voyage Plan > Files > Save** and **Voyage Plan > Files > Save As** commands.

The Save command will save the document to its original file while the Save As command saves the document to a different file name.

When the Save As command is used to save to a different file, the software will switch over to that new document. Example: If a document is opened called "one" and is then saved as "two," the software will then use the document called "two" and "one" will remain unchanged in its original file.

The **Voyage Plan > Marks > Export** command provides a way to save part of the current document to a new file which can either be a Rose Point ECS document, or some other file format for use with other programs.

The Clipboard (Cut, Copy, and Paste)

Like most Windows applications, Rose Point ECS makes use of the Windows Clipboard to transfer objects from one place to another using standard Cut, Copy, and Paste commands.

The Clipboard is a temporary place to keep objects of just about any type. When an object is cut, it is moved to the clipboard. Copying an object leaves the original alone but places a copy of it in the clipboard. Paste copies the contents of the clipboard to the currently open document.

Rose Point ECS lets allows the selection of multiple objects, so a group of objects can be moved or copied with one Cut/Copy and Paste operation.

To move or copy and object from one document to another:

- Open the document that has the desired object to move or copy.
- Select the object.
- Use the **Ctrl+X** (Cut) or **Ctrl+C** (Copy) command.
- Open or create the document to move or copy the object to
- Use the **Ctrl+V** (Paste) command.

To select more than one object at a time:

- Select the first object by clicking on it
- Select additional objects by clicking on them while holding down the **Ctrl** key, or:
- Drag a selection rectangle around a group of objects using the right-mouse button.

TIP:

When an area is copied, the clipboard ends up with a copy of each object within that area as would be expected. It will also contain an image of the selected area that can be pasted into an image painting program, word processing document, or even an e-mail message. It is also possible to get an image of the visible area of the chart if the copy command is used when nothing is selected.

The Routes Page

The routes page lists all of the routes in your voyage plan document and lets you perform various actions on them. The routes page also has button that can be used to create a new route.

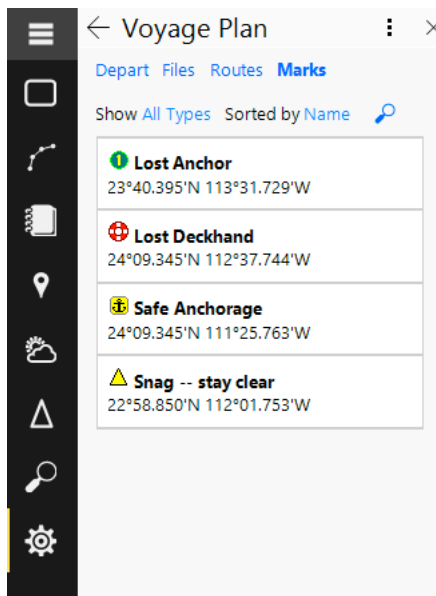
When you select a route in the list, a menu of options will appear and that route will be shown highlighted on the chart. The options include:

- **Details** Selecting this will switch to the Route Details page where you can see and adjust the departure and arrival times, total distance, and a list of the legs and waypoints making up the route.
- **Hide/Show** Selecting this will hide or show the route on the chart. Routes always appear in the list, but hidden routes will appear in gray rather than black.
- **Activate** Selecting this will switch the Depart page with the route already selected so you can quickly verify your vessel configuration and start navigating.
- **More** Selecting this displays a menu of additional actions you can take on the route. This menu can also be accessed by right-clicking on a route on the chart. These actions are described in more detail in the Using Routes chapter.

You can select more than one route in the list at a time by using the Shift and Ctrl keys when you click. To select a series of routes, start by clicking on the first route, then hold down the Shift key and click on the last route. All routes between the two clicks will be selected. To select multiple routes that are not in a series, use the Ctrl key when clicking on a route to add or remove that route from the selection. With multiple routes selected, you can hide or show, lock or unlock, or delete all of the selected routes at once.

The Marks Page

While your Navigation Objects typically show up on the chart, Rose Point ECS also lists them in tables in the Voyage Plan and Ship's Log Browsers. Routes will appear on the Routes page of the Voyage Plan Browser, Events and Tracks appear in the Ship's Log



Browser, and other types of objects appear in the Marks Browser. The Marks Browser normally shows a list of all Navigation Objects sorted by their names.

This list can be set to show only one type of Navigation Object by using the Show option. Sorting of the list can be changed using the Sorted by option. (Selecting the current sorting option will reverse the order of the list.)

Navigation objects can also be searched for the by clicking the magnifying glass and entering a Name or part of a Name. The list will change to show only objects that match what you type.

Selecting an object in a list will pan the primary chart panel to show that object, and vice versa. A Navigation Object's menu can be accessed by right-clicking on the

object in the list or on the chart.

More than one object at a time can be selected in a list by using the **Ctrl** key while clicking on an object to add it to or remove it from the selection.

Each object in the Browser has a Show or Hide option that can be used to hide or show the object on the chart panel. Since hidden objects don't appear on the chart (unless they are currently selected), this is the only way to show them again.

Using Marks, Annotations, Waypoints and Events

Marks, Annotations, Waypoints, and Events all behave the same but are created a little bit differently. Marks show up as a small icon with a name underneath, Annotations are just marks without icons, and Events are marks that are always created at the boat's location and with a name that describes when the event was created. Waypoints are marks that are created when making a Route.

The functions for manipulating Marks, Annotations, Waypoints, and Events are identical. They are available by clicking the right mouse button on the object.

Lock Mark Position - Prevents the Mark from being moved.

Unlock Mark Position - Allows the Mark to be moved (unless the Mark belongs to a Route which is locked).

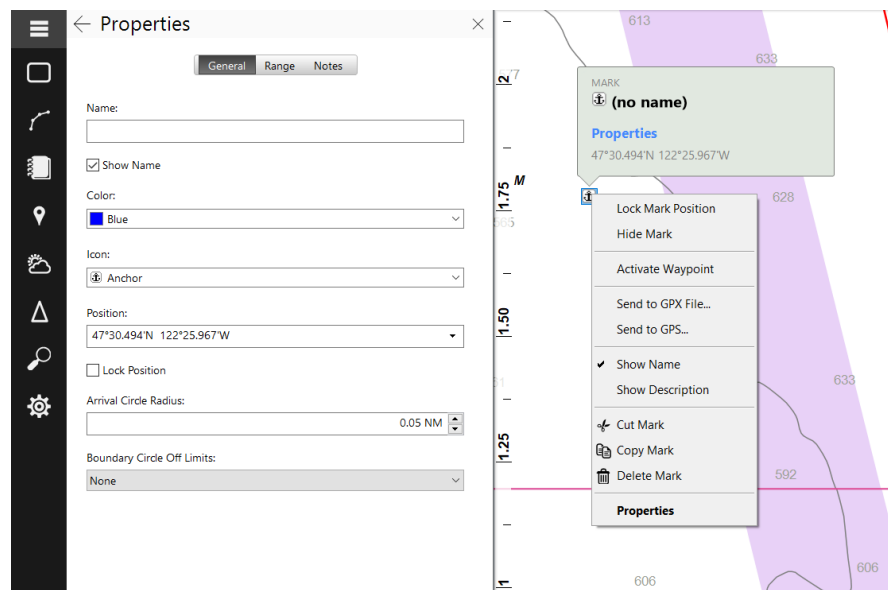
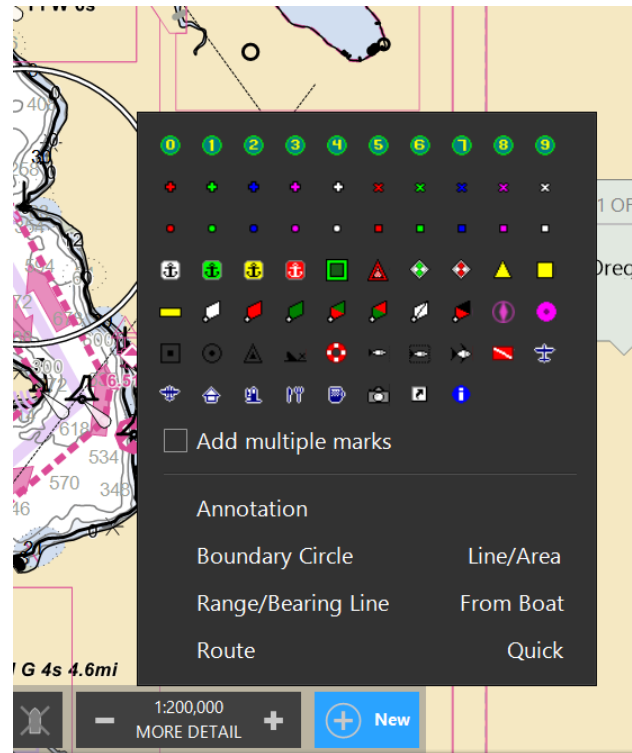
Hide Mark - Hides the Mark on the chart (the Mark will remain visible when it is selected). To show hidden marks and other objects, select **Voyage Plan > Marks**.

Activate Waypoint - Navigate to the Mark.

Show Name - Shows or hides the name of the Mark.

Show Description - Shows or hides the description of the Mark.

Delete Mark - Delete the Mark.



General Properties of the Property Browser

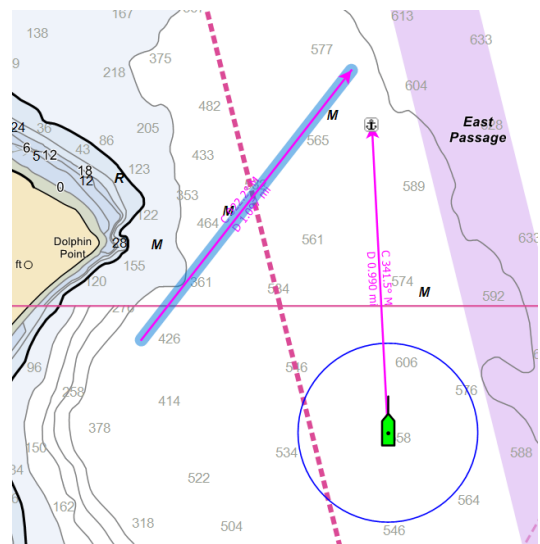
The properties that can be seen or changed in the Property Browser include:

- **Name** The name of the Mark.
- **Show Name** Whether or not to show the name on the chart.
- **Color** The color to use for the name and description text.
- **Icon** The symbol to use for the Mark on the chart.
- **Position** The latitude and longitude of the Mark.
- **Locked** Whether or not the Mark is locked against changes.
- **Arrival Circle Radius** How close to the Mark the boat must be to have arrived at the Waypoint.
- **Boundary Circle Off Limits** Used to turn a mark into a Boundary Circle. When this is set to Inside, an alarm will sound when the boat enters the Arrival Circle, and when it is set to Outside, an alarm sounds when the boat leaves the Arrival Circle.

Range Properties

The Range Properties control the display of range circles which are circles that may be drawn around the mark at regular distances you specify. They are only used as a visual indicator to you and should not be confused with the Arrival Circle which is used to determine arrival at a Waypoint, or the radius of a Boundary Circle.

- **Display Count** How many range circles to draw around the mark.
- **Radius** How far out each range circle is drawn.
- **Line Thickness** How thick should the circle appear.
- **Color** The color of the circles.
- **Fill** Whether the circles should be filled or not.



Notes Properties

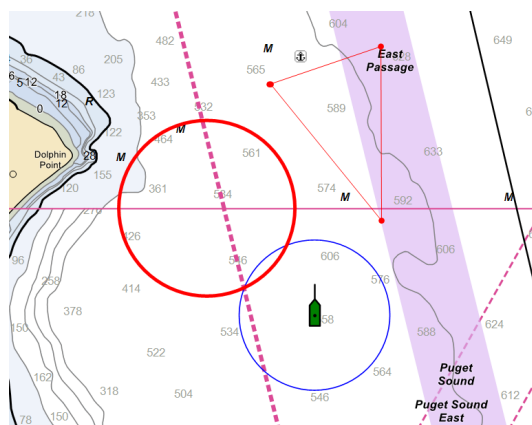
- **Show Description** Whether or not the description should be shown on the chart.
- **Description** An optional description or other notes about this route.

Using Boundary Circles and Areas

An alarm is sounded when the boat crosses the edge of a boundary. Boundaries may be defined as a circle, a series of lines, or an enclosed area.

To create a Boundary Circle:

- Select **New > Boundary Circle** on the chart panel's toolbar.
- Clicking on the chart panel will place the circle on the chart centered on the location clicked.
- Drag the edge of the circle with the left mouse button to adjust the size or enter a size in the Arrival Circle Radius property.
- Select whether the alarm should sound when the boat goes Inside the circle or Outside the circle using the Boundary Circle Off Limits property.



A Boundary Circle is a mark with additional properties set. See Using Marks for a description of those properties and the operations that can be performed on these objects. To create a Boundary Area:

- Select **New > Boundary Area** on the chart panel's toolbar.
- Click on the chart at each point of a chosen area or series of lines.
- Click again on the last point when finished.

General Properties of the Property Panel

A boundary area's properties may be viewed or changed with the Property Panel. The properties are:

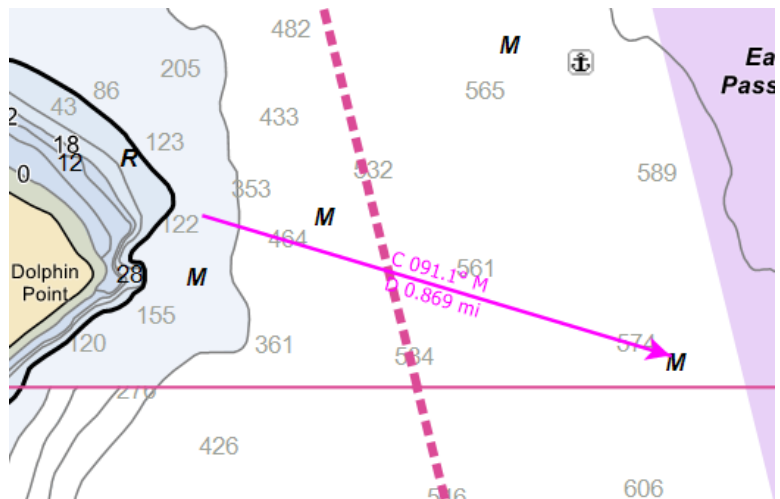
- **Name** The name of the boundary area.
- **Display Leg Range/Bearing** Controls the display of the range and bearing values of each line of the boundary.
- **Color** Controls the color of the of the boundary lines.
- **Fill Area** Controls whether the boundary area should be filled in with the selected line color.

Notes Properties

- **Description** An optional description or other notes about this Range/Bearing Line.

Using Range/Bearing Lines

Range/Bearing Lines, or RBL's, are lines drawn on the chart between two points with the range and bearing between the lines displayed at its center. RBL's can be between two arbitrary points, or one of the points can be the boat, in which case the range and bearing are continuously updated on the chart as the boat moves.



These operations can be performed on an RBL by clicking the right mouse button on the RBL and selecting the appropriate option:

Lock Range/Bearing Line - Prevents the RBL from being moved or changed.

Unlock Range/Bearing Line - Allows the RBL to be moved or changed.

Reverse Range/Bearing Line - Changes the direction of the RBL.

Delete Range/Bearing Line - Delete the RBL.

An RBL's properties may be viewed or changed with the Property Panel. The properties of an RBL are:

General Properties

- **Name** The name of the RBL.

Notes Properties

- **Description** An optional description or other notes about this RBL.

Export Navigation Objects

Voyage Plan > Marks > Export

Open **Voyage Plan > Marks** and click the toolbar's menu button (the three vertical dots) to see the Import and Export commands.

This window lets a user Export Navigation Objects to a file that can later be inserted into another Navigation Object document, imported by a different program, or kept as a backup.

The window displays a list of all the Navigation Objects in the currently open document. This list can be sorted by the type or name of the Object by clicking on the header of the column.

Each Navigation Object has a check box next to it which indicates which objects to export; click the box to check or uncheck an object. Multiple objects can be selected using the **Ctrl** or Shift keys while clicking the objects. Then, all boxes can be checked or unchecked at once. Buttons are provided to check or uncheck all objects as well.

Once Objects have been selected to export, click the **Next >** button. This will open another window asking for the name and type of the file to create.

The default file type created will be the Navigation Object File format. This is Rose Point ECS's own format and will contain exact copies of the selected objects. There are several other export formats available for use with other programs. Because of limitations in present in third party file formats, some properties of your Objects may not be saved, but most of the important ones usually are.

The formats for other programs that can be exported include:

- OpenNav (ONF) which is compatible with Nobeltec® navigation software.
- RXF which is the format used by several of Maptech's chart programs for routes.
- MXF which is the format used by several of Maptech's chart programs for marks.
- GPX which is an open standard format used by many other programs.
- KML which is the format used by Google Earth™.

Send to GPS Window

This feature allows the user to send one or more Routes and/or Waypoints to a GPS or chart plotter. NOTE: Not all GPS and chart plotter equipment supports the ability to receive routes or Waypoints, and many of them have limitations. Please refer to the user guide of the GPS or chart plotter to see what its limitations are.

To send a route or Waypoint to your GPS/chart plotter:

- Right-click on the route or Waypoint to send and select the Send to GPS option from the pop-up menu.
- Select the type of GPS from the list labeled To.
- Select the port the GPS is connected to from the list labeled On.
- Press the Start button.

Special notes for users of Garmin GPS units and Chart Plotters

Most Garmin products can be configured to operate using one of two protocols; either NMEA 0183 or a proprietary Garmin protocol. Rose Point ECS can use either protocol

but must be configured to use the same protocol as the Garmin device. This can be done with **Settings > Electronics**. Refer to the Garmin user guide for information on how to select which protocol (or Transfer Interface) the Garmin device will use.

Some Garmin devices require the use of a Garmin Transfer Interface when sending Routes or Waypoints to them. Others will work in either mode. This is not always mentioned in the user guides, so please keep this in mind when trying to use this feature in Rose Point ECS.

Special notes for users of Furuno GPS units and Chart Plotters

Sending one or more Navigation Objects to most Furuno equipment will cause the equipment to erase all other Routes and Waypoints from its memory. If important navigation data is already present on the Furuno device, make sure to backup this data before sending a Route or Waypoint from Rose Point ECS.

Special notes for users of Raymarine Chart Plotters

Some Raymarine equipment connected through a Seotalk NMEA/PC adapter will not accept Routes that are sent to them, only Waypoints will show up on the chart plotter. Many of these devices have a direct NMEA 0183 connection option that can be used via an NMEA 0183 adapter or multiplexer to allow route transfers. Please contact Raymarine support to find out more about device capabilities.

Importing Navigation Objects from Other Programs

Rose Point ECS can import Routes, Waypoints, and other Navigation Objects that were exported from some other programs. Importing a file will insert the Navigation Objects found in that file into the current Voyage Plan document.

The file formats that are supported include:

Navigation Object Files

These files have the .NOB file type and are Rose Point ECS's normal document file format. These files may be exported from Rose Point ECS, or can be imported into an already open Rose Point ECS document file. This will merge that document's Navigation Objects into the currently open document. Coastal Explorer and some versions of Chart Navigator Pro from Maptech also use the .NOB document file format.

Maptech Navigator Export Files

These files may be exported by Maptech's Chart Navigator and Offshore Navigator programs. Rose Point ECS can import Routes, Marks, and Named Waypoints from files

called Routes32.txt, Marks32.txt, and Nwps32.txt respectively. These are the only files that the Maptech products will export these objects to.

Open Navigation Format

These files may be exported from many of Nobeltec's products. Rose Point ECS can import all the objects from the Open Navigation Format 1.1 specification which includes Marks, Routes, Tracks, Boundaries, and Range/Bearing Lines. Please contact Nobeltec for more information on this file format.

The Capn Database Files

These files may be exported from The Capn by Nautical Technologies. Rose Point ECS can import Route and Waypoint files that have been exported by The Capn 5.0 and later.

NMEA Waypoint List Files

This is not a formal file format, but some programs (including The Capn from Nautical Technologies) can export these files which are simply a list of NMEA Waypoint location sentences. Each one of these files contains a single route which is made up of the Waypoints described in the file.

Lowrance USR Files

These files are used by some Lowrance GPS receivers and are typically stored on Flash Memory cards that can be moved between the GPS and your PC.

Magellan eXplorer Files

These files are used by the Magellan eXplorer line of hand-held GPS receivers.

GPX Files

This is an "open standard" file format that is used by many other programs.

To import navigation objects into Rose Point ECS:

- Select the **Voyage Plan > Marks > Import...** command (on the toolbar's menu).
- Use the window to find the file to import and click Open.
- Rose Point ECS will determine the type of the file selected, import the Objects, and display the results of what it found. The user can choose to select all the Objects that were just inserted into your document.

If the information populated from an import is not wanted, the Undo command (**Ctrl+Z**) can be used to undo the entire import command.

To export a route from some other program:

Every program works a little differently, so please refer to the documentation included with the other program to learn how it exports navigation objects.

Import Navigation Objects Window

Voyage Plan > Marks > Import

This window lets you Import Navigation Objects from a file created by Rose Point ECS or another program, or from a GPS or chart plotter.

To import navigation objects:

- Open **Voyage Plan > Marks**
- Select the Import option on the menu (the three vertical dots on the toolbar)
- Select the source of the Objects you want to import
- Press the Next button and follow the on-screen instructions

Resolving Conflicts

If a Navigation Object is copied from one document to another, then modified in one of the documents, and finally imported into the other document, you will be presented with a window that shows the difference between the two objects and asks what you want to do. Your options are to:

- Keep both objects
- Keep only the object being imported
- Keep only the object already in the document

Enable the Do This for All Conflicts option to repeat the action for any other duplicate Objects.

Importing Navigation Objects from a GPS or Chart Plotter

Rose Point ECS can import Routes, Waypoints, and sometimes other Navigation Objects from several different kinds of GPS and chart plotters. Importing will insert the Navigation Objects found on the device into the current document.

To import objects from your GPS or chart plotter:

- Use the **Voyage Plan > Marks > Import** command (on the toolbar's menu)
- Select the My GPS or Chart Plotter option and click Next
- Select the type of GPS or chart plotter from the From list
- Select the port it is connect to from the On list

- Check the Import Routes, Marks, and Tracks options based on what you want to import
- Click the Next button
- Follow any additional instructions on the screen

Manufacturer and Model Specific Notes

Because the NMEA 0183 standard for transferring Routes and Waypoints is rather limiting, many manufacturers have implemented proprietary methods for performing these tasks. Rose Point ECS supports several of these methods and the general capabilities are listed below.

Furuno

Furuno GPS receivers and chart plotters use extensions to the NMEA 0183 standard in order to perform Route and Waypoint transfers. (Tracks cannot be transferred to or from a Furuno device.)

When importing from a Furuno, use the Furuno device's menus to initiate the transfer. Exactly how to do this is covered in the device manual.

Garmin

Some Garmin GPS products use a proprietary protocol called Garmin Transfer Interface in order to transfer Routes, Waypoints, and Tracks. A Garmin GPS must be configured through its menus to use the Garmin Transfer Interface and Rose Point ECS must also be configured to use the "Garmin Interface" in **Settings > Electronics** before a transfer can take place.

Some Garmin products offer several sub-modes of the Garmin Transfer Interface. The correct mode to select is "Host Mode".

Rose Point ECS can receive GPS position information from a Garmin GPS while it is in Garmin Transfer Mode, so it is possible to use this mode and not have to switch back and forth between Garmin Transfer Mode and NMEA 0183 Mode. However, Garmin's combination GPS and Fish Finder products will only send depth information when they are configured to use NMEA 0183.

Other Devices

Several other proprietary interfaces are also supported, including Eagle, Lowrance, Magellan, and Northstar. Most of these transfers are started automatically when using the Import command.

Many manufactures adhere to the NMEA 0183 standard for transferring objects to and from their equipment so they are also supported. The standard does not provide a way

to initiate a transfer, so a transfer must be initiated from the device sending the data when the Import window indicates that it is Waiting for GPS... Please refer to your equipment's manual for instructions on how to start the transfer.

Ship's Log Browser



The Ship's Log Browser is used to access recorded Tracks, Events, and Voyage Recordings.

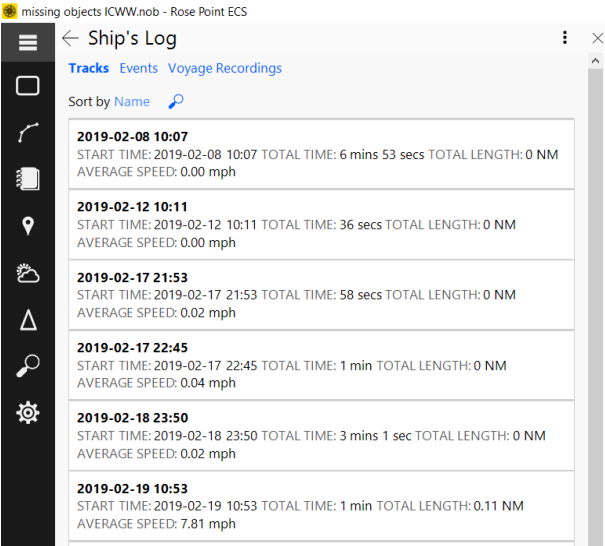
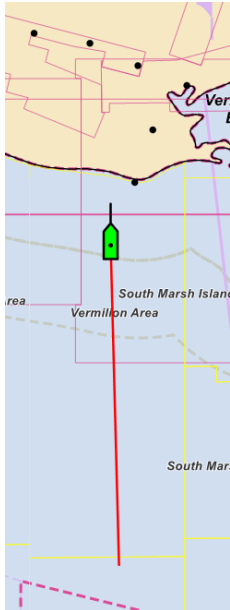
Tracks

Tracks are recordings of the courses the vessel has taken. When Tracking is enabled, a new Track is created when Rose Point ECS is started or use the Start New Track option.

Tracking can be enabled and disabled by right-clicking on the vessel icon and selecting the Enable Tracking option from the menu. The Start New Track option is also on the vessel icon's menu.

All the tracks recorder will appear on the chart and in the Tracks list as part of the Ship's Log.

Large Tracks can consume a lot of system resources. If Rose Point ECS is starting slowly or is acting sluggish, it may be due to excessive tracks. Deleting unwanted tracks can help restore performance. Tracks can be exported to their own document before deletion from the currently open document in case they are needed in the future.

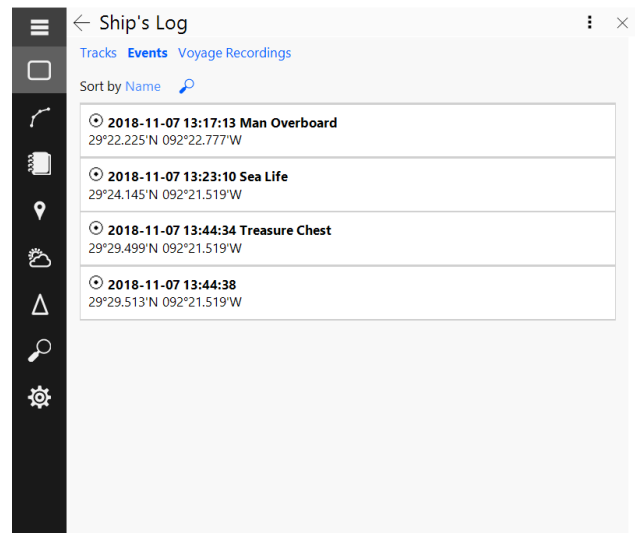


Events

An Event is a special type of Mark that is created the vessel's location and the date and time the Event was created as a name. They are useful to mark events such as dropping crab pots, catching a fish, etc.

Events can be created using the New Event option on the Home toolbar, the **New > Event** option on the Routes and Marks toolbar or pressing the F5 key.

Events show up on the chart as a normal Mark would and appear in the Events list of the Ship's Log.



Voyage Recordings

If the Rose Point ECS Voyage Recorder has recorded any data, times can be selected to replay from this list. See *The Voyage Recorder* (below) for more information.

Using Tracks

A Track is a Navigation Object that shows a line where the vessel has been. Like all other Navigation Objects, Tracks are stored in the currently open document.

Tracks work by recording the vessel's position at certain intervals, then connects those positions to make the track line. Tracks can be generated based on a time interval, an amount of distance traveled since the last point, or an amount of course change since the last point. A combination of these options can also be set.

IMPORTANT NOTE:



Take care when deciding how to record your Track as they can slow down Rose Point ECS or use a lot of disk space if they become too detailed!

To enable or disable Tracking:

- Click on the vessel icon and select Start Tracking or Stop Tracking on the pop-up tip
- Right-click on the vessel icon and select Enable Tracking

To start a new Track:

- Click on the vessel icon and select Stop Tracking and then Start Tracking on the pop-up tip
- Right-click on the vessel icon and select the Start New Track command

To convert a track to a route:

- Click on the Track and select Properties from the pop-up tip, or double-click on a Track to view its properties
- Use Convert to Route in the Track's Properties panel

Changing the Properties of a Track

A Track's properties may be viewed or changed with the Properties Panel when the Track is selected. These properties determine when track points are added to the Track. Changes made to these properties will only affect the active Track. The properties of a Track are:

General Properties

- **Name** The name of the track. This is set to the date and time the track was started by default, but can be changed
- **Total Length** The total distance traveled along this track.
- **Tracking - By Time Interval** Indicates that a new point should be added to the track based on elapsed time.
- **Tracking - Time Interval** How much time to wait between each track point. (Only used if the above option is checked.)
- **Tracking - By Distance Interval** Indicates that a new point should be added to the track based on distance traveled.
- **Tracking - Distance Interval** How much distance should be between each track point. (Only used if the above option is checked.)
- **Tracking - By Course Change** Indicates that a new point should be added to the track based on course changes.
- **Tracking - Degrees** How much of a course change should be between each track point. (Only used if the above option is checked.)
- **Wake - Enable Wake** When this option is on, only a portion of the track is shown on the chart.
- **Wake - Length** The amount of time from the track that should be represented on the chart. (Only used if the above option is checked.)

Format Properties

- **Color** The color to draw the track with.

Using the Voyage Recorder

Rose Point ECS has a powerful Voyage Recorder capable of recording all the navigation data received from instrument data ports as well as images from some video cameras. the system is connected to a Rose Point Radar interface box, the Voyage Recorder can also record radar imagery from the device.

Configuring the Voyage Recorder

Use **Settings > Voyage Recorder** to enable the voyage recorder and adjust its options.

Record Voyage Data - Check this option to enable the voyage recorder.

Keep for - Set this option to the number of days to keep data; data older than this number of days will be deleted automatically.

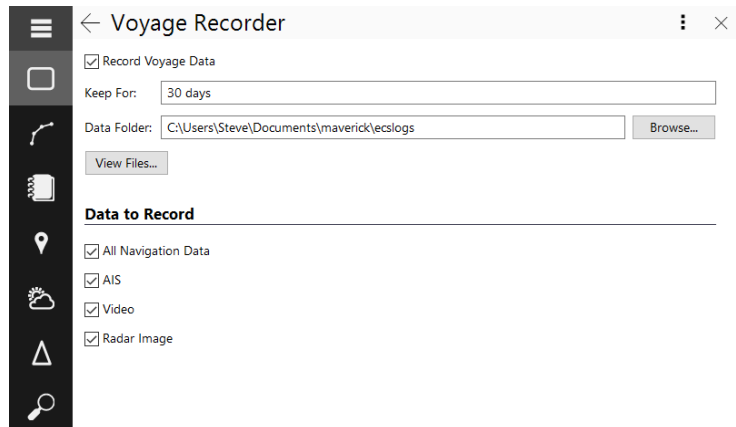
View Files - Click this button to open a Windows Explorer showing the voyage data files.

All Navigation Data - Enable this to record all the NMEA 0183 and NMEA 2000 data received that is not related to an AIS receiver or transponder.

AIS - Enable this option to record data received from an AIS receiver or transponder.

Video - Enable this option to record video from network cameras.

Radar Image – Enable this option to record radar imagery (requires a Rose Point Radar interface box).

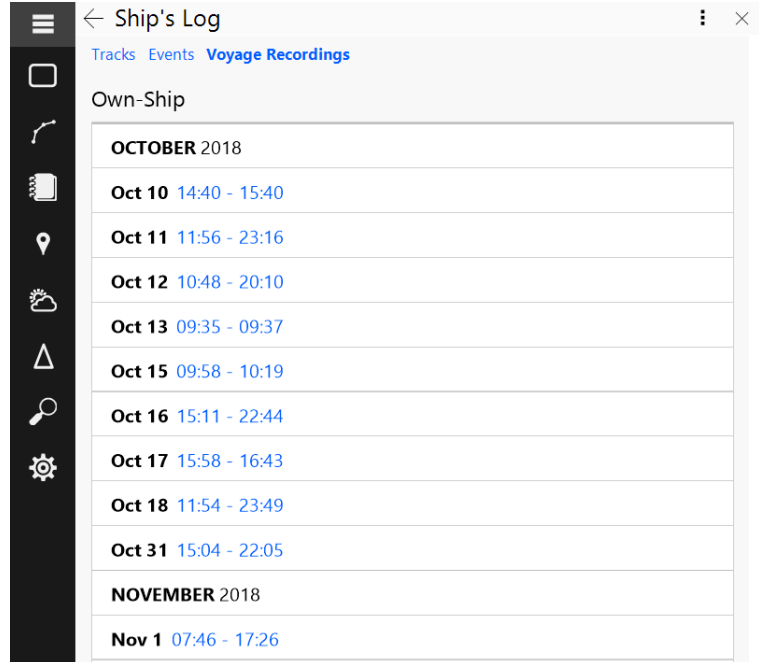


Replay a Recorded Voyage

Use Ship's **Log > Voyage Recordings** see a list of available voyage recordings.

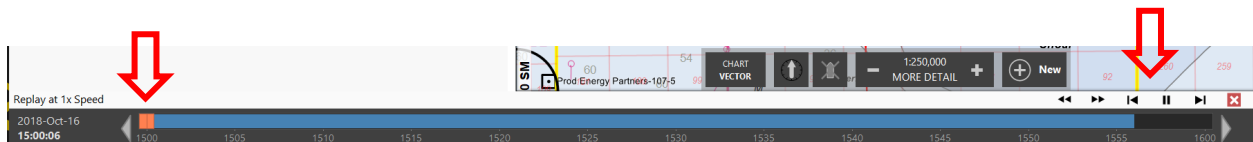
To start replay, double-click the time period you are interested. This will display a Replay Voyage control bar near the bottom of the screen. The Replay Voyage bar has several control buttons on the right side. These include:

- Slow down playback
- Speed up playback
- Skip backwards
- Pause/Play
- Skip forwards



The rest of the Replay Voyage bar displays the time and date of playback and a progress bar for the current hour. The bar is colored during times when data was recorded; any gaps indicate times when no data is available.

The orange box in the bar indicates the current playback time. This bar can be dragged to select a different time within the current hour. The triangular buttons at either end of the bar are buttons that will move back or ahead one hour at a time when clicked.



Places Browser



The Places Browser can display information for places that can be selected on the chart. This information comes from the NOAA US Coast Pilot, NGA Sailing Directions, or other optional guide books you may have installed.

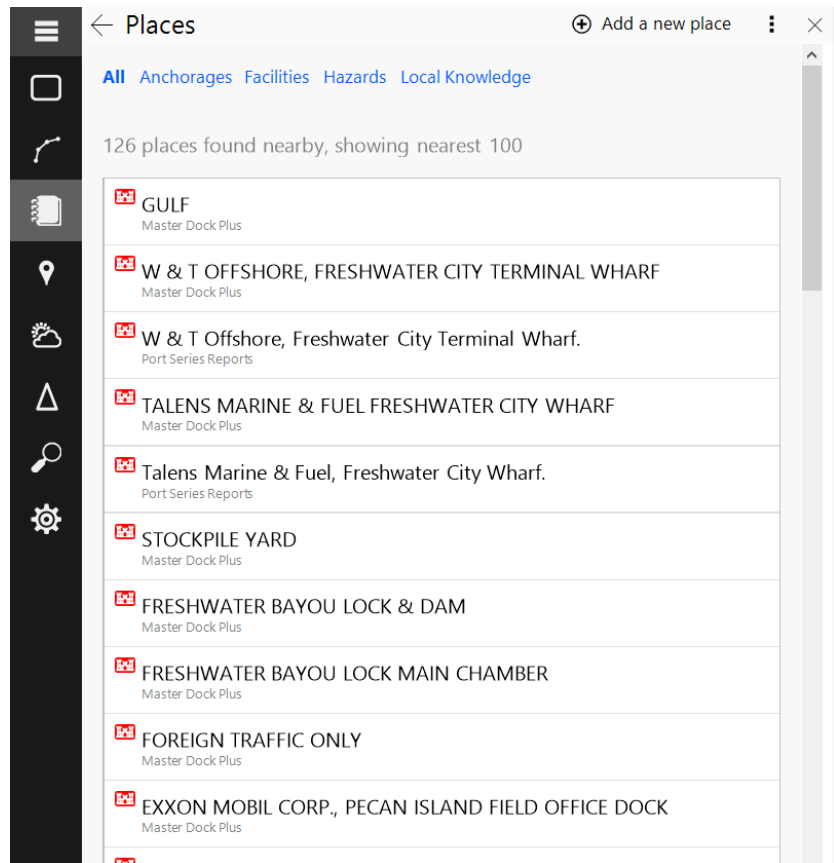
While the Places Browser is open, extra symbols will appear on the chart to indicate where more information is available. Clicking on one of these symbols will display that information from the guide books.

The Browser will show a list of Places from the Guide

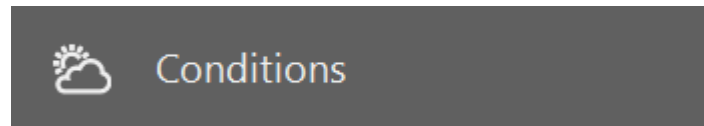
Books that are near the area being viewed in the chart panel.

Click on a Place in the list to see more information about that Place. When viewing a Place, the toolbar will provide buttons for getting to the previous and next Places in the list as well as a button to return to the list.

The guide books are optional components and are not included if you selected the Minimum Install option when Rose Point ECS is initially configured. To install additional guide books after Rose Point ECS has been installed, use **Settings > Charts and Add-Ons > Chart** and Add-On Store.



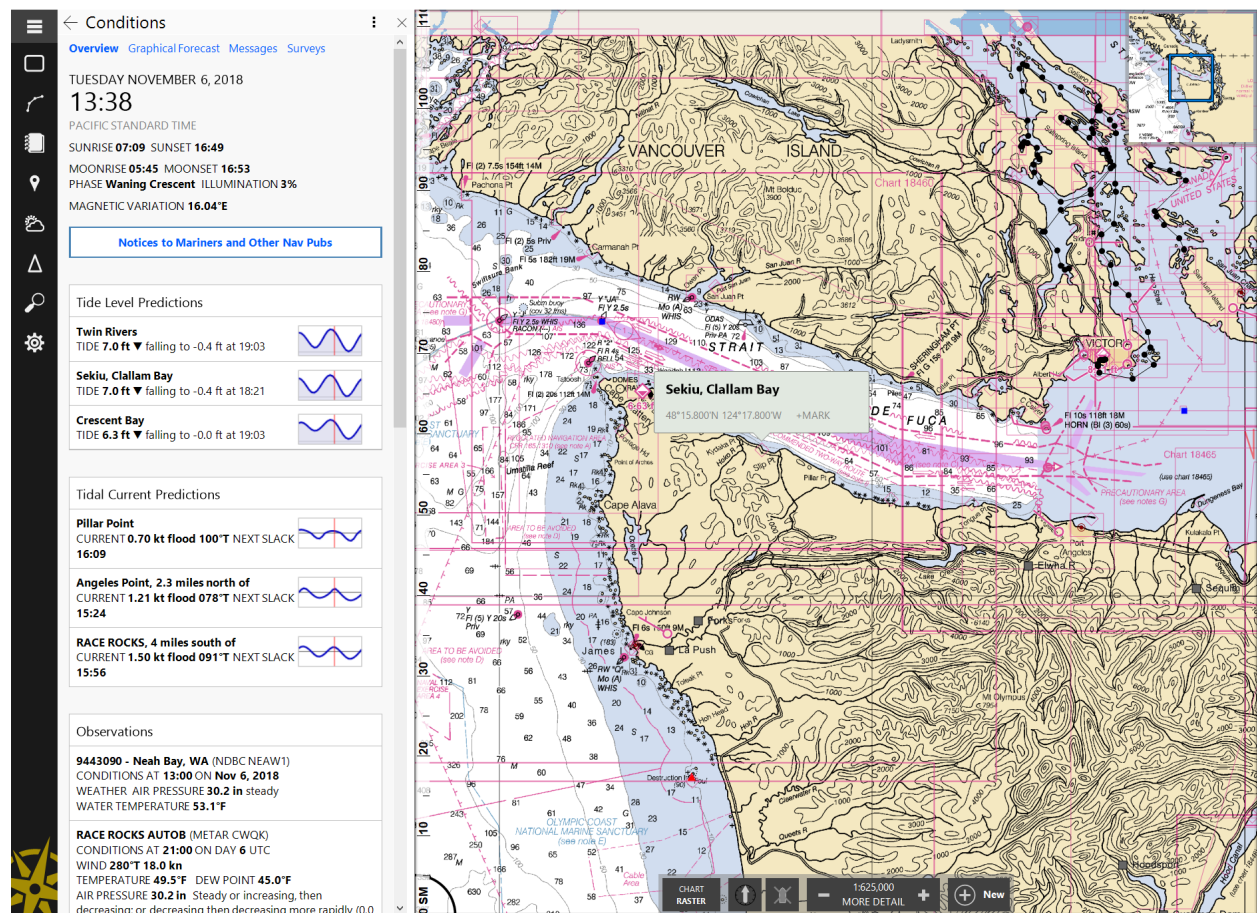
Conditions Browser



The Conditions Browser is used to access tide level and tidal current predictions as well as weather forecasts and observations, Notices to Mariners, and other similar information.

The default page of the Conditions Browser is an Overview that consolidates commonly used information. Additional pages are listed at the top of the Browser. Some of the panels within the overview link to other pages as well.

Overview



The Overview page provides a summary of important information at a glance. It includes the date, time, time zone in use, sun and moon rise and set times. Local magnetic

variation, nearby tide and current predictions, weather observations, text forecast, and weather radar are also displayed. (The actual information displayed will depend location and internet accessibility.)

The Tide Level and Tidal Current Prediction panels provide a summary of nearby station information. Clicking on a panel will switch to a page showing more station information and an interactive graph of predictions that can be used to see predictions for other times.

Some of the other panels will also lead to more detailed information when clicked.

Graphical Forecast

The Graphical Forecast page is used to download, and display weather and wave forecast information as an extra layer on the chart. Rose Point ECS can download data or open a file that was obtained externally.

The Graphical Forecast can display the weather elements Wind, Barometric Pressure, Precipitation Humidity, and Wave information. The information can be displayed in several different forms. The presentation is selected by right clicking on each panel and using the menu to make selections

Once data is downloaded for a selected region, the graphical display is ready to view. Additional elements can be displayed by selecting the check box next to the title of the display element. The presentation can be changed by right clicking on a selection box and choosing the method for display.

Since the Weather and Wave features are large scale phenomenon's, the chart display may need to have its scale adjusted to a clearer view of the features.

Messages

The Messages page is used to display NAVTEX or SafetyNET messages (if a compatible receiver is connected to the PC).

Navtex (Navigational Telex) is an international automated medium frequency direct-printing service for delivery of navigational and meteorological warnings and forecasts, as well as urgent Maritime Safety Information (MSI) to ships.

Inmarsat-C SafetyNET is an internationally adopted, automated satellite system for promulgating weather forecasts and warnings, marine navigational warnings and other safety related information to all types of vessels and is part of the Global Maritime Distress and Safety System (GMDSS).

With an appropriate receiver for either of these broadcasts and an interface to the computer, the messages can be displayed in the Messages section of the Conditions page.

Surveys

The Surveys page lets users load and manage XYZ survey files which can be obtained from some US Army Corps of Engineers districts.

About Virtual Time

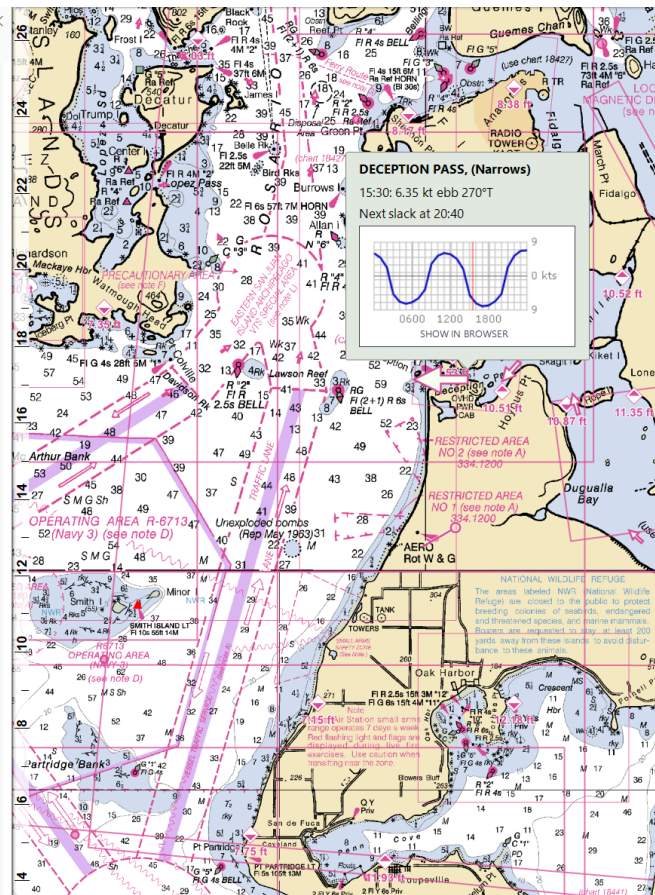
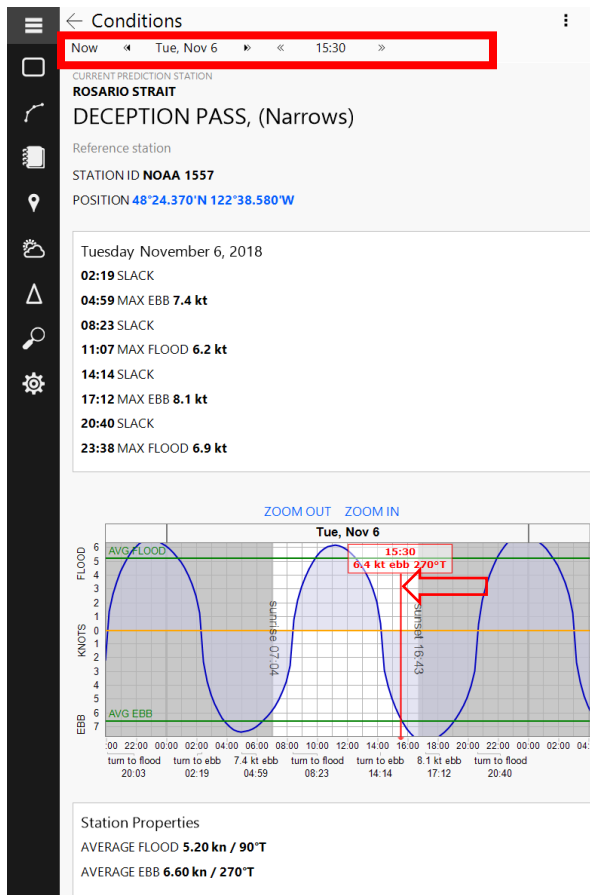
Rose Point ECS can display tide level and tidal current predictions and weather forecasts for future times by using a concept of Virtual Time.

Normally the Virtual Time is the same as the current Real Time and as the Real Time changes, so does the Virtual Time. However, when any of the time changing functions described below are used, the Virtual Time is set to the user selection and will remain independent of the Real Time.

Time changing functions are found in the Browser toolbars for Graphical Weather Forecasts, Tide Level Predictions, and Tidal Current Predictions. Each of these has five buttons to move forwards and backwards in time by one hour or one day and to resume Real Time. Holding down the forward and backward buttons will adjust the time by several hours or several days.

In the Tide and Current display, there is a time bar that indicates the time on the graph. This bar may be slid to the right or left to change the time as well. The presentation on the chart changes to match the Virtual Time setting. The weather indicators as well as tides and current information displayed on the chart will change in response to adjusting Virtual Time controls.

The time changing controls look like this:



When Virtual Time is in effect, the Browser will indicate that date and time. Rose Point ECS will resume Real Time mode when the Browser is closed.

If a clock is configured in the Instrument Panel it will show the Virtual Time. When the Virtual Time is different than the Real Time, a yellow warning bar pulses above the clock.

Observations

When the PC is connected to the internet, Rose Point ECS can download observations from the National Data Buoy Center (NDBC) as well as METAR reports from around the world.

In some areas, environmental condition observations are being broadcast via AIS and Rose Point ECS can use that information when an AIS receiver is connected to the system.

The NDBC and METAR observations appear as Station Plots on the chart when the Conditions Browser is open. These stations can be shown or hidden using the Show menu on the browser's toolbar. AIS observations will appear on the chart even when the Conditions Browser is not open.

Station Plot

A Station Plot is a standard meteorological symbol that concisely displays wind speed and direction, air temperature and pressure, and possibly other information.

At the center of the symbol is a wind barb indicating the direction and speed of the wind and in the top-left corner is the air temperature.

The top-right corner shows a number representing the air pressure. The air pressure is in millibars but has the leading 9 or 10 removed and is multiplied by 10. For example, 410 in a station plot means 1041.0 mb and 987 means 998.7 mb.

If a Station Plot is selected, a pop-up tip will appear to show all the information received from the station without this encoding.

Tide and Current Predictions

Rose Point ECS can predict the tide level and current set and drift for thousands of tide and current stations in the US and some other parts of the world. These predictions can be displayed as graphs over time in the Browser or for a specific instant directly on the chart.

WARNING: Tidal current predictions are based on observational data taken at the specific location. Since extremes of meteorological conditions have been excluded from the analyses and predictions, the predicted values should be considered as those expected under average weather conditions. During times when weather differs from what is considered average for the area, the user must be aware that actual water levels and currents may vary from those predicted. Generally, prolonged onshore winds or a low atmospheric pressure can produce higher levels than predicted, while the opposite can result in lower levels than those predicted.

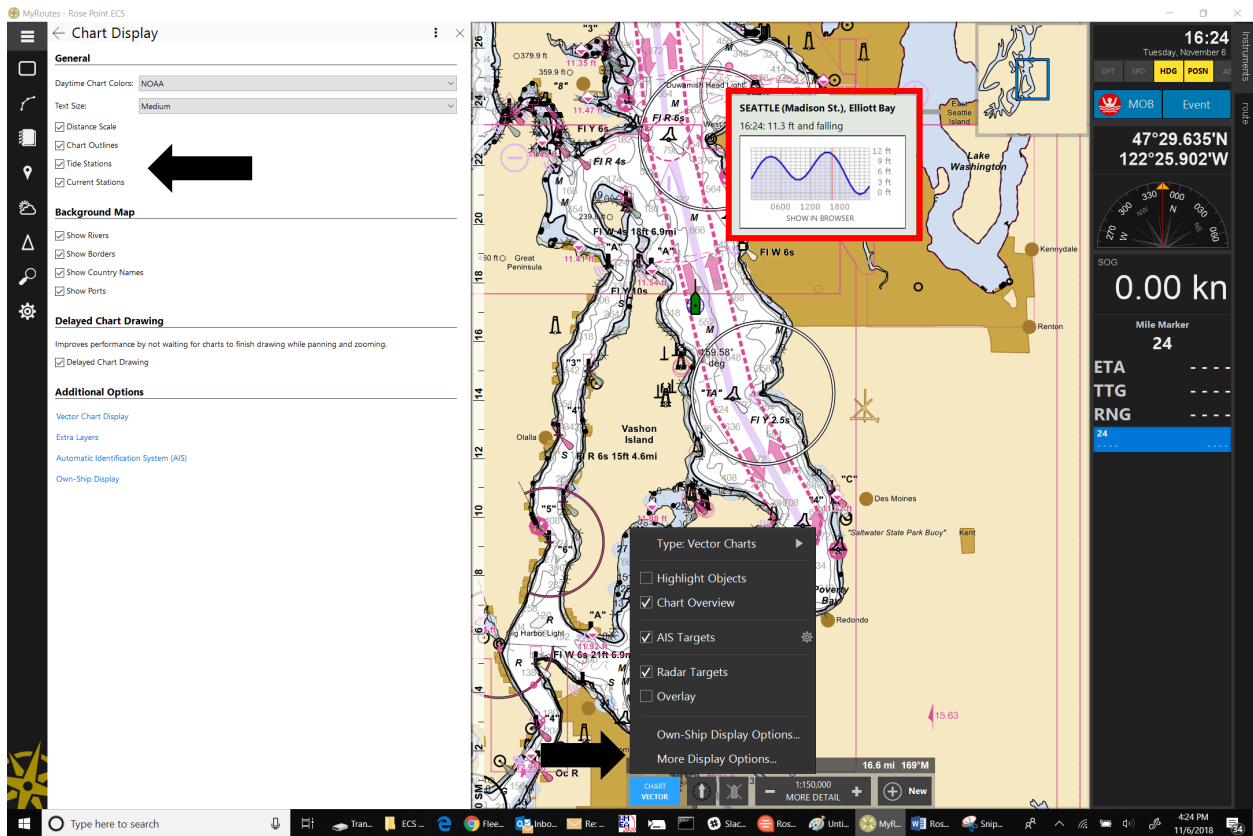
All tide prediction times are adjusted for the local time currently selected for your computer. To change your computer's time zone or daylight-saving option, use the Date and Time option in the Windows Control Panel.

Tide and current station symbols appear on the chart at the location provided by NOAA. In some circumstances the position is provided only to the closest degree and minute. This means the symbol can only appear in the general vicinity of the station. Sometimes the symbols may even appear on land. A symbol's location should only be used as an indication of the general location of a station.

To prevent crowding the chart, reference stations are not shown at scales smaller than 1:1,000,000 and subordinate stations are not shown at scales smaller than 1:250,000.

TIP:

Use the Highlight Objects button on the chart menu to make the tide and current stations stand out against the chart.



Tide Level Prediction Procedures

To See Tide Level Predictions on the Chart:

- Use the **Chart Type > More Options > Tide Stations** command (or the **T** key) to show and hide the tide station symbols.
- Open the Conditions Browser; the Tide Station symbols will appear whenever this Browser is open.

To See Details about a Tide Station:

- Click on a Tide Station symbol to see its name, location, a prediction for the current time, and the trend (rising or falling).
- Click the Show in Browser option to see more details about the station and an interactive graph of predicted levels.

Tidal Current Prediction Procedures

To See Tidal Current Predictions on the Chart:

- Use the **Chart Type > More Options > Current Stations** command (or the **C** key) to show and hide the Tidal Current Station symbols.
- Open the Conditions Browser; the current Station symbols will appear whenever this Browser is open.

To See Details About a Current Station:

- Click on a Current Station symbol to see its name, location, a prediction for the current time, and the time of the next slack.
- Click the Show in Browser option to see more details about the station and an interactive graph of predicted currents.

Using the Tide Level and Tidal Current Prediction Browser

Scrolling the graph:

- Drag the graph left or right with the mouse by pressing and holding the left mouse button.
- Move the mouse near the left or right sides of the graph until the cursor turns into an arrow and then press the left mouse button to scroll in that direction.
- Click the Select Date button on the Browser's toolbar and select a date from the pop-up calendar.
- Use the Left or Right Arrow Keys (The Browser may need to be selected first). Hold down the Shift key when using an Arrow Key to scroll faster.

Zooming in and out on the graph:

- Use the + and - buttons on the Browser's toolbar to zoom in and out on the graph.
- Use the + and - keys (the Browser may need to be selected first).

Adjusting the virtual time:

- Click anywhere on the graph to set the virtual time.
- Drag the Real- or Virtual-Time mark to a different time on the graph.
- Use the time changing buttons on the Browser's toolbar.

Resuming Real Time:

- Double-click on the Virtual Time mark.
- Click the Go to Now button on the Browser toolbar.
- Click the Virtual Time panel in the lower-right corner of the chart panel.
- Press the Home key (the Browser may need to be selected first).

River Stages

A hydrograph shows how the river level changes over time at a specific location. Forecast hydrographs are displayed when flooding is expected, otherwise the hydrograph for the past few days is provided, if data is available. At key river gages, such as along navigable rivers, daily forecast hydrographs are provided to determine whether flooding is anticipated. For some locations, probabilistic outlooks for extended periods of up to 90 days are provided.

In cold regions, the hydrograph may seasonally be impacted by the formation of ice covers. Gauges may either malfunction due to cold weather and/or show sporadic readings due to ice cover formation on a river or movement of ice. The severity of ice influence can be determined at a site by comparing the gauge forecasts (based on open water flow) to the observed stages.

Links to past and forecasted precipitation, river level impact and historical flood information are also included on this page.

The following terminology is used when describing floods:

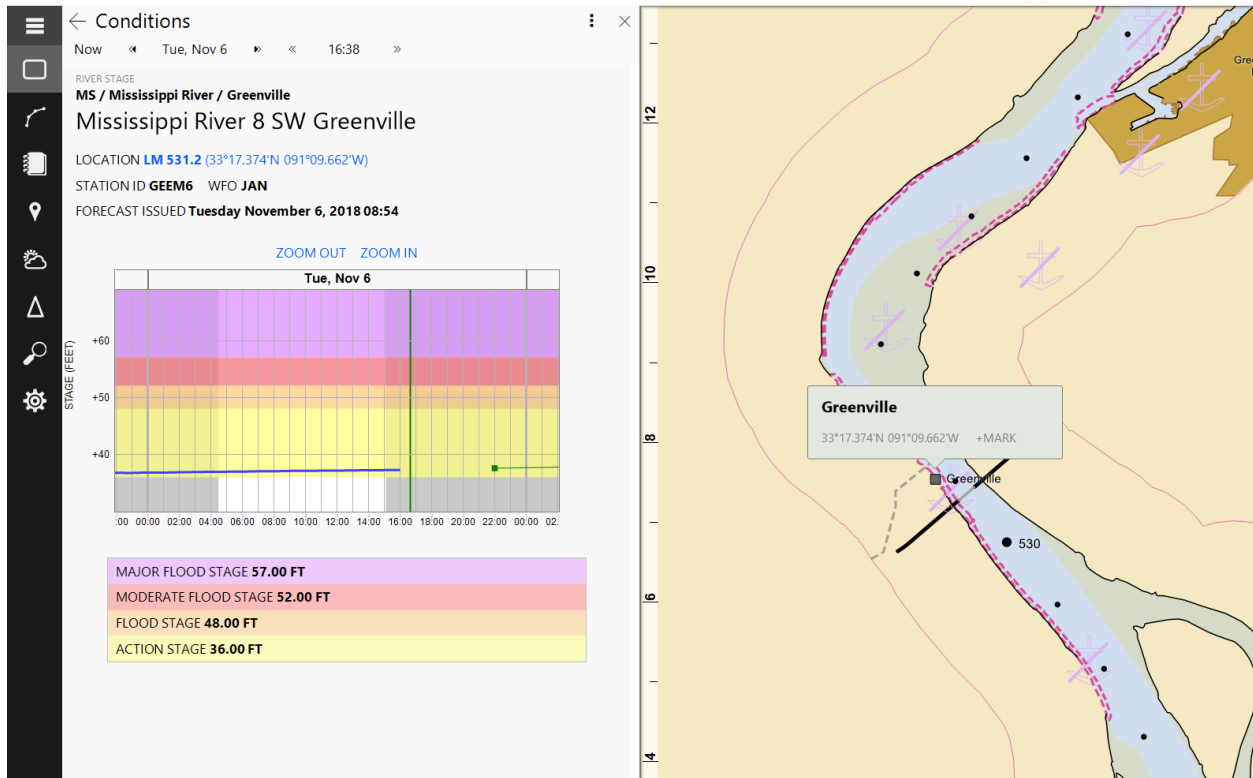
- **Action Stage** - the stage which; when reached by a rising stream, lake, or reservoir, represents the level where the NWS or a partner/user needs to take action to prepare for possible significant hydrologic activity. The appropriate action is usually defined in a weather forecast office (WFO) hydrologic services manual. Action stage can be the same as forecast issuance stage (see forecast issuance stage)
- **Minor flooding** - minimal or no property damage, but possibly some public threat.
- **Moderate Flooding** - some inundation of structures and roads near stream. Some evacuations of people and/or transfer of property to higher elevations.
- **Major Flooding** - extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations.
- **Record Flooding** - flooding which equals or exceeds the highest stage or discharge at a given site during the period of record keeping.
- **Stage** - level of the water surface in a river measured with reference to some datum.

- **Flow** - volume of water passing a given point per unit of time.
- **kcfs** - measurement of water flow equivalent to 1000 cubic feet of water passing a given point for an entire second.
- **UTC** - Universal Coordinated Time (same as Zulu (Z) and Greenwich Mean Time (GMT)). Time zones around the world are expressed as positive and negative offsets from UTC.

The screenshot shows a mobile application interface titled "Conditions". The top navigation bar includes "Overview", "Graphical Forecast", "Messages", and "Surveys". The main content area displays the date "TUESDAY NOVEMBER 6, 2018" and the time "16:35" in "PACIFIC STANDARD TIME". It also shows sunrise and sunset times (04:27 and 15:08), moonrise and moonset times (03:14 and 14:56), moon phase "Waning Crescent" with 3% illumination, and magnetic variation "0.46°W". A blue-bordered box contains the text "Notices to Mariners and Other Nav Pubs". Below this is a section titled "River Stages" with two entries: "Greenville" with a stage of 37.37 ft at 15:00, and "Anguilla" with a stage of 33.21 ft at 15:00. The "Local Forecast" section is titled "5 Miles WSW Chatham MS" and provides weather details for "Tonight" and "Wednesday".

The river stages can be reviewed by going to the Conditions Browser while on a river. The nearest locations will appear in the Browser window.

Selecting a location will open another Browser panel containing the hydrograph for the selected Station as shown below.



Weather Forecasts

Rose Point ECS can be used to download and view text weather forecasts and graphical forecasts, or weather maps, which are overlaid on your chart. Both features require internet access to retrieve the forecasts.

IMPORTANT DISCLAIMERS

The Rose Point Weather Services normally operate 24 hours a day, seven days a week, but Rose Point Navigation Systems cannot guarantee they will always be available. Therefore, weather forecast features in Rose Point ECS must not be relied upon as your sole source of weather forecast information.

Weather forecasts are provided as-is and the user assumes the entire risk related to their use. Rose Point, its licensors, and the National Weather Service disclaim any and all warranties, whether express or implied, including (without limitation) any implied warranties of merchantability or fitness for a particular purpose. In no event will Rose Point, its licensors, or the National Weather Service be liable to you or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of these forecasts.

The computer models used to generate the graphical weather forecasts predict "typical" weather conditions and will not produce accurate forecasts for severe storms,

hurricanes, etc. These predictions have not been validated by a marine weather forecaster and may be misleading. Mariners are urged to use these forecasts in conjunction with forecaster generated forecasts.

Text Weather Forecasts

Text weather forecasts are prepared by skilled meteorologists at the National Weather Service based on many different data sources. These forecasts are like the reports broadcasted on the NOAA Weather Radio service.

Text weather forecasts can be seen at **Conditions > Text Forecast** and/or **Conditions > Local Forecast** depending on the area being viewed on the chart.

An internet connection is required for downloading the text weather forecasts, but once a forecast has been downloaded it will be viewable until its expiration time even when the system is not connected to the internet.

About Graphical Weather Forecasts

Graphical Weather Forecasts are produced by computers from mathematical formulas based on known weather patterns. The graphical weather forecasts contain a geographical grid of predicted values for weather attributes such as temperature, air pressure, wind, etc. Rose Point ECS can superimpose these values on your Chart and even animate them over time so you can see how the weather might affect your plans.

The general nature of the Graphical Weather Forecasts makes them more suitable for long-range voyages rather than short trips (where the text weather forecasts are usually more appropriate).

Local Forecast

5 Miles NW Avon MS

Tonight Showers likely, mainly after 3am. Increasing clouds, with a low around 57. East northeast wind 10 to 15 mph, with gusts as high as 20 mph. Chance of precipitation is 60%. New precipitation amounts of less than a tenth of an inch possible.

Wednesday Showers likely and possibly a thunderstorm before 9am, then a chance of showers and thunderstorms between 9am and 2pm, then a slight chance of showers after 2pm. Cloudy, with a high near 62. Northeast wind 15 to 20 mph, with gusts as high as 25 mph. Chance of precipitation is 60%. New rainfall amounts between a tenth and quarter of an inch, except higher amounts possible in thunderstorms.

Wednesday Night A 40 percent chance of showers after midnight. Mostly cloudy, with a low around 49. North northeast wind 10 to 15 mph, with gusts as high as 25 mph.

Thursday A 50 percent chance of showers. Cloudy, with a high near 56. North northeast wind around 10 mph. New precipitation amounts between a tenth and quarter of an inch possible.

Thursday Night Showers likely, mainly after midnight. Cloudy, with a low around 45. North wind 5 to 10 mph. Chance of precipitation is 60%. New precipitation amounts between a quarter and half of an inch possible.

Friday Showers likely. Mostly cloudy, with a high near 53. North wind around 10 mph. Chance of precipitation is 70%. New precipitation amounts between a tenth and quarter of an inch possible.

Friday Night Partly cloudy, with a low around 36. North wind 5 to 10 mph.

Saturday Sunny, with a high near 51. Northeast wind 5 to 10 mph.

Saturday Night Partly cloudy, with a low around 37. Northeast wind around 5 mph.

Veterans Day A 20 percent chance of showers after noon. Partly sunny, with a high near 55.

Sunday Night A 20 percent chance of showers. Partly cloudy, with a low around 41.

Monday A 20 percent chance of showers. Sunny, with a high near 58.

Monday Night Mostly clear, with a low around 41.

Tuesday Sunny, with a high near 57.

Graphical Weather Forecasts can be seen at **Conditions > Graphical Forecast**.

Interpreting the Weather

This section was excerpted from "Observing Handbook No. 1 -- Marine Surface Weather Observations" by the National Weather Service.

Air Pressure and Pressure Changes

Pressure changes, or a lack thereof, are very significant weather indicators. The approach of a low pressure or frontal system, tropical depression, storm, or hurricane is heralded by falling pressure. A steady, persistent drop in pressure normally indicates that foul weather is on the way. Be particularly wary of a rapid or sudden pressure fall of considerable magnitude. A steady and persistent rise in pressure is indicative of a period of settled or stable weather. Steep pressure rises, and falls are often accompanied by strong wind. The passage of a front is often marked by a fall and subsequent steadying of pressure, or a fall followed by a rise in pressure. High pressures accompanied by slow pressure changes usually indicate a location within or near the center of a large high-pressure area.

Wind

Wind shifts are very meaningful, and usually foretell a change in the weather. If, during stormy conditions, the wind shifts from the east, southeast, or northeast, to the west, northwest, or north (in the northern hemisphere), the weather should soon begin to clear. During fair weather, if the wind shifts from the west, southwest, or northwest, to the east, northeast, or southeast, (in northern hemisphere middle latitudes), a deterioration in weather conditions is likely (especially with a falling barometer). In general (but not always), fair weather comes with a wind from the southwest, west, or northwest, and unsettled weather is usually associated with wind from the east, southeast, or northeast (all wind directions are reversed for the southern hemisphere).

Clouds

Clouds are very important indicators of existing weather conditions and provide early clues to impending changes. Of significance is the sequence or progression of cloud formations observed over several hours or more. In advance of storms (including mid latitude cyclones or low pressure areas, tropical depressions, storms, or hurricanes), a typical cloud progression would be (1) high cirrus clouds several hundred miles or more in advance of the storm center, (2) if the storm is moving closer, cirrus will thicken to become cirrostratus, and then, when the storm is only a few hundred miles away, the darker altostratus, (3) If the altostratus develop into stratocumulus, or especially

nimbostratus, the storm is getting closer, rain will begin to fall and wind speed should increase. The duration and intensity of storms can vary greatly; by using cloud sequences together with other indicators such as pressure and wind direction, you will obtain a good idea of what conditions to expect.

Cumuliform clouds should also be closely watched. Cumulus with sharp or hard-edged cauliflower-like tops are still growing and rising vertically. Cumulus with indistinct or fluffy tops have probably stopped rising and should not pose any threat. Sometimes cumulus is seen to develop strongly to start with, then flatten out into a layer. This indicates the cloud has advanced into a temperature inversion associated with a high-pressure area.

If cumulus is observed to extend vertically and grow into cumulonimbus, a thunderstorm with possible lightning and strong, gusty winds may be near. When a thunderstorm enters your area, pressure may rise. This results from the downdraft of air just ahead of heavy precipitation. The downdraft may also cause the air temperature to drop.

Fair weather cumulus with little vertical extent are good weather clouds. They indicate some instability close to the surface, but stable, dry conditions at higher levels. High icy cirrus clouds are also indicative of fair weather (if precipitation or storms are near, these clouds would not be visible).

It has been found that halos around the sun or moon are followed by rain about 65% of the time. Halos occur as a result of refraction of light through the ice crystals of cirrostratus clouds. As already indicated, cirrostratus is often the first sign of an approaching storm or warm front. In the middle latitudes of the northern hemisphere, a halo with northeast, east, or southeast wind, and falling barometer, can be a reliable indicator of inclement weather to follow.

Temperature and Humidity

There is a good possibility of fog formation whenever the wet bulb depression is slight, or when dew point temperature is close to the wet bulb temperature. The fall in nighttime temperature should be watched. If the wet bulb depression narrows, there is a greater likelihood of fog formation.

Also, an increasing dew point temperature or a narrowing of the wet bulb depression may indicate the approach of a front or storm system with inclement weather. On the other hand, a low dew point temperature and large wet bulb depression indicate very dry conditions associated with high pressure areas, good visibility, and generally settled weather conditions.

Sea and Swell

The arrival or absence of swell provides a clear distinction between the advance of a local thunderstorm and an approaching well developed storm center. A threatening sky with increasing and thickening clouds, but without any swell, cannot be part of a large storm system, so any bad weather will probably be short lived. However, increasing swell from the direction of advance of the storm clouds would suggest an approaching storm with a large area of strong winds. The appearance of a heavy, rolling swell often indicates the approach of a tropical storm. Such swell are the remains of huge, decayed waves generated by the storm, but which travel faster than the storm.

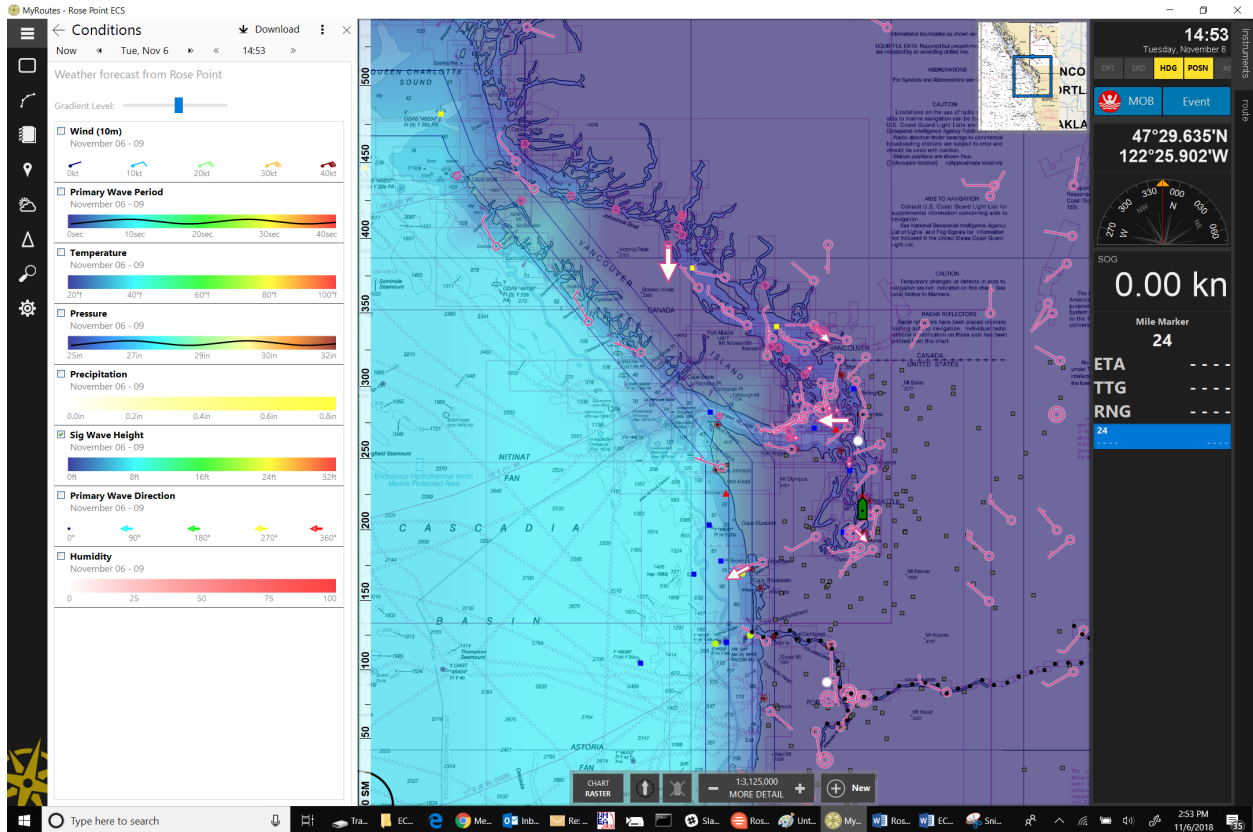
The presence of swell for a long time without any significant change in weather conditions is difficult to interpret. A storm system may be approaching, but very slowly, or it may have already passed by.

Using the Graphical Weather Forecast Browser

The Graphical page of the Weather Browser allows for the creation of a custom map that is overlaid on the Chart and may be animated through time to indicate how the weather might affect your journey.

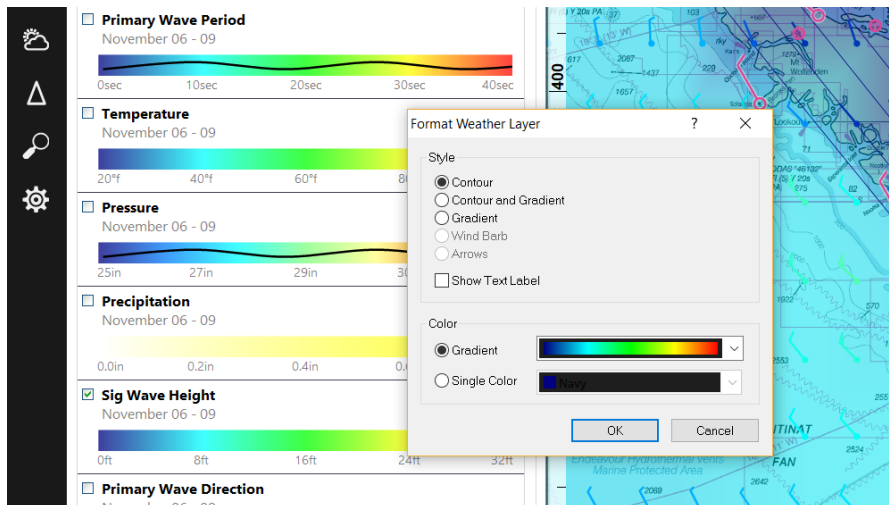
The first step to using this feature is retrieving weather forecast data. Rose Point ECS provides two ways to do this. If the system has internet access, the easiest way to get weather information is by pressing the Download button on the toolbar for the Graphical Weather Forecast Browser. This option opens a window where the forecast area and information type can be selected. Upon entering the selections and pressing the OK button, the weather forecast data will download from the Rose Point Weather Services and will be display on the chart.

Rose Point ECS can use the weather data from Rose Point Weather Services or from files known as "GRIB Files" which are an International standard for gridded weather forecast data. These files are available from NOAA and other locations on the internet. To open a GRIB File, use the menu button on the Graphical Weather Forecast Browser toolbar and select the Open GRIB File option. (The menu button has three horizontal lines and is just to the left of the red close browser button.)



Controlling What You See

The Graphical Forecast page of the Conditions Browser provides a list of the layers (weather elements) that are available in the currently loaded weather data. A legend is shown for each layer as well as the range of dates the loaded forecast data is valid for. As the mouse cursor is moved over the chart, values for each layer at the mouse cursor will appear to the right of the legends. Underneath each value is a time offset which indicates how far into the forecast that value is for. NOTE: Values further into a forecast should be trusted less than values closer to the beginning.



Layers that appear in your Weather map can be selected to customize their presentation on the display. Use the check boxes to turn individual layers on and off. To change the way a layer is presented on the screen, double-click on the legend and use the window that appears to select the style and colors for that layer.

Use the Gradient Level slider to control how much of the chart shows through the filled-in parts of the weather forecast overlay. Moving the slider all the way to the left will make the layers with the "gradient" style completely transparent and moving the slider all the way to the right will make them completely opaque.

Changing the Forecast Time

There are Five buttons on the toolbar to control the Virtual Time which is used to determine the time of the forecast data shown. These buttons are used to go back and forward one day or one hour at a time, or to reset the Virtual Time to the current (real) time. Time can be moved back or forward by more than one day or hour by holding down the appropriate button. The Weather Forecast displayed on the chart will change to show the predicted values for the Virtual Time selected.

Format Weather Layer

This window provides controls for configuring weather layer appearance on the custom Weather map. The options selected here do not affect the built-in weather maps, just the custom Weather map.

The Style of the weather layer can be:

- **Contour** This shows contour lines indicating different values for the data. This style is commonly used for pressure.
- **Contour and Gradient** This shows contour lines indicating major value changes as well as a color gradient so show more subtle changes.

- **Gradient** This shows only the color gradient and is commonly used for temperature.
- **Wind Barb** This shows wind as a standard meteorologist's "wind barb".
- **Arrows** This shows wind as an arrow pointing in the direction the wind is blowing. The arrows increase in size with stronger winds.
- **Show Text Label** This option causes contours to be labeled with their value.
- The **Color** of the weather layer can be:
 - **Gradient** Select from several sets of color ranges that are used to indicate values.
 - **Single Color** Select a single color to show all values but use the value to control how transparent the color appears to be. This option is typically used for Rain.

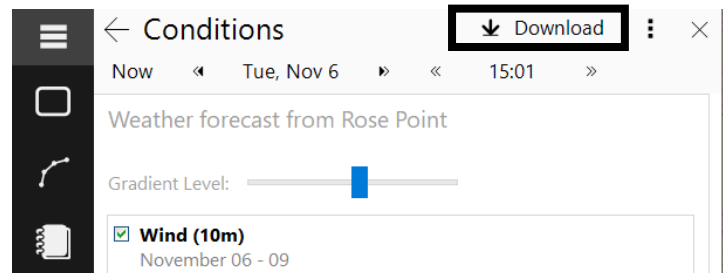
Download Weather Forecast

The Download Weather Forecast window let you download weather forecasts from the Rose Point Weather Service. An internet connection is required for this feature to work.

To access the Download Weather Forecast window, click the Download button on the Graphical Weather Forecast Browser's toolbar.

To Download a Weather Forecast:

- Select a forecast region. Choose from the list of pre-set regions or draw a rectangle around an area on the map.
- Select the types of information to download.



- Each type, or layer, has a check box next to it and each layer that is checked will be included in the download.
- Select the number of days to include in the forecast download. A maximum of 15 days can be selected, but that much information might not be available. In this case, the forecast will include as many days as are available.
- Press OK

The download will start, and a progress indicator will show how much data still needs to be downloaded. Rose Point ECS can be used normally during the download process

GRIB Files

GRIB is a standard file format used for historical and forecast weather data that is aligned in a grid, usually over a large geographic area. A GRIB file can contain an

arbitrary number of grids, each with a different type of data and/or a different slice of time.

Rose Point ECS can load and display GRIB files with a few restrictions:

- Only GRIB Edition 1 is supported (not Edition 2).
- The entire GRIB file must fit into memory, so extremely large GRIB files may not work or require a lot of disk access.
- Only the GRIB data types described below are supported (others are simply ignored).
- Only latitude/longitude and polar stereographic grids are supported.

The following table describes the GRIB data types that are supported by Rose Point ECS:

2 Pressure	107 Primary Wave Direction
7 500mb Height	108 Primary Wave Period
11 Temperature (surface level only)	109 Secondary Wave Direction
33 U Wind	110 Secondary Wave Period
34 V Wind	
31 Wind Direction	
32 Wind Speed	
47 Current Direction	
48 Current Speed	
49 U Current	
50 V Current	
52 Humidity	
61 Precipitation	
100 Significant Wave Height	
101 Wind Wave Direction	
102 Wind Wave Height	
103 Wind Wave Period	
104 Swell Direction	
105 Swell Height	
106 Swell Period	

NAVTEX

NAVTEX is an international automated information service for delivery of navigational and meteorological warnings and forecasts, as well as urgent marine safety information to ships. It was developed to provide a low-cost, simple, and automated means of receiving this information aboard ships at sea within approximately 200 nautical miles of shore.

Rose Point ECS can receive and display NAVTEX messages from most PC-compatible NAVTEX receivers which are available from a variety of manufacturers.

Using the NAVTEX Browser

The NAVTEX message browser can be found at **Conditions > Messages**. The browser displays a list of the NAVTEX and SafetyNET messages that have been received and the text of the selected message. Click on a message in the list to select it for display.

Reading NAVTEX Messages

Each NAVTEX message has a specific type which is indicated in the list of messages as well as at the top of the currently selected message.

NAVTEX messages use many standard abbreviations in order to decrease the amount of data that needs to be transmitted.

Configuring a NAVTEX Receiver

Rose Point ECS can receive messages using two different techniques:

- The NMEA 0183 NRX sentence – If a connected NAVTEX receiver uses this standard sentence, use **Settings > Electronics** to configure the COM port it is connected to with the "NMEA 0183" Interface.
- Raw NAVTEX messages – Some NAVTEX receivers (especially older units) simply send messages to the PC as they are received or when a button is pressed on the receiver. If one of these unit's is connected, use **Settings > Electronics** to configure the COM port it is connected to with the NAVTEX Interface.

NAVTEX Message Types

At the start of each NAVTEX message is a four-character code. The first character identifies the station broadcasting the message within a zone. The second character identifies the type of message and is one of the letters in the table below. The next two characters are a two-digit serial number for the message.

A	Navigational Warning
B	Meteorological Warning
C	Ice Report
D	Search and Rescue Information
E	Meteorological Forecast
F	Pilot Service Message
G	DECCA Message
H	LORAN Message
I	OMEGA Message
J	SATNAV Message
K	Other Electronic Navaid Message
L	Additional Navigational Message
V	Special Service
W	Special Service
X	Special Service
Y	Special Service
Z	No Message on Hand

The US Coast Guard also uses these message types:

V	Notice to Fishermen
W	Environmental Message

The UK also uses these message types:

L	SUBFACTS/GUNFACTS Warning
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V	Amplified Navigational Warning
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NAVTEX Standard Abbreviations

All wind directions are abbreviated as follows:

N North or Northerly	NE Northeast or Northeasterly
E East or Easterly	SE Southeast or Southeasterly
S South or Southerly	SW Southwest or Southwesterly
W West or Westerly	NW Northwest or Northwesterly

Other abbreviations include:

BACK Backing	BECMG Becoming
BLDN Building	C-FRONT Cold Front
DECR Decreasing	DPN Deepening
EXP Expected	FCST Forecast
FLN Filling	FLW Following
FM From	FRQ Frequent/Frequency
HPA Hectopascal	HVY Heavy
IMPR Improving/Improve	INCR Increasing
INTSF Intensifying/Intensify	ISOL Isolated
KMH Km/h	KT Knots
LAT/LONG Latitude/Longitude	LOC Locally
M Metres	MET Meteo.
MOD Moderate	MOV Moving/Move
NC No change	NM Nautical miles

NOSIG No significant change	NXT Next
O-FRONT Occlusion Front	OCNL Occasionally
POSS Possible	PROB Probability/Probable
Q-STNR Quasi-Stationary	QCKY Quickly
QUAD Quadrant	RPDY Rapidly
SCT Scattered	SEV Severe
SHWRS Showers	SIG Significant
SLGT Slight	SLWY Slowly
STNR Stationary	STRG Strong
TEMPO Temporarily/Temporary	TEND Further outlooks
VEER Veering	VIS Visibility
VRB Variable	W-FRONT Warm Front
WKN Weakening	

XYZ Surveys

Rose Point ECS can import hydrographic survey data and overlay the depth information on the Chart.

About XYZ Survey Files

Hydrographic survey files are available in several formats from many sources. Rose Point ECS can use files commonly referred to as XYZ Files. These are text files containing three values on each line. The first two values (X and Y) describe a geographic coordinate for a sounding which is stored in the third value (Z). Rose Point ECS will accept values with either spaces, commas, or commas and spaces between them. Any lines that do not contain exactly three numbers will be ignored.

Different surveys use different coordinate systems to describe geographic coordinates. Most of the surveys performed by the US Army Corps of Engineers use the local state plane coordinate system, for example. In these coordinate systems, the X and Y values describe a distance from some center point on the Earth. Each state plane coordinate system uses a different center point. The distance from that point may be given in meters, feet, or US survey feet depending on the agency that performed the survey.

In addition, the Z values represent depths as positive numbers in some surveys, but in other surveys positive values represent heights and negative values represent depths.

When loading an XYZ file into Rose Point ECS, it is critical to describe how to interpret the numbers in the file so that Rose Point ECS can display the correct information in the correct locations on the chart. This can be done in two ways: when an XYZ file is opened, Rose Point ECS will display a window to enter this information. Alternatively, this information can be added to the top of an XYZ file using a text editor such as Notepad.

It is also possible to cause Rose Point ECS to automatically load survey files from a special folder. This option requires the addition of coordinate information to the top of the file. The file will also need to be renamed to end with .rpxyz, and be placed in a special folder. Complete instructions for this are provided in the Automatic Loading of Survey Data section of this manual.

Using XYZ Survey Files

To load a survey file manually, go to **Conditions > Surveys** and use **Open Survey File** to select the file to load.

Loaded files will be listed below the Open Survey File button and each item will include information about the survey file and some option, including:

- **Show file** - opens the Windows File Explorer with the file selected

- **Remove from chart** – removes the soundings from that file from the chart display
- **Show on chart** – adds the soundings from that file to the chart display

Vessels Browser



The Vessels Browser displays information about all the vessels currently being tracked by Rose Point ECS.

The Vessels Browser includes several different types of pages with links to each of them displayed at the top.

AIS Vessels

The main page is called AIS Vessels and shows a list of all the vessels being tracked by a connected AIS receiver or transponder.

Normally the list is sorted by the distance from the vessel's own-ship location to each of the target vessels. This order can be changed by clicking on the Sort by option (select the same option to reverse the order). The magnifying glass can also be used to search for vessels by name.

Messages

The Messages page of the Vessels browser shows a log of safety related messages received by the AIS and allows the sending of messages (if a Class-A AIS transponder is connected).

The screenshot shows the 'Vessels' browser interface. At the top, there is a search bar and a 'Sort by Range' option. Below this, a list of vessels is displayed, each with its name, MMSI, IMO, SOG, COG, HDG, BRG, RNG, CPA, and DESTINATION. The vessels listed are:

- Unknown Name (WDG3449)**: MMSI 367526150, SOG 0.00 kn, COG 238°M, HDG 238°M, BRG 307°M, RNG 1779.36 NM, 47°48.440'N 122°23.646'W
- WSF WALLA WALLA (WYX2158)**: MMSI 366772780, IMO 7233151, SOG 16.4 kn, COG 059°M, HDG 060°M, BRG 307°M, RNG 1780.14 NM, CPA 1423.55 NM IN 2 days 14 hours 14 mins 8 secs, DESTINATION N/A, ETA N/A, NAVIGATIONAL STATUS N/A, 47°49.015'N 122°24.491'W
- BILLIE H (WCY4992)**: MMSI 366751770, IMO N/A, SOG 7.10 kn, COG 153°M, HDG 148°M, BRG 307°M, RNG 1781.4 NM, CPA 1164 NM IN 7 days 13 hours 22 mins 14 secs, DESTINATION SEATTLE BOYERS, ETA 11-7 1400 UTC, NAVIGATIONAL STATUS Underway with engine, 47°47.932'N 122°27.398'W
- LINDA B (WBF4466)**: MMSI 367452240, IMO 655275000, SOG 6.60 kn, COG 016°M, HDG 027°M, BRG 307°M, RNG 1781.48 NM, DESTINATION EGIGIK ALASKA, ETA N/A, NAVIGATIONAL STATUS Moored, 47°51.532'N 122°24.736'W
- WSF SPOKANE (WYX2004)**: MMSI 366709780, IMO 7214325, SOG 16.6 kn, COG 244°M, HDG 245°M, BRG 307°M, RNG 1781.53 NM, DESTINATION N/A, ETA N/A, NAVIGATIONAL STATUS N/A, 47°47.445'N 122°27.993'W
- OCEAN EAGLE (WDG8082)**: MMSI 367573820, IMO 7047239, SOG 7.10 kn, COG 153°M, HDG 144°M, BRG 307°M, RNG 1782.18 NM, CPA 1183.24 NM IN 7 days 11 hours 14 mins 45 secs, DESTINATION SEATTLE, ETA 7-11 1200 UTC, NAVIGATIONAL STATUS Underway with engine, 47°50.482'N 122°26.713'W
- YTB 836 POKAGON**: MMSI 369970413, IMO N/A, SOG 10.9 kn, COG 108°M, HDG 107°M, BRG 307°M, RNG 1784.74 NM, CPA 127.6 NM IN 6 days 11 hours 57 mins 29 secs, DESTINATION N/A, ETA N/A, NAVIGATIONAL STATUS N/A

Search Browser

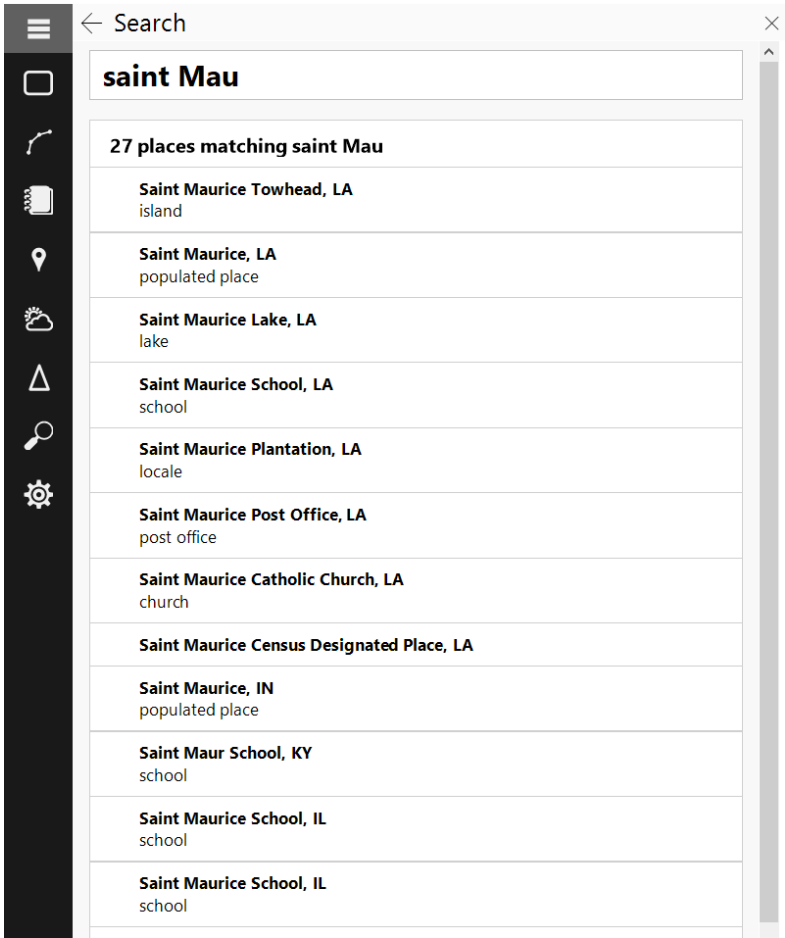


The Search Browser can be used to find places and objects by name or location, look up terms in a glossary, or even convert measurements from one unit to another.

The **Ctrl+F** keyboard shortcut can be used to quickly select the Search Browser.

Rose Point ECS will search for places matching the name entered and display a list of results below the Search Box. Click on any of the places listed to show that place on the chart. The **F3** key can be used to select the next place in the list and the **Shift+F3** key to select the previous place.

The Search feature will not only find places from Rose Point ECS's gazetteer, but also from the guide books, tide and tidal current prediction stations, area weather forecast, user created Navigation Objects, even nearby ships if an AIS receiver is connected.



The Search Control can also be used to go directly to a location by entering a latitude and longitude, or to select a specific chart scale by entering the desired scale (as in "1:10,000").

The Search Browser will search dynamically depending on the characters typed. There is often no need to type the entire word when searching.

Settings Browser



The Settings Browser provides access to many options and configuration settings as well as a sort of dashboard for monitoring news and announcements from Rose Point as well as program, chart, and data updates.

When the Settings button on the Browser is highlighted, it means that Rose Point ECS has a notification awaiting acknowledgement. These notifications can mean that updates are available or that a problem has been detected. When the Settings Browser is open, it will either display a highlighted box with some additional information, or one of the menu items will be highlighted indicating that it should be

A screenshot of a mobile application's settings screen. At the top, there is a header bar with a back arrow, the text "Settings", and a menu icon. Below the header is a yellow bar labeled "News and Announcements". The main content area is divided into sections: "Program, Chart, and Data Synchronization" with a "LAST SYNC About 5 minutes ago" status; "Charts and Pubs are Up-to-Date" with a "CLEARED THROUGH Today at 05:00" status and a link to "Declaration of Conformity"; a "Sync Now Options Update Log" row; a theme selector with "Day Dusk Night" options and a slider; a "Preferences" section with links for "General", "Measurements", "Alerts", "AIS", "Chart Display", and "Default Formatting"; and a "Configuration" section with a highlighted "Charts and Add-Ons" header and links for "Vessel", "Electronics", "Voyage Recorder", "Accounts", and "Rose Point Labs". On the left side, there is a vertical navigation menu with icons for home, back, list, location, weather, triangle, search, and settings (which is highlighted).

clicked to find out more.

Look near the top of the Settings home page to find controls for performing a Sync. Syncing is when Rose Point ECS checks the internet for updates and optionally downloads them. The Options button allows for control of what Rose Point ECS can do automatically.

The Settings home page also provides a way to select daylight mode and adjust screen brightness. (The brightness option is not supported by all systems.) The daylight mode can also be changed with the **Ctrl+I** key which will cycle through day, dusk, and night modes.

The Preferences area includes options that are typically selected based on personal preference. These include window behaviors, user interface colors, measurement units, etc.

The Configuration area provides access to installed chart and add-on collections and the tools to maintain them, and information about the vessel and the electronics interfaced to the PC.

Synchronization Options

Settings > Synchronization > Options

This window provides controls for when and how Rose Point ECS will use the internet to download program, chart, and data updates.

Automatically synchronize when Rose Point ECS is started — enabling this will cause a check for program, chart, and data updates each time Rose Point ECS is started and the system is connected to the internet.

It is okay to leave this option enabled even if the computer is not normally connected to the internet.

When using a cellular or satellite internet service where it is possible to be charged for internet access time, auto sync options can be disabled to maintain control over bandwidth usage.

Download program updates and **Download chart updates** — set these options to **Automatically During Synchronization** to have Rose Point ECS to download available updates as soon as they are discovered, or to **Only When I Click Download** to decide when the downloads will occur.

NOTE: Program and Chart Updates are not installed automatically regardless of the options. When any Program or Chart updates have been downloaded and are ready to be installed, the software will request permission before installation takes place.

General Options

Settings > General

User Experience

Language – Select the user interface language. (This option only appears when options other than English (US) are available.)

Use Full Screen when maximized – Enable this option to remove the title-bar when the Rose Point ECS window is maximized. The title-bar (and its Minimize, Maximize, and Close buttons) can still be accessed by moving the mouse to the very top of the screen.

Hide the Windows Start Bar when in Full Screen modes – Enable this option to take over the entire screen, including the Windows Start Bar when using Full Screen Mode. When this option is disabled, Full Screen Mode will use all the screen except for the Windows Start Bar.

TIP:

*If this option is enabled, and it becomes necessary to access the Windows Start Bar press the Windows Start key on the keyboard (or **Ctrl+Esc**).*

Theme – Select between a dark and light color theme for Rose Point ECS.

Prompt to Save Changes

Normally Rose Point ECS will automatically save changes to a modified document when the program is exited or a different document is loaded. Optionally, the Prompt to save changes feature can be set to display before documents are saved so it can be decided whether or not to keep changes.

Automatic Save

Rose Point ECS can periodically save voyage plans to protect changes in case of an accidental shutdown. If the Prompt to Save Changes feature is enabled, then these periodic saves will happen in a temporary file so the option will be given to save or not save when the document is closed due to exiting Rose Point ECS or opening a different document.

Save changes every – Enable automatic saving by checking the box and enter the desired interval between saves (e.g. "3 mins" for three minutes).

Shore Station Mode

Use Shore Station Mode – This should be selected when Rose Point ECS is not normally used on a vessel. It removes all the commands that are related to a vessel and its navigation. (Rose Point ECS must be restarted after changing this option.)

Exclusive Application Mode

Use Exclusive Application Mode – This mode causes Rose Point ECS to appear more like a dedicated chart plotter by hiding the Windows desktop and removing the title-bar along with the Minimize, Maximize, and Close commands.

Measurement Options

Settings > Measurements

This option page allows the option of selecting which units to display values in. These settings will affect the values displayed just about everywhere in Rose Point ECS, including on vector charts, but not on raster or photo charts.

TIP:

Quickly select all the English or Metric options by pressing the Select all English settings or Select all Metric settings buttons.

Distances may be displayed as any of these:

- Kilometers and Meters
- Feet
- Yards
- Nautical Miles
- Nautical Miles and Yards
- Nautical Miles and Feet
- Statute Miles
- Statute Miles and Yards
- Statute Miles and Feet

The Nautical Miles and Yards and Statute Miles and Yards options will show distances larger than ¼-mile in miles and smaller distances in yards.

Distances less than 100 yards will be shown in feet instead of yards for any option that normally shows yards.

The Nautical Miles and Feet and Statute Miles and Feet options will show distances larger than $\frac{1}{4}$ -mile in miles and smaller distances in feet.

Depths may be displayed as any of these:

- Meters
- Feet
- Fathoms
- Fathoms and Feet

The Fathoms and Feet option will display fractions of a fathom as feet.

Heights may be displayed as either of these:

- Meters
- Feet

Speeds may be displayed as any of these:

- Kilometers per Hour
- Knots
- Miles per Hour

Temperatures may be displayed as either of these:

- Celsius
- Fahrenheit

Fuel may be displayed as any of these:

- Liters
- Gallons

Locations consist of a latitude and a longitude and may be displayed in any of these formats:

- Degrees, Minutes, and Seconds
- Degrees and Minutes
- Degrees

Times may be displayed in either of these formats:

- 24-hour
- 12-hour (AM/PM)

Bearings may be displayed as either of these:

- True
- Magnetic

Sailing (the range and bearing between two points) may be calculated as either of these:

- Mercator
- Great Circle

Alert Options

Settings > Alerts

This option page allows provides controls for which events cause alerts and the sounds or voice used to deliver them.

The various alerts are:

Course update at Waypoints Selecting this option will cause an alert whenever a Waypoint is reached. The alert will include the bearing to the next Waypoint.

Boundary crossing Selecting this option will cause an alert when a boundary area or circle is crossed.

Depth above Selecting this option and entering a depth value will cause an alert whenever the depth goes above the depth value. This feature depends on a working depth sounder connected to the NMEA port.

Depth below Selecting this option and entering a depth value will cause an alert whenever the depth goes below the depth value. This feature depends on a working depth sounder connected to the NMEA port.

XTE over Selecting this option and entering a distance value will cause an alert whenever the cross-track-error exceeds the distance.

Obstacles (vector charts only) Selecting this option and entering a Look ahead time period value (minutes and/or seconds) will cause an alert when a new obstacle is found on the path between the vessel and the point looking that far ahead of the vessel at its current speed.

Speakers

Rose Point ECS normally uses a PC's "internal speaker" to sound alarms because these speakers cannot be turned off and are not affected by volume controls. However, some computers do not have an internal speaker, so Rose Point ECS can be configured to use normal speakers instead. Click the Test Beeper button to determine if the computer has an internal speaker; press the button and listen. If a beep is heard, then the PC does have internal speakers. If a beep is not heard, select the Use default playback device option and make sure the computer's volume is set to a level appropriate for the alarms to be heard.

Voice

The voice used to deliver alerts may be controlled with these options:

Enable Voice Alerts Selecting this option allows the voice to be used.

Which voice Selects the voice to use. (Different versions of Windows come with different voices installed. Some programs, such as Microsoft Office, may also install additional voices. Therefore, the available voice options will vary from PC to PC.)

Time between alerts Selects the amount of time to wait between alerts. This must be one or two numbers followed by the letter m for minutes, or s for seconds.

Volume Selects the volume of the voice relative to other sounds. It may be necessary to adjust the volume control of the computer if the voice is not loud enough when this is all the way up.

Speech Rate Controls how fast the computer talks.

AIS Options

Settings > AIS

Vessels

Show Tracks causes a track to appear for each vessel picked up by the AIS receiver. The length of the Track (in time) can be set with the **Track Length** option.

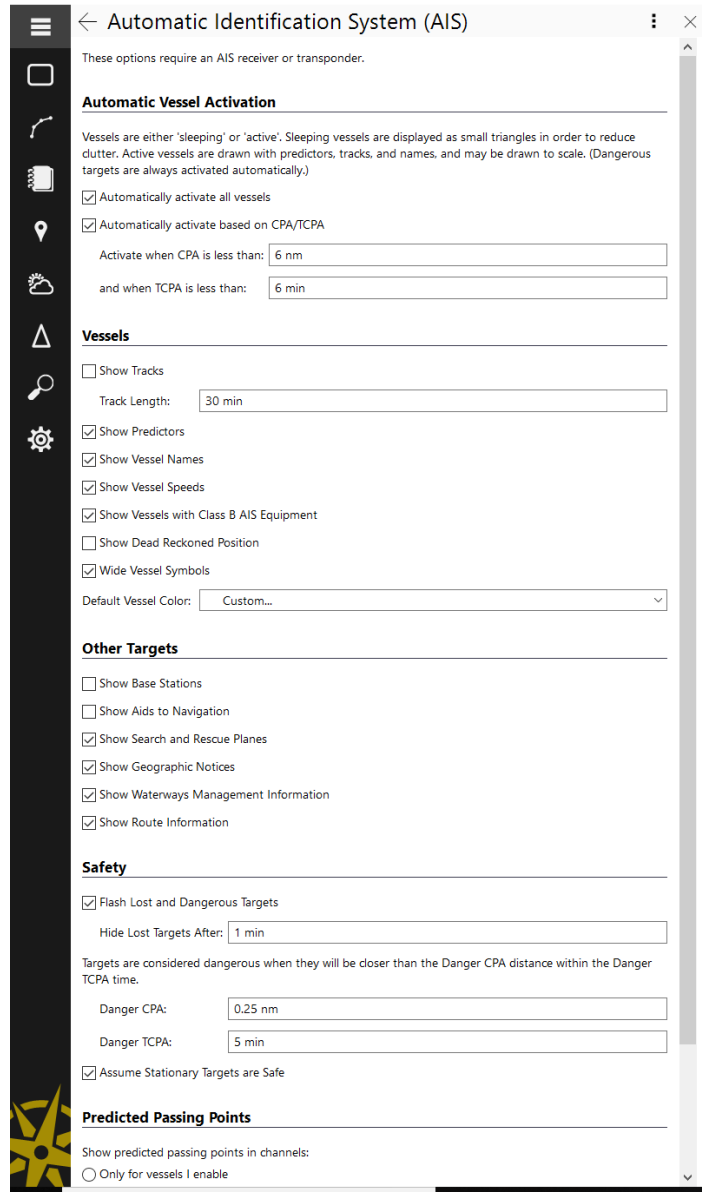
Show Predictors causes each vessel to display a predictor line indicating approximately where the vessel will be if it maintains the same course and speed for a set period of time. The predictor time used for AIS vessels is the same as the time set for the own-ship predictor in Boat Properties.

Show Vessel Names causes the names of vessels to appear near their symbol on the chart. (Rose Point ECS will attempt to prevent names from overlapping and causing too much clutter, so some vessel names may not appear even when this option is enabled.) When this option is disabled, the names of vessels can be selectively displayed by right-clicking on a vessel and selecting the Show Name option.

Show Vessel Speeds causes the speed of the vessel to appear near their symbol on the chart.

Show Vessels with Class B Equipment can be used to show or hide vessels that are using Class B AIS Transponders. Normally this option should be enabled, but it can be used to help reduce chart clutter in areas with many smaller vessels.

Show Dead Reckoned Position causes the locations of vessels to be predicted and displayed every second rather than only when a position report is received. The



predicted location of a vessel appears as a semi-transparent version of the vessel's symbol.

Default Vessel Color selects the color to use for an AIS vessel symbol on the chart by default. The color may be changed on a vessel by vessel basis using the Property Panel.

Other Targets

Show Base Stations displays the locations of AIS Base Stations on the charts.

Show Aids to Navigation displays the locations of AIS Aids to Navigation (AtoNs) on the charts. [More Info](#)

Show Search and Rescue Planes displays the locations of search and rescue planes (that are transmitting an AIS signal) to appear on the chart.

Safety

Flash Lost and Dangerous Targets causes targets that have been lost or are considered dangerous to flash on the chart. (Targets are considered lost when a position report has not been received from them in the past 90 seconds.)

The **Hide Lost Targets After** option specifies how long a target should be displayed after having been lost.

The **Closest Point of Approach (CPA)** and **Time to CPA (TCPA)** for each vessel is calculated each time the own-ship or a vessel target moves. These values indicate closing time and distance to target vessels provided no one changes course or speed. Vessels are considered dangerous when they will be closer than the Danger CPA distance option within the Danger TCPA time option. Dangerous vessels appear in red and may flash (based on the option mentioned above).

Assume Stationary Targets are Safe prevents a target that is not moving from being considered dangerous. This option is very useful in areas where passing moored vessels is frequent and the risk of collision is low.

Show predicted passing points in channels controls the display of marks that indicate predicted passing points along rivers, channels, or the active route. Select "only for vessels I enable" to take manual control over these marks or "for all vessels" to automatically display a mark for each appropriate vessel. In either mode, right-clicking on an AIS vessel and selecting the Show Predicted Passing Point option will hide or show the mark for that vessel. The predicted passing points can be much more accurate than the normal CPA/TCPA since the CPA/TCPA feature assumes vessels will move in a straight line which is usually not the case on a river or in a restricted channel.

Other

Sound an Alarm when AIS vessels cross Boundary Lines and Circles.

Chart Display Settings

Settings > Chart Display

This page allows control over various options that determine how charts are displayed as well as overlay additional optional information.

Vector Chart Display Options

Settings > Chart Display > Vector Chart Display

This window lets the user adjust various aspects of how vector charts are displayed.

The **Symbols** list allows selection of simplified symbols designed specifically for use on computer screens or more traditional symbols.

Show Important Text Only and Show All Chart Text select between two different levels of detail for text display.

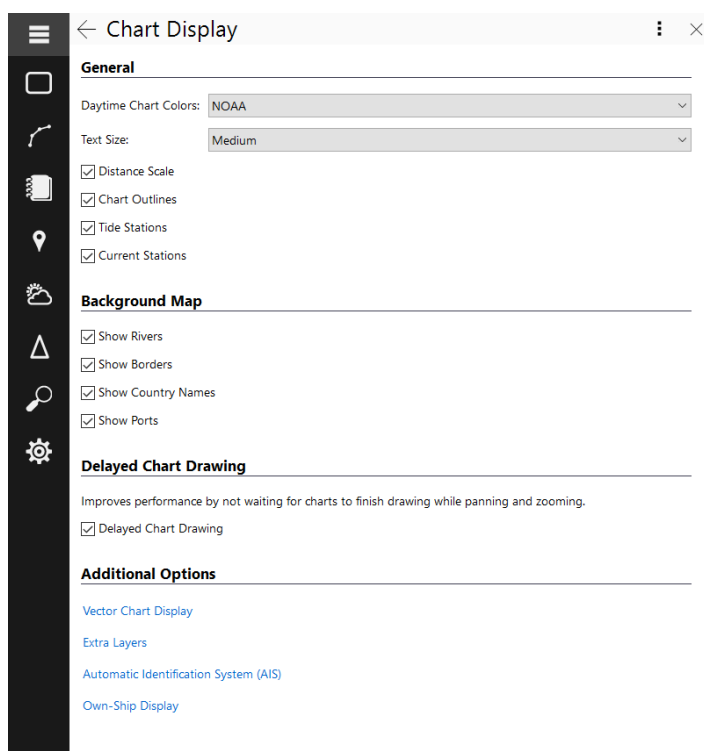
Show Full Light Sectors controls the display of light sectors, the part of a light that indicates its estimated visible range.

Show Light Descriptions controls the display of descriptions of lights. When the display is off, the description of a light can still be displayed by clicking it and selecting Properties

Show Soundings controls whether depth soundings are displayed.

Make Safe Soundings Dimmer controls whether depth soundings deeper than the safety contour are displayed in a color dimmer than shallow soundings.

Show Two and **Four Depth Shades** control how many different colors are used to indicate water depths.



The **Safety**, **Shallow**, and **Deep Contour** options control the depths that are considered "safe", "shallow", and "deep". These depths are used in conjunction with the number of depth shades to determine how to draw the water on the screen. The depth contour lines that are the same or deeper than the safety contour will be drawn thicker than other contour lines.

When the Show Two Depth Shades option is selected, any water areas that shallower than the safety contour are displayed in a pale-blue color while areas that are deeper are shown in white (or black, depending on chart color selection).

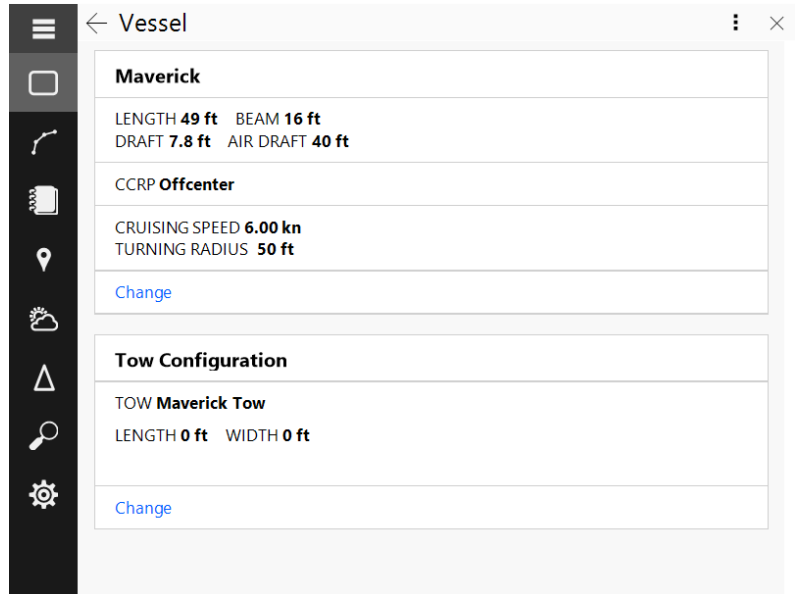
When the Show Four Depth Shades option is selected, depth areas between zero and the shallow contour are displayed in pale-blue, areas between the shallow contour and the safety contour in a lighter pale-blue, areas between the safety contour and the deep contour in a very pale-blue. Areas deeper than the deep contour are displayed in white.

You should always set the safety contour depth to a value that is reasonably safe considering the vessel's draft. This allows Rose Point ECS to alter the colors used when drawing water areas on the chart such that safe areas are always shown in white, while areas that require extra caution (or avoidance) are shown in blue.

Vessel Configuration

Settings > Vessel

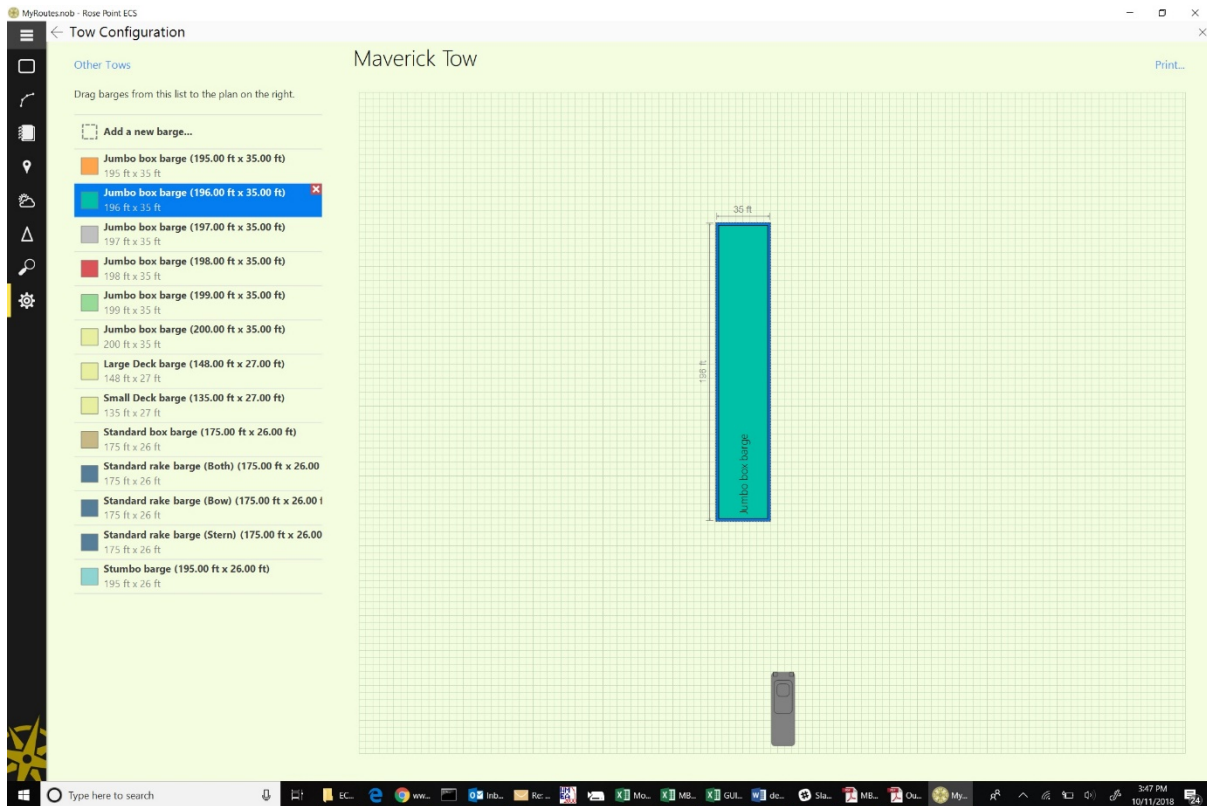
Information such as the length and beam of the vessel is used to show the vessel symbol correctly on large scale charts, the draft and bridge clearance are used to detect shallow areas and bridges that are too low for the vessel to pass, and the turning characteristics are used for various precision navigation route planning tools.



Tow Configuration

The +Inland Add-On includes the ability to configure a tow which will then appear along with your vessel symbol on the chart. Click the Change button in the Tow Configuration panel to make changes to your tow.

On the left side of the screen are a series of standard barges. Use the **Add a new barge** option if the one you need is not in the list. Pick a barge and place it in front of the vessel to create an image of the expected tow load. Selecting Other Tows in the upper left allows you to pick from previously used configurations. Rose Point ECS will communicate the combined vessel and tow dimensions to the AIS transponder so that the vessel will be represented accurately on other AIS displays.



IMPORTANT NOTE



If the AIS vessel type is 57 (vessels towing ahead or alongside with dimensions reflecting the overall size of the vessel and its tow), Rose Point ECS will send the boat and tow combined dimensions as the overall width and length to the Class A AIS device. This automation will only occur if the dimensions of the boat and the locations of the GPS receivers used by the AIS transponder are properly configured. See **Voyage Plan > Depart** to setup the vessel configuration and to configure your barges. Go to **Settings > Electronics > (select your AIS transponder) > Name and GNSS Antenna Locations** to set up the position of the GPS receiver(s) on the vessel. Once the size of the vessel and the location of the sensors are setup, you should not have to change them again. The barge configuration needs to be updated every time it changes.

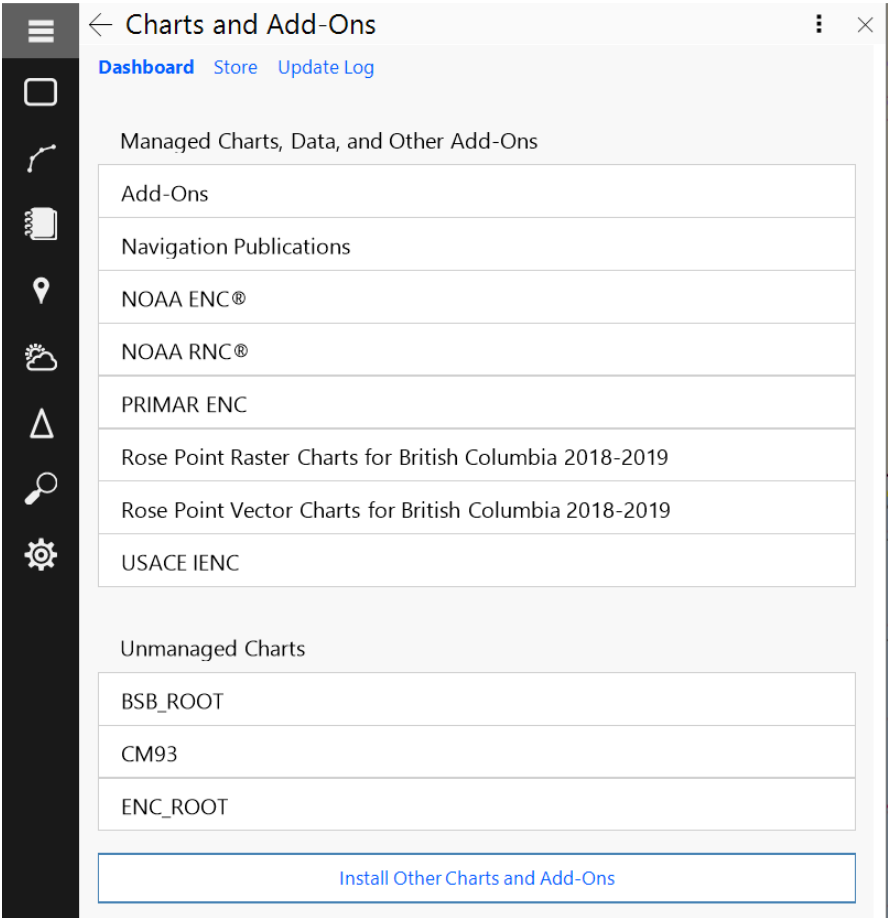
Settings - Charts and Add-Ons

Settings > Charts and Add-Ons.

This browser displays the charts and add-ons that are installed on the system and provides access to a store where to find new charts and add-ons to install (some of which are available free of charge).

Overview

When a Rose Point Chart Disc is inserted into your PC, or if charts have been purchased on a different PC and are now available for this PC, an alert will appear near the top of the overview page along with options for installing those charts.



The overview page normally lists the various collections of charts and add-ons that are installed on the system. These collections are shown in two groups: Managed and Unmanaged. The items in the "managed" group are ones that Rose Point ECS can update on its own. The unmanaged items can be used by Rose Point ECS, but they cannot be checked for updates automatically.

Chart Collection Details

Clicking on a collection listed on the dashboard will display details for that collection. Some collections are simply a list of charts while others may include a list of regions of charts.

Rose Point ECS will try to keep all installed Managed charts up to date during the Sync process. However, if there are chart groups or individual charts installed on the system that do not require updating, the Inhibit updates option can be used.

The Store

The Store shows charts and add-ons that may be purchased or downloaded. Some of these charts are free, such as the NOAA ENC®, NOAA RNC®, and the U.S. Army Corps of Engineers (USACE) IENC, while others must be purchased.

Purchasing Charts

To purchase a chart product, find and select it from the appropriate collection and then click the Add to Cart button. There is no limit the number of chart products that can be added to the shopping cart.

Once a product is added to the shopping cart, a Shopping Cart button will appear at the top of the browser to indicate how many items are in the cart and how much they will cost.

Once the necessary charts have been added to the cart, click the Shopping Cart button to verify the full contents of the order.

After reviewing the items in the shopping cart, click the Checkout button to complete the order using the Rose Point Online Store.

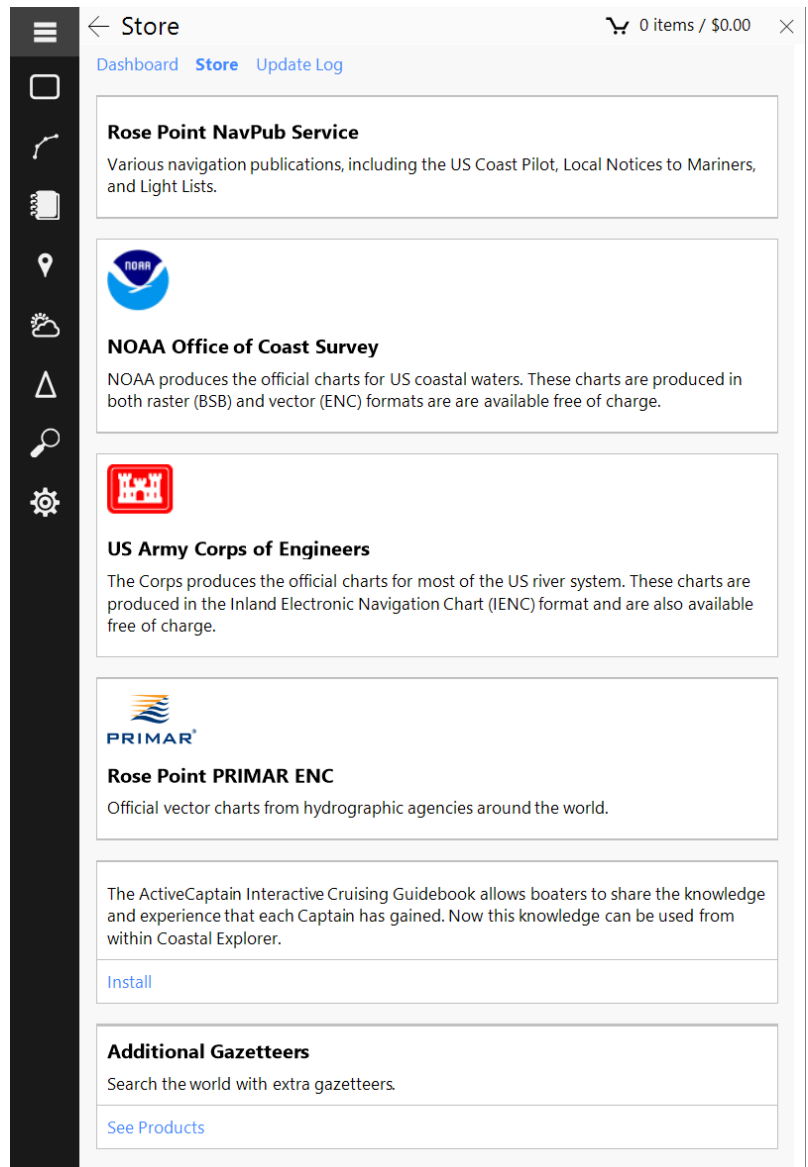
Downloading Charts

Charts that are free, or charts that were purchased through the chart store on a different computer, will appear in the store with an Install button rather than an Add to Cart button. Individual charts, or entire regions can be installed by clicking said button.

Installing Other Charts

Rose Point ECS will automatically search for chart files in a few standard folders on the system. If compatible charts are available on the system, but are not being loaded by Rose Point ECS, you can easily tell it where they are.

Some third-party charts may require the use of the manufacturer's installation procedure, but others can be installed by Rose Point ECS. If a disk is inserted containing



The screenshot shows a web browser window titled "Store" with a shopping cart icon in the top right corner indicating "0 items / \$0.00". A navigation bar includes "Dashboard", "Store", and "Update Log". A vertical sidebar on the left contains icons for home, search, location, and settings. The main content area lists several chart products:

- Rose Point NavPub Service**: Various navigation publications, including the US Coast Pilot, Local Notices to Mariners, and Light Lists.
- NOAA Office of Coast Survey**: NOAA produces the official charts for US coastal waters. These charts are produced in both raster (BSB) and vector (ENC) formats and are available free of charge.
- US Army Corps of Engineers**: The Corps produces the official charts for most of the US river system. These charts are produced in the Inland Electronic Navigation Chart (IENC) format and are also available free of charge.
- Rose Point PRIMAR ENC**: Official vector charts from hydrographic agencies around the world.
- The ActiveCaptain Interactive Cruising Guidebook**: Allows boaters to share the knowledge and experience that each Captain has gained. Now this knowledge can be used from within Coastal Explorer. Includes an "Install" button.
- Additional Gazetteers**: Search the world with extra gazetteers. Includes a "See Products" link.

charts while Rose Point ECS is running, and it can handle installing those charts, it will provide an on-screen notification.

To change where Rose Point ECS looks for charts:

- Select the **Settings > Charts and Add-Ons > Install Other Charts > Install charts already on this computer** option.
- Follow the directions in the window to change the folders that will be searched for charts.

To change where Rose Point ECS will install charts:

Select **Settings > Charts and Add-Ons > Install Other Charts > Change chart installation folder** and follow the directions in the window.

To install charts from the internet

Use **Settings > Charts and Add-Ons > Store** to download and install both free and purchased charts. To update charts, use **Settings > Sync Now** and Rose Point ECS will automatically download and install any new or updated charts that are available.

Installing S-63 ENC Charts

When S-63 ENC charts from a chart supplier are purchased, a S-63 User Permit will be requested. The User Permit is a special code that identifies a computer to the chart supplier and is needed to generate a license to use the charts purchased. A system's User Permit can be found in Rose Point ECS by going to **Settings > Charts and Add-Ons > Install Other Charts > Install S-63 permits and charts**.

After chart licenses have been purchased, the chart supplier will provide two or more files. One file will contain the permits (licenses) to use the charts and the other files will contain the actual charts.

Install the chart permits by using the Install a Chart Permit file... button and selecting the permit file the chart supplier provided.

If charts were purchased from ChartWorld then one or more files will be provided with a file type of .zip.s63 that contains the charts. Each of these files should be installed using the Install charts purchased from ChartWorld... button right below the Install Permits button. (Be sure to install the permit file received with the charts BEFORE attempting to install the actual charts.)

If a supplier provides you with a CD-ROM or DVD-ROM containing a standard S-57/S-63 Exchange Set, simply insert the disk into the PC's drive and Rose Point ECS will ask for permission to copy the charts to the PC's hard drive.

If a supplier provides an Exchange Set that is not on a CD-ROM, but is instead in a folder on the computer, the Install charts from an Exchange Set button can be used. Example: The Admiralty Updating Service creates a folder inside of the PC's documents folder called Exchange Sets that contains the updates it downloads.

S-63 Charts

S-63 is a copy-protection scheme developed to protect the copyright of S-57 charts that are not made freely available (which includes most charts outside the US). S-63 protected charts work great with Rose Point ECS but installing them requires a few extra steps.

Rose Point PRIMAR ENC Service

The easiest way to purchase and install S-63 charts is to buy them through the chart store built into Rose Point ECS. Use **Settings > Charts and Add-Ons > Chart and Add-On Store > Rose Point PRIMAR ENC** to get started.

When charts are purchased from Rose Point, the selection, purchase, and installation process is greatly simplified. Updates to the charts are also installed semi-automatically just like the NOAA ENC and USACE IENC. (Internet access is required.)

Chart Compatibility

Rose Point ECS utilizes various formats of charts from several manufacturers. Each type of chart has its own advantages and disadvantages, and many of these are subject to individual preference.

RASTER CHARTS

Raster charts are simply digital pictures of paper charts that also contain the information necessary to convert between locations in the picture and a latitude and longitude. Most Raster charts also contain other information such as when the last update was made and the units of depths.

Some people prefer raster charts over the newer vector charts because they seem more familiar - they are just copies of paper charts after all. However, Vector charts have some major advantages over Raster charts and will soon be the world-wide standard chart format.

Most raster charts are available in a format called "BSB" which comes in various versions. Rose Point ECS can accept BSB 3, BSB 4, and BSB 5 charts which are all that are currently in use.

BSB 3 charts for the United States are available free of charge from NOAA via the internet and are also available on DVD-ROM from various retailers for a small fee.

The BSB 4 and BSB 5 formats add copy protection to the basic BSB format. In order to use these charts with Rose Point ECS be sure to run the chart manufacturer's included setup program to install the charts and register them for use on the computer.

The Canadian Hydrographic Service (CHS) produces raster charts for Canada and are available through many resellers. All of their charts are compatible with Rose Point ECS.

Nautical Publications produces Caribbean Yachting Charts (CYC-Charts) which can be used by Rose Point ECS, though these are not BSB format charts. Their parent company, Nautische Veröffentlichung Verlagsgesellschaft mbH, produces many compatible European charts as well.

The older "NOS/GEO", "PCX Format" and "RML Format" charts are also fully compatible. These formats are still used by several producers of digital charts covering areas outside of the United States. Be aware, however, that charts in this format tend to be pretty out of date.

PHOTO CHARTS

Photo charts are a variation of raster charts. They are still a static picture, but rather than being a picture of a chart, they are a photograph of an area. Photo charts are especially handy for checking out shallow areas as they clearly indicate the location of shoals and channels.

Photo charts are usually derived from the Digital Orthographic Quadrangle (DOQ) photos created by the USGS. The originals are available in various forms on the internet and Rose Point ECS can use the GeoTIFF format. The USGS does not offer the DOQs for download, but many states have universities that do.

Maptech's Navigation Photos and SoftChart's PhotoNavigator charts which are derived from the USGS DOQs are also supported.

VECTOR CHARTS

Rather than storing the entire chart as a single image like a raster chart, vector charts are made up of many separate "objects" such as coastlines, bays, land areas, buoys, and depths. Some of the advantages of this method include:

- The display of individual types of objects can be controlled which allows for management of clutter on the screen
- The units of displayed measurements can be controlled
- The database of object descriptions uses much less storage space than an equivalent raster chart

- There is a greater amount of information stored in the database that computer software can take advantage of for advanced features such as route safety checking.

There are only three disadvantages to Vector charts:

- Coverage of Vector charts is not as complete as Raster charts (yet)
- Many Vector charts do not have as much detail as their paper counterparts
- The resulting display does not look as familiar as a paper chart

The only non-proprietary Vector chart format is called S-57, or ENC (short for Electronic Navigation Chart), and is the standard format used by nearly every hydrographic office in the world for official government charts. S-57 ENCs are the only Vector chart format approved for use as paper chart replacements on SOLAS (Safety Of Life At Sea) class vessels such as cargo and cruise ships.

A great benefit of S-57 ENCs is that NOAA and the U.S. Army Corps of Engineers provides these charts free of charge.

Canadian ENCs may be purchased directly from the Canadian Hydrographic Service. Many other countries also make ENCs available through their hydrographic offices or distributors.

ENCs are made up of one or more files, usually stored in a folder that just contains files related to one chart. The most important file has a type of .000 which contains the chart database. Other files with the same name but different numeric file types (such as .001, .002, .003, etc.) may be in the chart's folder and contain updates to the database. Any number of other files, usually text or TIFF images, may be in the folder and contain extra information or pictures that are referenced by the database.

S-57 refers to the world-wide standard format of a Vector chart database. Another world-wide standard, called S-52, refers to the way to present that database to a user in a graphical way. S-52 determines colors, line-styles, fill-patterns, text placement, and all the other details that go into drawing a chart database on a computer screen. Rose Point ECS has complete support for S-57 ENCs drawn according to the S-52 specification.

S-63 is yet another International standard that refers to a specific type of licensing used for S-57 charts. Charts supplied in S-63 format are available from many suppliers and are compatible with Rose Point ECS.

TOPOGRAPHIC MAPS

Topographic maps are not suitable for navigation but are very handy for viewing land-based topography. Rose Point ECS can use the topographic maps that are included in

most Maptech ChartKits as well as the original USGS DRG files which are found in the GeoTIFF format. See also: Using Topographic Maps.

Electronic Chart Manufacturers

These are just some of the chart manufacturers that create Rose Point ECS compatible charts:

- **NOAA Office of Coast Survey** Official US charts are available for download free of charge.
- **U.S. Army Corps of Engineers Inland ENC** These vector charts are available for free and cover major U.S. rivers.
- **Maptech Digital Charts** Maptech distributes raster charts for most of the world. Maptech's Digital ChartKits usually contain a marine facilities directory and aerial photos for the region and this information is used by Rose Point ECS as well as the charts and maps.
- **Canadian Hydrographic Service** produces the official charts for Canadian waters. Both raster and vector charts are available from the CHS website.
- The United Kingdom Hydrographic Office (UKHO) offers the **Admiralty Vector Chart Service** which is a world-wide catalog of official vector charts in S-57/S-63 format that may be used with Rose Point ECS.
- **ChartWorld GmbH** also provides official vector charts for the world in S-57/S-63 format and they have most of the Navionics portfolio available in that format as well.
- **Nautical Publications** produces raster charts for the Caribbean as well as parts of the US East Coast and most of Europe that can be used with Rose Point ECS.
- **U.S. Geological Survey** The USGS produces "DRG" topographic maps as well as "DOQ" photo charts the GeoTIFF format which may be used with Rose Point ECS.

Using Topographic Maps and GeoTIFF Files

To use Coastal Topographic Maps from Maptech:

- Install the topographic maps from the Maptech Digital ChartKit CD-ROM
- Select Topographic Maps from the Chart Type menu on a chart panel

To use USGS DRG topographic maps or other files in the GeoTIFF format:

As long as the accompanying metadata files (.FGD files) that usually come with the USGS DRG topographic map files are present, GeoTIFF files can be used just as navigational charts would by telling Rose Point ECS where to find the files in the **Settings > Chart Portfolio > Install Other Charts > Install charts already on this computer** window.

If the corresponding metadata files are not available, the GeoTIFF files can be opened by dragging them onto the Rose Point ECS window (drop the file anywhere but on the chart panel).

GeoTIFF Format Options

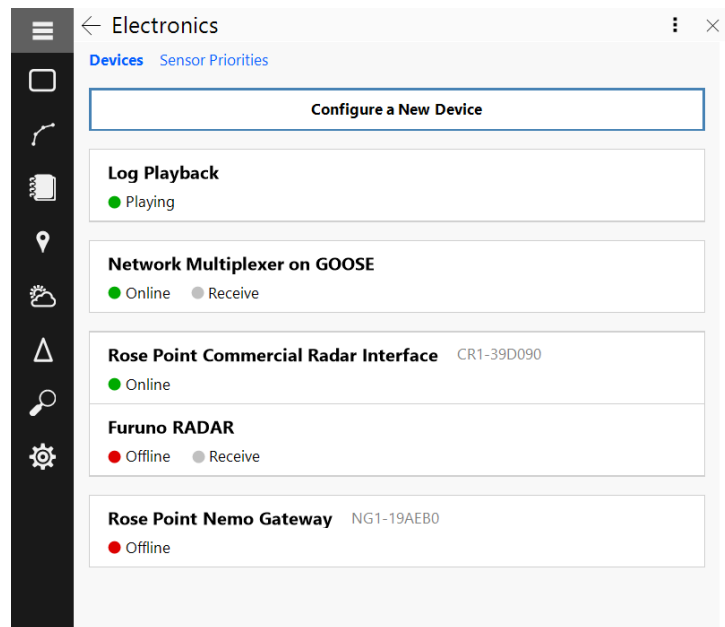
The GeoTIFF image file format is very complex and has a lot of options, some of which are not compatible with Rose Point ECS. Here are the options that are supported:

- Color Formats: monochromatic, grayscale, palletized, or RGB
- Color Resolution: 1, 4, 8, 24, or 32 bits per pixel
- Compression: PackBits or JPEG
- Image Format: Tiled or Non-tiled
- Model: Geographic or Projected
- Geographic Coordinate Systems: WGS-84, WGS-72, NAD-27, or NAD-83
- Projections: Transverse Mercator, Transverse Mercator (Alaska), Mercator
- Map Systems: UTM North or UTM South

Settings – Electronics

Rose Point ECS can utilize information from many different instruments on board the vessel if they are connected to the PC through an appropriate interface. A GPS will be the most common type of instrument, but depth sounders, speed sensors, wind vanes, and even some radar units can supply useful information to Rose Point ECS. Rose Point ECS can also send information to compatible devices such as autopilots, data displays, and radar units.

Many marine electronic devices have the ability to share sensor data and other information with each other and with your PC. Several different interfaces are commonly used for interconnecting devices, including the NMEA 0183 and NMEA 2000 standards which Rose Point ECS can use, and a few proprietary interfaces which are limited to a single manufacturer's equipment.



NMEA 2000 Gateways

The NMEA 2000 networking standard is another marine electronics interface that is newer than NMEA 0183 and has many advantages. A special interface known as a "gateway" is needed to connect a PC to the NMEA 2000 network. Point ECS is compatible with the following NMEA 2000 gateways:

- Rose Point Nemo Gateway
- Rose Point NMEA 2000 USB Gateway
- Actisense NGT-1 NMEA 2000 PC Gateway

NMEA 0183 Interfaces and Multiplexers

For Rose Point ECS to take advantage of your NMEA 0183 compatible instruments, they must be connected to the PC. Two different kinds of devices are available that provide an interface between NMEA 0183 and a standard serial port (also known as a Communication Port), a USB port, or a network connection.

One of these devices is usually called an "NMEA Adapter" and allows a single NMEA 0183 device (usually a GPS) to be connected to the PC. The other type is called an "NMEA Multiplexer" and allows more than one NMEA 0183 device to be connected to a single serial port. The multiplexer is more complicated on the inside because it needs to merge the sentences from more than one source without mixing them up, but the manner in which they are connected is basically the same as an adapter.

One issue that arises with NMEA Multiplexers is that they are usually receiving data at the same rate that they can transmit it, but they are receiving it from multiple sources. There is no problem when the data comes in as small bursts from each source, but when too much data starts to come in, some of it will be lost. Some multiplexers can be setup to transmit at a higher rate than the default. If one of these multiplexers is connected, The Advanced NMEA Port settings utility (see below) can be used to configure Rose Point ECS to accept the higher rate of data.

Garmin

Rose Point ECS can also use the proprietary "Garmin" serial interface used by some of Garmin's GPS receivers and chart plotters. Rose Point ECS cannot use Garmin's proprietary networking interface, only the Garmin Serial Interface.

Making the Connection to Your PC

Some devices can connect directly to a PC without the need for an adapter or multiplexer. Refer to the equipment's documentation for PC connection guidelines.

Most modern PC's no longer have COM ports built in, but one (or more) can be added using a plug-in card or a USB adapter. Any of these solutions will require a driver which is usually provided on a CD-ROM that comes with the adapter. Most manufacturers also provide updated drivers on their websites and it is almost always better to be the latest driver that was made for the version of Windows running on the system.

Some devices will provide NMEA 0183 formatted data over a network rather than a serial port. Two different standards are used for this, TCP and UDP, and Rose Point ECS can user either one. Check with the device's documentation to see what it uses. See "Add a Network Port" below for more details configuring Rose Point ECS to use these devices.

General Hardware Setup Steps

Every piece of equipment is different, it may be necessary to consult a device's documentation to find out how to get it connected to your PC, but the general process is:

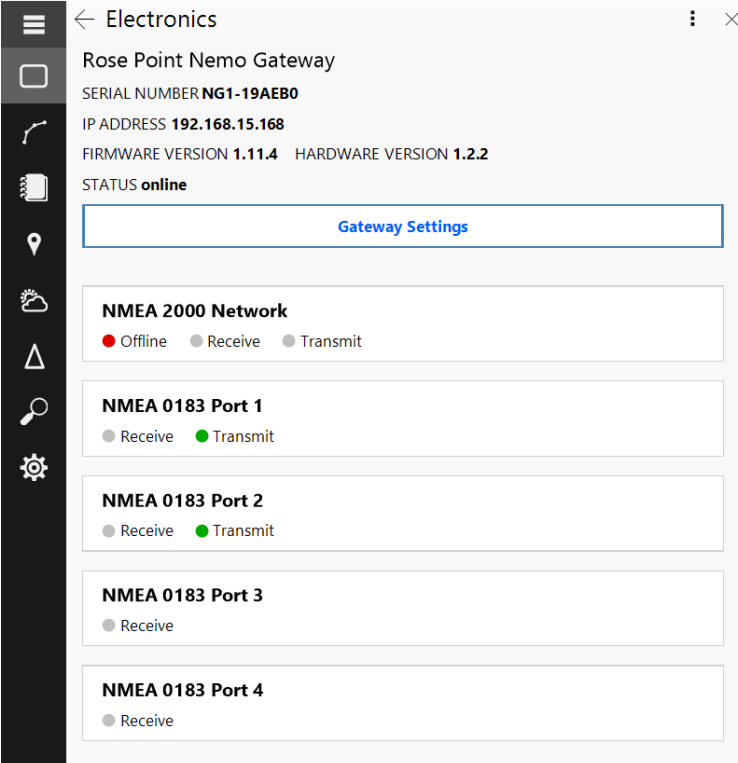
- **Wire it up** - connect the NMEA output from the device to the input of an adaptor or multiplexer and connect the serial port of the adaptor or multiplexer to the serial port of the PC. The adaptor or multiplexer should come with instructions specific to its installation.
- **Enable NMEA 0183 Output** - some devices may need to have the output of NMEA 0183 sentences enabled; refer to the device's documentation.
- **Configure the port in Rose Point ECS.**

The Devices Page

The primary page of the Electronics area is called "Devices". It lists the devices and interfaces that have already been configured, and allows for manual configuration of new devices.

The list of configured devices can include simple USB or Bluetooth GPS receivers, COM Ports connected to single NMEA 0183 devices or multiplexers, NMEA 2000 gateways (and networked devices), radar interfaces, video cameras, and more.

Clicking on a configured device will display a page specific to that device. These Device pages contain different information and options based on the type of device. Most Device pages provide diagnostic information and troubleshooting tools, some provide configuration options, and manually added devices can be manually removed from their respective pages.



The screenshot shows the "Electronics" page for a "Rose Point Nemo Gateway". The page displays the following information:

- Serial Number: NG1-19AE80
- IP Address: 192.168.15.168
- Firmware Version: 1.11.4
- Hardware Version: 1.2.2
- Status: online

Below this information, there is a "Gateway Settings" button. The page also lists several NMEA interfaces with their status:

- NMEA 2000 Network**: Offline (red dot), Receive (grey dot), Transmit (grey dot)
- NMEA 0183 Port 1**: Receive (grey dot), Transmit (green dot)
- NMEA 0183 Port 2**: Receive (grey dot), Transmit (green dot)
- NMEA 0183 Port 3**: Receive (grey dot)
- NMEA 0183 Port 4**: Receive (grey dot)

Near the top of Devices page is a link called "Sensor Priorities." This link leads to a page where to adjust the relative priorities of devices of the same type. This may be important

if, for example, multiple GPS receivers are connected and it becomes necessary to designate one as the primary system and another as a backup.

Configuring a New Device

Settings > Electronics > Configure a New Device

The Configure a New Device page allows for manual configuration of a new device or interface for use with Rose Point ECS. A NMEA 0183 data server can also be configured to provide other networked devices access to the NMEA 0183 data received or generated by Rose Point ECS.

When the Configure a New Device page is opened, a list of the Communication (COM) Ports on the PC that have not yet been configured will display. This list will include any USB Serial Ports and Bluetooth Serial Ports that are currently available on the PC.

Automatic Port Configuration

For many installations, Rose Point ECS can determine which ports to use semi-automatically with the Auto Detect feature which will open all the communication (COM) ports on the PC and start "listening" for your electronics. Rose Point ECS will keep listening to all the ports on the computer until the Auto Detect page is exited.

To use this feature, click the "Try to auto-detect devices on these ports" button below the list of Communication Ports. Rose Point ECS will then attempt to open all COM ports on the computer that are not already configured and wait for navigation data to appear. If all goes well, Rose Point ECS will notify which ports it finds navigation data on and save the appropriate settings.

While Rose Point ECS is scanning, a list of COM ports found will display along with the status of each port.

COM ports can only be used by one program at a time, so if some other program is already using a COM port, Rose Point ECS will show its status as being in use by another program. If that is the port needed, it will be necessary to figure out which program is using it and make it release the port.

Manual Port Configuration

In some cases, a port needs to be configured when it is not currently sending any information or cannot be automatically detected. This can be done by clicking on the port to access and configure that port's settings.

The first thing to adjust is the Interface option which determines the protocol used for communications between the PC and the instruments on the port. This should usually

be set to "NMEA 0183" but there are other options as well. It is important that the device be configured to use the same interface as the one selected here. Check the documentation for the connected device to see how to select which interface it will use.

In some cases, Rose Point ECS can automatically determine the right interface to use. Click the Auto-Detect button to try it.

Once the interface is selected, the set of available options will change based on the selection. Some interfaces do not require any more options and the back button can be pressed or the browser closed, but others may require more configuration.

Most marine electronic devices use the "NMEA 0183" interface at 4800 baud. However, if a Garmin GPS is connected it might be configured to use the Garmin Interface which operates at 9600 baud. If an AIS receiver or transponder is connected, it probably uses NMEA 0183 at 38400 baud (also known as NMEA 0183-HS).

Add a Network Port

Settings > Electronics > Configure a New Device > Add a network port...

Rose Point ECS can use a network to send and receive NMEA 0183 data provided that a suitable data server is available on that network.

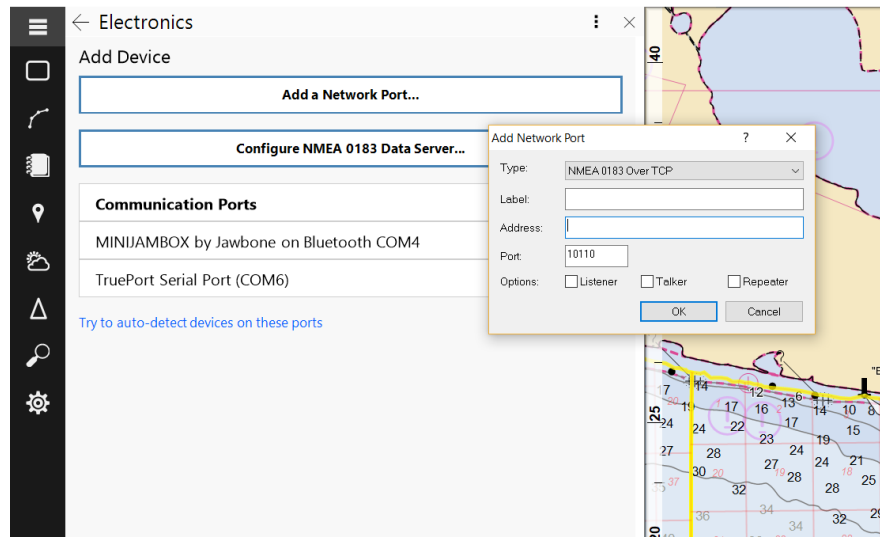
To configure a network port, use this window to select the type of network interface to use. Then enter the address of the data server and a port number if

necessary. The address should consist of the network name of the server or the dotted IP address of the server (e.g. 192.168.1.12).

The standard interface options include:

NMEA 0183 over TCP is a basic TCP/IP protocol similar to Telnet to send and receive NMEA 0183 sentences over the network. This protocol is compatible with many RS-232 to Ethernet Adapters, internet-based AIS "feeds", and software packages that use, generate, or repeat NMEA 0183 information over networks.

NMEA 0183 over UDP is also used to send and/or receive NMEA 0183 data but uses UDP broadcasting instead. When Rose Point ECS is configured to send ("talker" or



"repeater") data, each NMEA 0183 sentence will be transmitted to the specified port as a separate UDP datagram. When Rose Point ECS is configured to receive data, it will accept any number of sentences in each datagram.

Other interface options may be available if you have any optional Add-On modules installed.

Configuring NMEA 2000 Networks

Rose Point gateway devices are automatically detected and configured for use with Rose Point ECS. The Actisense NGT1 requires a free Add-On to be installed before it can be used with Rose Point ECS. The process for installing this Add-On is covered later.

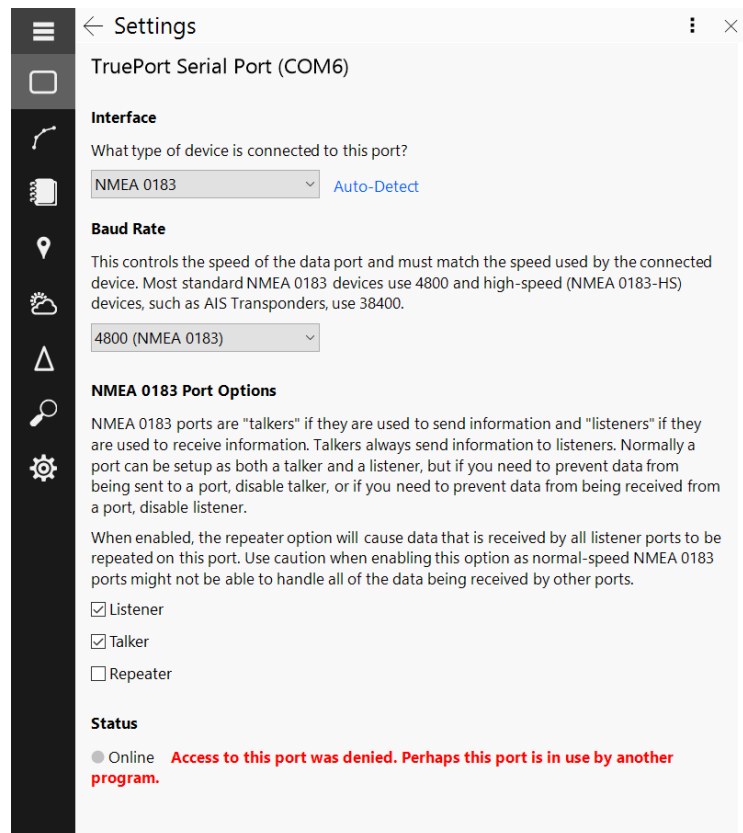
Once they have been installed, NMEA 2000 gateways do not typically require any additional configuration. However, Rose Point ECS does offer a few options that control what information it will send to the NMEA 2000 network. As these are typically used to control an autopilot, they are covered later in the Autopilot Configuration section.

Configuring NMEA 0183 Ports

When the NMEA 0183 interface is used, it will be necessary to configure the "baud rate" and possibly a few other things.

The Baud Rate option determines the speed of communications between the PC and the device connected to the port. It is important that the speed selected here is the same as the speed selected on the device. (The baud rate option only applies to Communication Ports; if NMEA 0183 over a TCP network is being used the option will not be available.)

The NMEA 0183 interface standard specifies that serial communications occur at 4800 baud. However, some NMEA 0183



PC interfaces may require different settings. Check the documentation that came with the connected device for more information.

Most AIS Receivers and Transponders use a high-speed version of NMEA 0183 which is called "NMEA 0183-HS". This is exactly the same as NMEA 0183 except that the baud rate is 38400 so if you are connecting an AIS device, that is probably what you need to select here.

The NMEA 0183 interface uses the terms "Talker" and "Listener" to refer to whether a device sends information or receives information. A GPS, for example, is a Talker since it sends its current position, course, and speed to devices that are listening to it. In Rose Point ECS, each NMEA 0183 port has a Listener option which is normally enabled and a Talker option which is normally disabled. These options refer to Rose Point ECS with respect to the selected port, so in the default configuration Rose Point ECS will act as a Listener but not a Talker.

If you have an autopilot, NMEA 0183 repeater display, or other Listener connected to a port, it will be necessary to enable the Talker option for that port so that Rose Point ECS will send it information. To control exactly what information is sent to Talker ports, use Talker Options. Fine control over exactly how each bit of information is sent can be found in the Talker Options window.

The NMEA 0183 ports also have an option called **Repeat sentences from other ports** that is normally disabled. When this option is enabled, Rose Point ECS will forward all the information that it receives from all the ports marked as Listeners to the port. Use this option with caution as most NMEA 0183 Listeners can only handle a small amount of information and sending them too much can cause all sorts of problems.

If too much data is being sent to a port, you will receive a "Port Clogged" warning. This can happen either because too many sentences are selected in the **Talker Options > Sentences** window, or because the Repeater option is enabled and too many sentences are being received on Listener ports. For more information about the causes and cure for this condition, see the Port Clogged topic.

NMEA 0183 Port Pages

After an NMEA 0183 port has been added, selecting it from the list of configured devices leads to a page where you can make changes to that port's settings, remove the port's configuration, or see the data that is being received from the port.

The Listener, Talker, and Repeater options are for the NMEA 0183 interface only and determine how data sent to and received from the port.

The **Listener** option indicates whether NMEA 0183 data should be received on the selected port. This option should be on for any ports that have instruments that send data such as your GPS receiver or depth sounder.

The **Talker** option indicates whether NMEA 0183 data should be sent to the selected port by Rose Point ECS. This option should be on for any ports that have instruments that need to receive information such as your autopilot.

The **Repeater** option indicates whether NMEA 0183 data that is received on any port should be repeated by sending it to the selected port. This is different from the Talker option which affects data that is generated by Rose Point ECS.

The **Filter Sentences** option may be used to cause some sentences to be ignored when they are received on a port configured as a Listener. (When sentences are filtered out, they are not sent to Repeater ports, so this is a good way to reduce the chances of ports getting clogged.) For more information, see Filter Sentence Window below.

Filter Sentences Window

This window lets you configure which NMEA 0183 sentences Rose Point ECS should use and which ones it should ignore. Normally all sentences are used, but you might need some to be ignored if:

- you have a faulty piece of equipment that is sending erroneous data, but other instruments are sending useful data to the same port
- you are receiving redundant or unnecessary information on a port and need to reduce the amount of data that is being sent to repeater ports

The Filter Sentences window contains a list of all standard NMEA 0183 sentences with a checkbox next to each one. Clearing a checkbox causes that sentence to be ignored.

Access the Filter Sentences Window by using **Settings > Electronics**, selecting the port to configure, and then clicking the Filter Sentences... option.

NMEA 0183 Talker Options

Settings > Electronics > (NMEA 0183 Port) > Talker Options

This window lets you control various aspects of how Rose Point ECS formats the information it sends to your autopilot and/or other NMEA 0183 devices. The default settings should work with most devices, but if something is not working quite right you might have to make some adjustments here. Please refer to the documentation for the devices you want Rose Point ECS to send data to in order to find the appropriate settings.

Each NMEA 0183 port has its own independent options.

Options Page

Talker ID This is the type NMEA 0183 device that Rose Point ECS will claim to be when it transmits sentences. This should be set to EC - Electronic Chart Display unless you have equipment that requires something else (some Furuno autopilots are known to only listen to a GP - GPS Receiver, for example.)

Time between updates Specifies the number of seconds to wait between each burst of NMEA 0183 sentence transmissions

Always include checksum Checking this will cause Rose Point ECS to send a checksum value with every NMEA 0182 sentence it transmits; when this is not checked, only those sentences specified as requiring checksums will have them. A checksum is a simple method of ensuring data transmission reliability. We recommend that this option be left on unless you experience problems with older NMEA 0183 equipment.

Magnetic or True Bearings This specifies whether bearings should be sent as True or Magnetic (the default is True). Since the information about which option is selected is included with each bearing sent, most autopilots will work either way. However, some older autopilots ignore the true/magnetic settings and assume the bearing is one or the other. For these autopilots, you must select the appropriate option here.

Send three-digit bearings (000-359) Some autopilots require bearings to be specified as three digits with leading zeros added to bearings less than 100 degrees. When this option is on, bearings are always sent with three digits before the decimal point. When this option is off, bearings are sent without leading zeros.

Maximum Waypoint name length Specifies the number of letters and/or digits that are allowed by your autopilot in a Waypoint name. Names longer than this value will be truncated to fit (the default is 16).

Use ALL CAPS Specifies that the autopilot does not accept lower-case letters, so Waypoints names should be converted to all capital letters before sending them.

Numeric Precision - Bearing This specifies how many digits after the decimal point should be sent for bearings (the default is 2).

Numeric Precision - Range This specifies how many digits after the decimal point should be sent for ranges (the default is 2).

Numeric Precision - XTE This specifies how many digits after the decimal point should be sent for cross-track-error distances (the default is 3).

Numeric Precision - Fix This specifies how many digits after the decimal point should be sent for fixes (the default is 3).

Numeric Precision - Speed This specifies how many digits after the decimal point should be sent for speeds (the default is 1).

Select Default Options Press this button to restore all the values on this page to their defaults.

Sentences Page

This lists the various NMEA 0183 sentences that Rose Point ECS can transmit. You will need to refer to your equipment's documentation or experiment to find the right options. However, most autopilots will work with just the APA, APB, and BWC sentences selected.

Try not to select sentences that are not necessary as only a limited amount of data can be sent. If you attempt to send too much data, you will get "NMEA Port Clogged" messages from Rose Point ECS. When that happens, you can either turn off some sentences, or adjust the **Time between updates** value on the *Options* page.

Port Troubleshooter

The bottom of NMEA 0183 port information pages shows a list of sentences that have been sent and/or received on that port. Each sentence type is only listed once along with a description and the time it was last sent or received.

Below the sentence lists, you will see a box containing Raw Data. This is a live display of the data received from the port.

Use these displays to troubleshoot your ports and to see what sort of data is available on each port.

Port Clogged Warnings

Port Clogged is a warning condition unique to Rose Point ECS that is intended to help troubleshoot a common problem you might run into when combining the data from several NMEA 0183 instruments on a single NMEA 0183 port.

The problem stems from the fact that NMEA 0183 data is typically sent at a slow speed and many devices send almost as much data as can be sent on a single NMEA 0183 port. When the data from more than one instrument is combined, there is sometimes more data to send than time will allow.

While Rose Point ECS can't do anything about incoming data that is garbled due to a clogged port, it can prevent itself from creating the problem. The "NMEA Port Clogged" warning specifically means that one of your Talker and/or Repeater ports currently has too much data being sent to it. While this warning is in effect, stop sending lower priority sentences as often in order to prevent the data it is sending from getting corrupted.

Several factors control the amount of data being sent to a port by Rose Point ECS. Probably the most important is the Repeat Rate which is found in the port's *Talker Options*. This controls how often Rose Point ECS will send updated data to the port. The number of seconds should be as small as possible to ensure that equipment that is using the data is always using relatively fresh data, but large enough that the port does not clog up. Two seconds is usually a good number.

Another major factor is the set of sentences that Rose Point ECS sends. These are selected in the port's Talker Options. Only the sentences that need to be sent should be checked but figuring this out can be very difficult. Unfortunately, most electronics manuals list all the sentences that the device can use but they don't list the minimum or even preferred sentences. Most modern autopilots only need the APB and RMC sentences, but some other models may require other sentences instead.

One other potential cause of port clogging is the Repeater option for NMEA 0183 ports. When this option is enabled, all the NMEA 0183 data from all the Listener ports and the data configured for Talkers is combined into a single stream and sent to the Repeater port. This option is almost never necessary, so think twice before turning it on.

Using USB Devices

Most USB devices require a driver to be installed before Windows will allow an application to start using them. If you have a USB Serial Adapter, USB GPS Receiver, NMEA 2000 USB Gateway, or another USB device that you want to use with Rose Point ECS, be sure to install that driver first. Drivers usually come on a CD-ROM with the device that need it, but newer (and usually better) drivers are frequently available on the manufacturer's website.

Using Bluetooth Devices

When using a Bluetooth GPS Sensor, or any other Bluetooth device, you must first pair the device with your PC. This establishes a link between the device and your PC in the form of a virtual COM port which can then be configured just like a built-in COM port or USB Serial Adapter.

Follow the instructions that came with your GPS or other device to create a pairing with your PC. If those instructions are not available, the steps usually go something like this:

- Open the Bluetooth Device Manager for your PC. This is usually found in the Control Panel but may also be elsewhere depending on how your PC is configured. Once you've found the Bluetooth Device Manager, use the Add a Device command to have your PC start looking for nearby Bluetooth devices.

- Next get your Bluetooth GPS or other device ready for pairing. This usually involves pressing and holding a button for a period. A blue light will usually start flashing quickly to indicate the device is in pairing mode.
- Once your PC detects the Bluetooth device it will probably prompt you for a "passcode". If your GPS has a display and keys, it may also prompt you for a passcode. In that case, just make up a number and enter it on your GPS and your PC. Otherwise, your GPS probably uses a fixed passcode such as "1111" that only needs to be entered in your PC. If that doesn't work, you may need your device's documentation to find the passcode it needs.

That is all there is to pairing a device, and you should only need to do it once for each Bluetooth device (unless you use the Bluetooth Device Manager to remove a pairing).

Once the pairing has been established, you should notice a new COM port in Rose Point ECS's lists. This COM port can now be configured just like any other in **Settings > Electronics**.

To find out what COM ports were created for your Bluetooth device, double click its icon in the Bluetooth Device Manager and switch to the Hardware tab in the Properties window.

Warning: Bluetooth can be very convenient, but any wireless connection technology is going to be less reliable than a correctly wired connection.

Actisense NGT-1 NMEA 2000 to PC Interface

The Actisense NGT-1 NMEA 2000 to PC Interface can be used with Rose Point ECS via a free add-on module.

Installation and Configuration

- Follow the directions provided by Actisense to setup the NGT-1 on your PC.
- Download the Actisense NGT-1 add-on module from:
<http://files.rosepointnav.com/ActisenseNGT1.cepkg>
- Use Rose Point ECS to open the add-on module file you just downloaded. One easy way to do this is to drag the file to the Rose Point ECS title bar area (don't drop the file on the chart area). Rose Point ECS will need to restart in order to complete the installation.
- Use **Settings > Electronics > Configure** a New Device to configure the appropriate port to use the Actisense NGT-1 interface. The correct port should have a name like "Actisense NGT (COM5)".

IMPORTANT: Be sure to keep your Actisense NGT-1 firmware up-to-date. As the NMEA adds new PGN's to the NMEA 2000 standard, this firmware must be updated in order to

allow Rose Point ECS to receive those PGN's. Please visit the Actisense website for details on how to update your NGT-1.

Using a Garmin GPS

Garmin GPS products can transmit either NMEA 0183 or one of two proprietary protocols of their own. Rose Point ECS can only use the NMEA 0183 and Garmin protocols, but it will detect the Garmin "Text Out" protocol and let you know if it is being received on a COM port. If this happens, you should use the menus on your GPS to select the NMEA 0183 or Garmin interface.

If you are using the NMEA 0183 interface, then your Garmin GPS should be configured like any other NMEA 0183 device.

If you are using the Garmin interface, the standard specifies that serial communications occur at 9600 baud. However, some Garmin GPS receivers allow the baud rate to be adjusted so you might need to select a different baud rate here to match the setting in your Garmin GPS.

NMEA 0183 Data Server

Rose Point ECS includes a very simple data server that can be used to share NMEA 0183 data with other programs and/or devices on a network.

When enabled, the server will accept TCP/IP connections on the specified port. As NMEA 0183 sentences are received on the Data Ports, Rose Point ECS will repeat those sentences to each Data Server connection.

Examples of programs that can use the Data Server include Coastal Explorer, Rose Point ECS, iNavX™, and anything else that can receive NMEA 0183 sentences from a TCP/IP connection.

To enable the Data Server:

- Open **Settings > Electronics > Configure a New Device > Add a network port**
- Select NMEA 0183 Data Server from the Type list
- Check Enable Data Server
- Select a TCP Port to use (the default is 10110 which is the standard NMEA 0183 data port)
- Click OK

To configure Coastal Explorer or Rose Point ECS to use a Data Server:

- Open **Settings > Electronics > Configure a New Device > Add a network port**
- Select NMEA 0183 Over TCP from the Type list

- Enter the address of the server (found in the Data Server window) followed by a colon (:) and the TCP Port number of the server
- Click OK

To configure other programs to use a Data Server:

- Consult with the documentation for the other program. You should need to enter the Data Server's IP Address and TCP Port numbers somewhere in the other program. You can find these values in the Data Server window.

Important Notes

The Data Server is an advanced feature that requires a knowledge of TCP/IP networking to use effectively. Due to the wide variety of network configurations possible and the issues that each configuration can cause, Rose Point cannot offer much in the way of help if you are trying to setup a network without the proper level of expertise.

If you are using dynamic IP addresses, then the IP address of the Data Server may change after you have setup your clients. If the client is Coastal Explorer or Rose Point ECS you may enter the network name of the Data Server rather than the IP address to compensate for this. Other client software may or may not support network names; please check with the client software documentation.

You may need to configure the firewall on the Data Server PC as well as any clients that will connect to it. How to do this depends on what firewall you are using; please consult with the appropriate documentation for assistance. You will need to allow TCP communications on the TCP Port you selected in the Data Server window.

Position Sensor (GPS) Configuration

Position sensors include GPS and Loran Receivers and AIS Transponders (which can relay position information received by its GPS receiver). In order to more precisely locate your vessel on the chart when viewing at large scales, Rose Point ECS needs to know where on your vessel the position sensor is located. This window lets you configure the location of each position sensor on your vessel. Before setting the location, you must enter the overall length and beam of your vessel in **Settings > Vessel**. To set the location on the vessel of a GPS antenna, enter the distance from the bow into the box labeled A or the distance from the stern in the box labeled B. (When you enter a value into one of these boxes, the other box will be updated based on the value you entered and the overall length of the vessel.) Then enter the distance from the port side in the box labeled C or the distance from the starboard side in the box labeled D. You can also drag the crosshair on the vessel diagram to quickly provide a rough placement.

Multiple Position Sensors

If you have more than one position sensor, you might want to specify a priority for each one. The priority tells Rose Point ECS which sensor you would prefer to use as the primary position system. Rose Point ECS will use the sensor with the highest priority (lowest number) that has a valid signal. When more than one sensor has the same priority, Rose Point ECS will attempt to determine which one has the best signal quality and use that one. The same sensor will be used while it is providing a good position. If the position is lost, Rose Point ECS will again look for the highest priority sensor with a good position.

You can manually select a GPS sensor by clicking the Position Sensor Status Panel or by right-clicking on the vessel symbol shown on the chart. The menu that appears will include a list of position sensors. Selecting one will cause Rose Point ECS to use that sensor.

Heading Sensor (Compass) Configuration

The heading sensor configuration page lets you set up a compass deviation table that Rose Point ECS will use to correct raw headings it received from your heading sensor. Most electronic heading sensors have an internal compass deviation table that should be used if possible as it will result in consistent data being sent to Rose Point ECS and any other devices connected to the heading sensor. However, it is sometimes necessary to use the deviation table in Rose Point ECS to get the most accurate headings.

To setup the deviation table, follow standard procedures for determining the deviation at each of the eight headings in the table and fill in the blanks.

Autopilot Configuration

Rose Point ECS will work with most autopilots using either the NMEA 2000 or the NMEA 0183 interface.

NMEA 2000 Autopilots

A Rose Point Nemo Gateway, Rose Point NMEA 2000 USB Gateway, Actisense NGT1, or Maretron USB100 is required to interface with an NMEA 2000 autopilot.

Configuring Rose Point ECS to work with an NMEA 2000 autopilot is very simple; just select the NMEA 2000 interface in **Settings > Electronics**, click NMEA 2000 Output Options, and check the box labeled NMEA 2000 Autopilot Control. This will cause Rose Point ECS to emit the following standard NMEA 2000 PGNs:

- 129283 Cross Track Error

- 129284 Navigation Data
- 129285 Navigation - Route/WP Information

If your NMEA 2000 network does not include a GPS and your autopilot requires one to be present, you can configure Rose Point ECS to emulate one by enabling the Repeat position, course, and speed option. This will cause Rose Point ECS to emit these NMEA 2000 PGNs:

- 127258 Magnetic Variation
- 129025 Position, Rapid Update
- 129026 COG and SOG, Rapid Update

If you have another chart plotter on your NMEA 2000 network, you may need to configure your autopilot to accept information from Rose Point ECS rather than the other chart plotter. Check your autopilot manual for information on how to do this.

NMEA 0183 Autopilots

The NMEA 0183 standard for communicating with an autopilot has been interpreted differently by various manufactures and has evolved over the years. This makes working with an NMEA 0183 autopilot less than automatic, and sometimes it can be downright difficult. Rose Point ECS tries to make it a little easier by having some built-in knowledge of how some autopilots work.

The Autopilot window controls all the options for the data that is sent to your autopilot as well as any other NMEA 0183 "Listener" devices that are connected to your PC.

The first step in getting your autopilot working is to select the port connecting you autopilot to your PC in **Settings > Electronics** and making sure Talker is enabled. That will cause Rose Point ECS to send information about the active route to that port using default settings that work with most autopilots.

For some autopilots, you might need to use the Options... button next to the Talker option to adjust what Rose Point ECS sends to your autopilot. This Options window lets you control exactly what sentences are sent, how often they are sent, the precision used in various values, and more.

Try not to select sentences that are not necessary as only a limited amount of data can be sent. If you attempt to send too much data, you will get "NMEA Port Clogged" messages from Rose Point ECS. When that happens, you can either turn off some sentences, or adjust the Time between updates value in the Options tab.

Many autopilot manuals list many sentences that are accepted by the autopilot. That does not mean that the autopilot needs all of them, just that it can use them. Most modern autopilots will only need the APB, RMB, and RMC sentences to be enabled.

AIS Transponder Configuration

The AIS transponder configuration page lets you send information about your vessel and voyage to your AIS transponder. This page will only appear when Rose Point ECS has detected that you have an AIS transponder connected to your PC.

To update your AIS transponder, fill in the form and press the Send to AIS Transponder button.

IMPORTANT NOTE



Some AIS Transponders have options that prevent updates from external sources such as Rose Point ECS. You may need to adjust that option using your AIS Transponder's menu system before Rose Point ECS will be able to update vessel or voyage data on the transponder.

Rose Point Commercial Radar Interface Box

Rose Point ECS provides several options related to the Commercial Radar Interface as well as the ability to update the firmware on the interface box. To get to the options, use **Settings > Electronics** and select the Rose Point Commercial Radar Interface item.

Configuring a Furuno FAR 2xx7 Radar

The following procedures are performed using the FAR 2xx7 display and control unit.

First check the FAR 2xx7 version number for networking support. Press MENU, 9, 8, 2, 2 to start a self-test. Find the SPU line near the top of the display. The first column includes a number, a dash, and a second number. The second number describes the version of the FAR 2xx7 software. If the version displayed is smaller than 03.13, you will need to contact Furuno support to have the radar updated. To exit the self-test mode, press F1 several times.

IMPORTANT: Do not reconfigure the IP address of the Furuno FAR radar to match the ECS LAN; this is handled automatically by the Commercial Radar Interface. The radar should be left on Furuno's default 172.31.x.x network.

To configure the FAR 2xx7 to send position, course, speed, and heading information to Rose Point ECS over the network:

- Move the cursor over the OS POSN box and click the right button on the trackball to display the OS POSN menu.
- Check option 3 SIO DATA LAN OUTPUT; if it is turned off, move the cursor to the ON setting, click the left button on the trackball, roll the trackball wheel one notch to select ON, and click the left button again.

To configure the FAR 2xx7 to send target tracking information to Rose Point ECS over the network:

- Enter the INITIALIZE menu by holding down the HL OFF button and pressing the MENU button five times.
- Select option 8 OTHERS on the INITIALIZE menu.
- Set option 5 INS to LAN.
- Press the MENU key to exit the menu.

Please note that performing this step will disable the FAR 2xx7 option to display a Barge Mark. If you require the Barge Mark display you will not be able to display tracked target symbols within Rose Point ECS.

Configuring a JRC JMA 5300 MK2 Series or Alpatron JMA 610 Radar

The following procedures are performed using the JRC JMA 5300 MK2 Series or Alpatron JMA 610 display and control unit.

IMPORTANT: Do not reconfigure the IP address of the radar to match the ECS LAN; this is handled automatically by the Commercial Radar Interface. The radar should be left on the default 192.168.60.x network.

To enable the radar networking features:

- Press and hold the RADAR MENU key until the "Code Input" menu appears (about two seconds).
- Press the 0-key followed by the ENT key to enter the **Serviceman Menu**.
- Press the 2, 9, 5, and 4 keys to get to **Installation Menu > Next > Network**
- Set "Network Function" to "On" with the 1 key.
- Press the 5-key to enter the "RADAR Echo Delivery" menu.
- Set the "Echo Delivery Function" option to "On"
- Set the "Output Form" option to "Sweep"
- Set the "Data Format" option to "Normal"

Configuring a Koden MDS-4/5 Radar

Koden Radar Calibration Window

Settings > Electronics > Koden MDS Radar > Calibrate Radar

This window provides access to various Koden radar calibration settings that typically need to be adjusted only when the radar is first installed.

The "tabs" along the top of this window let you select from various pages of calibration settings.

Controls Page

The Controls page provides quick access to most of the controls for the radar. While these controls do not need to be calibrated themselves, you may need to adjust some of them while calibrating other settings.

When you are using the radar (as opposed to calibrating it) these controls will be available in a more convenient location in the software described later.

The Transmit option turns the radar transmitter on and off. (When the transmitter is off, the radar will be in standby mode.)

The Range slider adjusts the range of the radar.

Target Expansion can be used to make small targets appear larger.

The Interference Rejection option lets you remove interference from other nearby radar transmitters. It has an "off" setting as well as three different levels of rejection.

The Pulse Length option lets you select between short and long pulses. Short pulses will normally provide more accuracy at shorter ranges while longer pulses are needed to greater distances. The radar automatically adjusts the pulse length based on your selected range, but you can make the pulse longer with this option.

When enabled, the Main Bang Suppression option clears the radar image immediately around your vessel. This area tends to show a full-strength return which can obscure chart details at large scales.

Installation Page

The Installation page provides options for adjusting the heading line and the parking angle.

The Heading Line should normally be at zero, but if your radar antenna is not perfectly aligned with the centerline of your vessel you can compensate for the installation angle with this option.

The Parking Angle determines the stopping location of the antenna motor, and therefore the direction the wand will be pointing when the radar is off or in standby. Because of the momentum of the spinning antenna, you will need to adjust this angle to a point somewhere before the angle you really want the wand to be pointing. It may take a few tries to get it just right.

Gain Page

The Gain page contains the controls you need to adjust the automatic gain feature as well as fine tune the manual gain feature.

The Auto Gain option selects between the manual and automatic gain modes.

The Auto Gain Preset slider adjusts the automatic gain function. To calibrate this setting, enable Auto Gain mode and then adjust the Auto Gain Preset slider so that there is very little noise in the radar display but targets are appearing clearly.

The Manual Gain Preset slider adjusts the manual gain function. The preset works as a sort of coarse gain value and affects the range of control the Manual Gain Slider will provide. To calibrate this setting, disable Auto Gain mode, select a Manual Gain somewhere near the middle of the range, and adjust the Manual Gain Preset until the radar picture looks good. Now try the full Manual Gain range to make sure you have enough control over the gain.

Sea Clutter (STC) Page

The Sea Clutter (STC) page provides options for calibrating the various Sea Clutter removal modes as well as the "STC Curve" which controls how much more clutter removal occurs closer to your vessel.

The Clutter Mode lets you select between Manual, Automatic, and Harbor Clutter Modes. Manual Clutter Mode gives you complete control over clutter removal, while Automatic Clutter Mode and Harbor Clutter Modes will automatically remove clutter for ranges above and below 1 NM respectively.

The Manual STC Preset, Auto STC Preset, and Harbor STC Preset sliders adjust how much clutter removal is applied in each of the modes.

The STC Curve Preset slider adjusts the relationship between range and STC attenuation. When the slider is closer to 0, the most attenuation is applied in a smaller area around your vessel and with a value closer to 8, the most attenuation is applied in a larger area around your vessel.

Tuning Page

The Tuning page lets you tune the radar receiver. This is not normally required and the automatic tuning mode should be used.

Trigger Delay Page

The Trigger Delay lets you adjust the radar receiver's timing in order to compensate for minute signal delays caused by the electronic circuitry and the cable between the antenna and the control box. These signal delays affect the range computations made by the radar, so it is very important to adjust the Trigger Delay correctly!

In order to correctly adjust the Trigger Delay, you will need a large straight target such as a bridge or breakwater nearby. Using the radar chart overlay can also help a great deal, since an incorrect Trigger Delay adjustment will prevent the radar image from correctly aligning with objects on the chart.

Before adjusting the Trigger Delay, set the range to $\frac{1}{4}$ NM, set the gain and clutter modes to manual, and turn the FTC all the way down. The Make those changes for me button in the window will make those adjustments.

Next adjust the Manual Gain and Manual STC sliders for the best picture.

Finally adjust the Trigger Delay so that the target appears straight and, if you are using the radar chart overlay, targets appear above the correct objects on the chart.

Sector Blanking Page

If your installation is such that part of the radar antenna's sweep would reflect off part of the vessel's superstructure, you can setup a Sector Blanking which is an area of the sweep where the transmitter is disabled.

Select the relative bearings of the start and end of the blank sector. (The radar will stop transmitting near the start bearing and resume transmitting near the end bearing.)

To disable Sector Blanking, set both bearings to 0°.

When Sector Blanking is defined, the radar must be tuned manually.

Koden Radar Errors

Radar Not Found

Here are some things to check if your Koden radar is powered on and connected to your PC, either directly or through a network, and Rose Point ECS says it can't find the radar:

- If you are not using router to create a complete network and have not turned off switch 1 inside the Radar Control Box, then you might just need to wait one minute after turning the radar on. The switch tells the Radar Control Box to acquire a network address from your router and it will wait up to one minute for that to happen. If the radar does appear after one minute, it will display error code 1000 to indicate that it could not get an address. We recommend that you turn off switch 1 if you are not going to use a router.
- Make sure the network adapter that should be connected to the Radar Control Box is enabled. Search the Windows Control Panel for network connections to see a list of your network adapters. Right-click on an adapter's icon to access the Enable command.
- Is Rose Point ECS being blocked by your network firewall? If you are using the Windows Firewall, then open its Control Panel (use the Start menu to search for "firewall"). Then use the "Allow a program through the Windows Firewall" option, click the "Change Settings" button, find Rose Point ECS in the list of programs. You should see two rules, one for public networks and one for private networks.

Make sure both rules are enabled using the checkboxes on the far-left side of the window (to the left of the program names).

Error Codes

When a problem is detected with the radar, the radar panel shows the word ERROR and a 4-digit code. Most of these errors indicate something has malfunctioned in the radar itself and that the unit probably needs to be sent in for repair. However, a couple of errors could indicate simple problems that can easily be fixed by any installer.

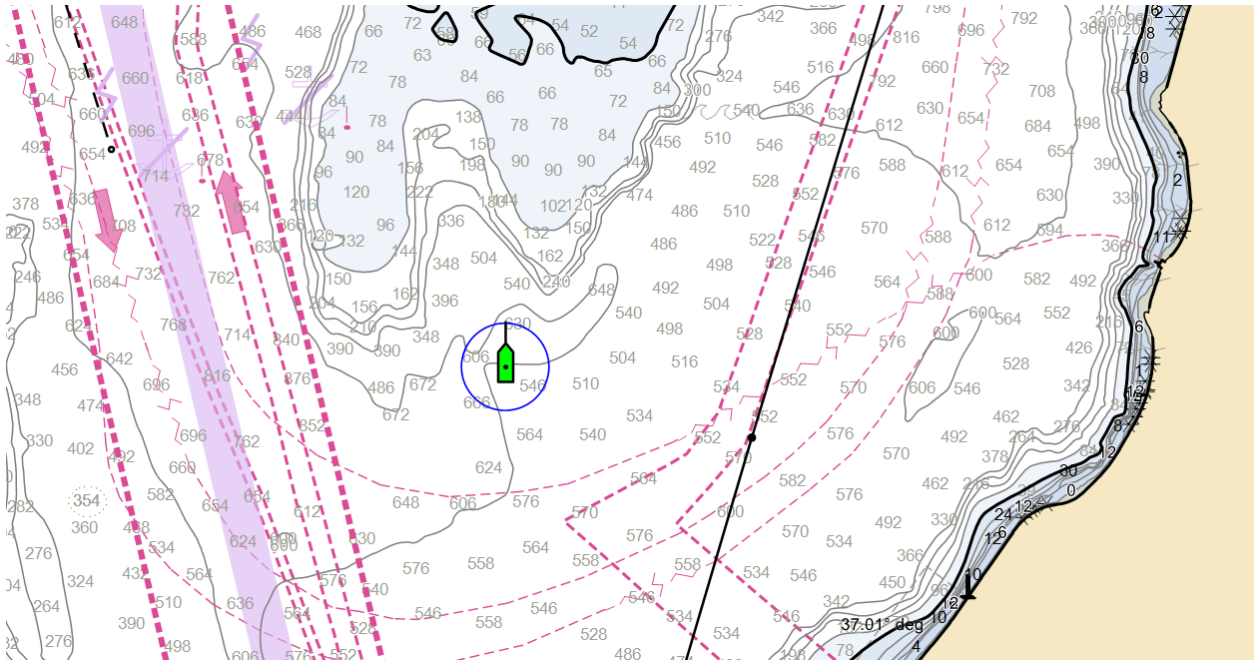
If more than one error condition is true, then the code displayed might be the sum of the following error codes:

- 0001 Azimuth Error usually indicates that the antenna is not able to spin. This can happen if something is obstructing the wand of an open-array radar, or if the protective shipping tapes have not been completely removed from the inside of a dome radar.
- 0008 System Error usually indicates that the connection between the control box and the scanner has been broken. You should check that the connector is securely attached to the control box, that the cable is intact, and that the connectors inside the scanner have been hooked up properly.
- 1000 DHCP Warning indicates that the radar could not obtain an address from a DHCP server on the network (e.g. a router), but that switch 1 in the radar control box is on indicating that a DHCP server should be used. This is more of a warning than an error as the radar will still work in this situation. However, Rose Point ECS will not be able to detect the radar until one minute after the radar is powered on. To resolve this warning, either add a DHCP server to your network, or turn off switch 1 inside the radar control box.

For all other error codes, please contact SI-TEX Koden for assistance.

Using the Virtual Boat

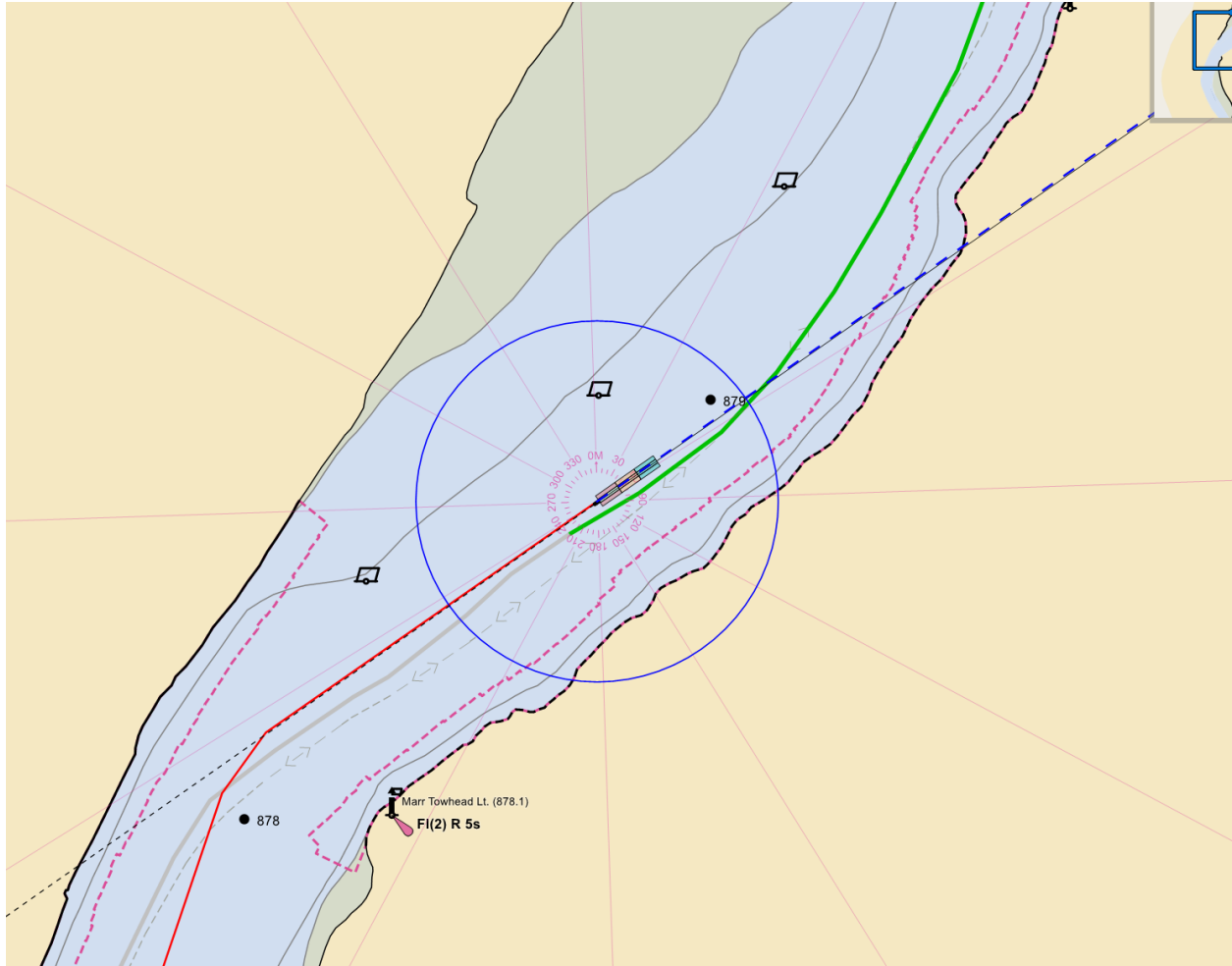
When your position is known from a GPS, Rose Point ECS will draw your boat on top of the chart. This is what your boat will look like:



The symbol in the center represents your boat and will show its location and heading (or course if the heading is not known). You can select a Small, Medium, or Large boat icon with the Symbol property on the General page of the Boat Properties.

If you are operating a towboat, you can select the Towboat option instead. In this case, your vessel symbol will appear as a rectangle in the selected color. Be sure to also supply the Length Overall, Beam, in **Settings > Vessel and GPS Location on Vessel in Settings > Electronics** so that the towboat symbol will appear in the right size and location.

If you have the Rose Point ECS +Inland option, you may also setup a tow configuration and have it show on the chart along with your boat.



The solid circle around the boat is a range circle which indicates a specified distance from the boat. This circle may be adjusted with the boat's Properties panel.

An optional magnetic compass rose appears around the boat with lines emanating to the edge of the screen every thirty degrees. These lines are intended to help you match up visual bearing with objects on the chart.

If you have a wind sensor connected to your PC, Rose Point ECS can show an arrow pointing with the wind toward the boat symbol along with the wind speed.

When the boat is moving, a dashed line called the predictor will appear between the boat and the point on the current course that is a few minutes ahead at the current speed. The amount of time may be adjusted with the boat's Properties panel.

When an electronic compass is providing Rose Point ECS with rate-of-turn information, you can enable the Display Rate of Turn option to cause the predictor line to curve according to that information.

A red track line will also appear where your boat has been. The track line may be configured to track a new point based on a time, distance, and/or heading change. You

can access the tracking options by selecting the track line and using the Properties Panel.

An optional line can be shown from your boat to the active mark.

To enable the boat and move it somewhere without a GPS:

- You can move the boat to any location on the chart when you don't have a GPS connected by using the Move Boat Here option which may be found on the right-mouse button menu of a chart. These actions initialize Dead Reckoning mode.

Changing the properties of your virtual boat

Your boat's properties may be viewed or changed with the Property Panel when the boat is selected. You can access the Property Panel by clicking on your boat's symbol and selecting Properties from the pop-up tip.

The properties of the boat include:

General Properties

- **Symbol** Selects the side or shape of the boat symbol.
- **Color** Selects a color for the boat symbol.
- **Lock Position** Prevents the boat from being dragged accidentally.
- **Display Line to Active Mark** Controls the optional line between the boat and an active mark (Waypoint).
- **Display Compass** Controls the optional magnetic compass around the boat symbol.
- **Display Wind** Controls the optional wind arrow around the boat symbol.
- **Display Heading Line** Controls the optional heading line that extends past the bow along your boat's heading.
- **Display Stern Line** Controls the optional stern line that extends past the stern along your boat's heading.
- **Display Predictor Line** Controls the optional predictor line that can be shown along your course.
- **Predictor Time** Controls the length of the predictor line as a function of time and your speed over ground.
- **Predictor Color** Controls the color of the predictor line.

Range Properties

- **Display Count** Selects the number of consecutive range rings to display around your boat.

- **Radius** Sets the radius of the innermost range ring, and the distance between adjacent range rings.
- **Pen Width** Sets the width of the range ring lines.
- **Color** Sets the color of the range ring lines.

Dead Reckoning

You can use Rose Point ECS in Dead Reckoning mode to move your Virtual Boat on the chart without the help of a GPS. This may be necessary if you have lost the ability to use your GPS, and it can be handy while learning how to use the program.

To Start Dead Reckoning Mode

- Right-click on the boat symbol and select the Dead Reckoning option.
- Right-click on the chart and select the Move Boat Here option.
- Drag the boat to a different location on the chart.
- Use any of the **Ctrl+Shift+Arrow** Keys as described below.

Basically, any action that you take to move the boat symbol will initiate Dead Reckoning mode.

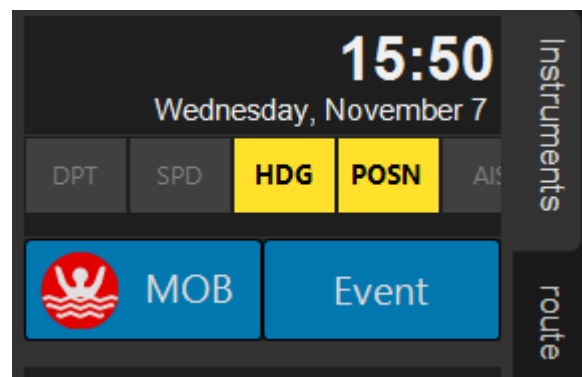
While Rose Point ECS is in Dead Reckoning mode, the GPS Status Panel will turn yellow.

Controlling Dead Reckoning Mode

The **Ctrl+Shift+Left** and Right Arrow Keys will steer your boat and the **Ctrl+Shift+Up** and Down Arrow Keys will speed it up and slow it down.

To Resume Using the GPS Position

- Click on the GPS Status Panel and select one of the other position source options.
- Right-click on the boat symbol and select one of the other position source options.



Using Routes

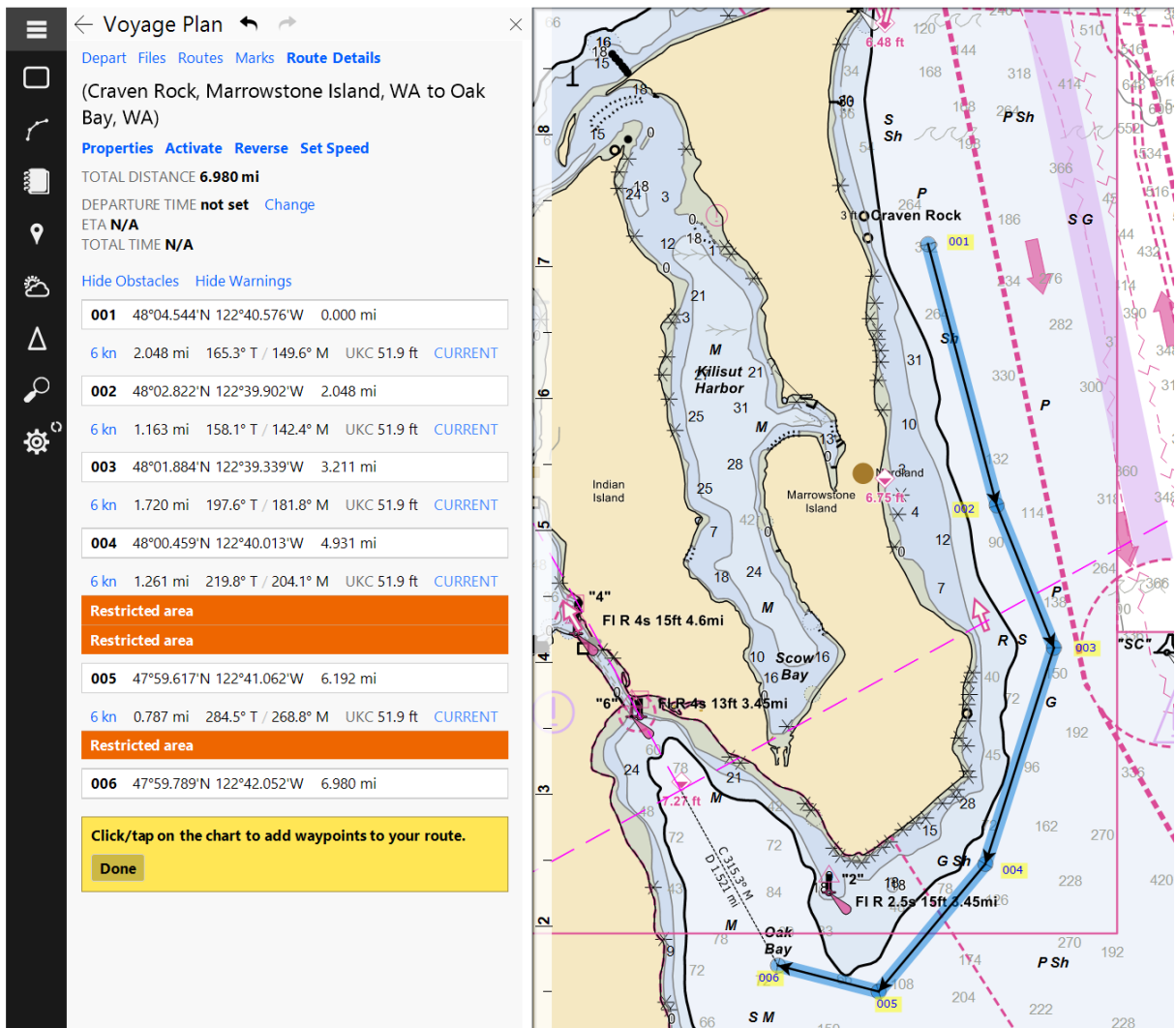
Routes are a series of waypoints that describe a plan for getting from one place to another. Rose Point ECS uses routes that you create to help you follow those plans and to calculate estimated times of arrival as well as point out obstacles that might be in the way of your plan.

While they do provide many useful features, standard routes can be tedious to create on rivers due to the many waypoints needed to describe the bends of the river. Because of this problem, the Rose Point ECS +Inland Add-On includes a special type of automatic river route that does not use waypoints. Skip ahead to the section called "Automatic River Routes" to learn more.

Creating a route

To create a new Route:

- Use **Voyage Plan > Routes > Add Route, New > Route** on chart panel's toolbar, or press the **F8** key to begin the route creation mode.
- Click on the chart where you would like the route to start; this will set the location of the first waypoint.
- Continue clicking on the chart to add additional waypoints.
- When all waypoints have been placed, click the last waypoint again or press the **Esc** key to end Route creation mode.



While in Route creation mode, the mouse cursor will gain a small plus sign to indicate that a Waypoint will be added when clicking on the chart panel. Near the edges of the chart, however, the mouse cursor will show a large arrow pointing outward from the chart to indicate that the cursor has entered an automatic scrolling zone. Objects cannot be created in the automatic scrolling zone but moving the mouse there will scroll the chart to allow for additional Waypoint placement.

If an existing mark is clicked while creating a Route, Rose Point ECS will reuse that mark rather than create a new one. When a mark is used in more than one route, any changes to that mark will affect all the routes that include it.

In addition to the leg-line that follows the mouse cursor a dashed purple T-shape will display extending from the leg-line to the edge of the chart and perpendicular to the leg-line in both directions. This cross hair is there to help line up new Waypoints with other objects or locations on the chart.

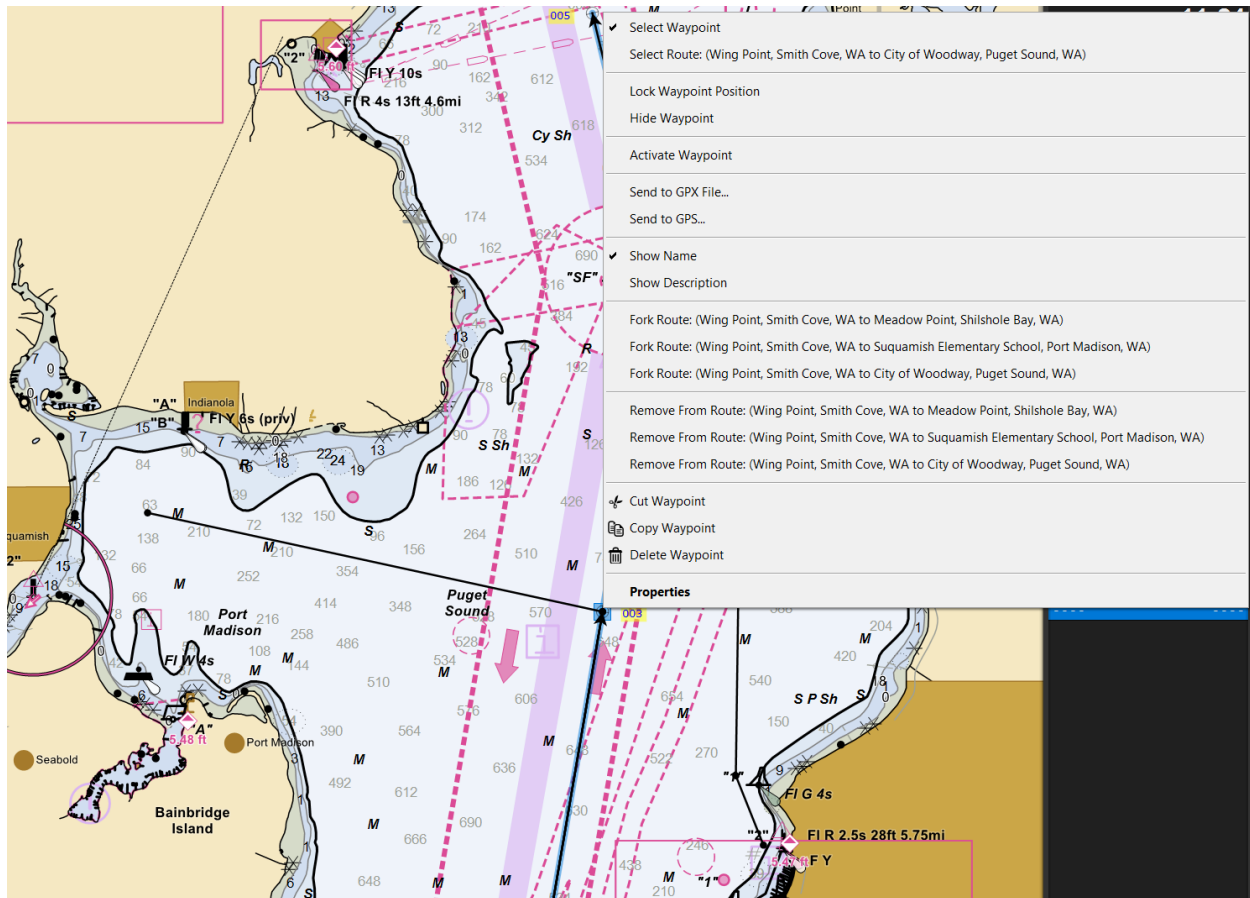
Finally, the distance and bearing of the leg-line is also displayed along the leg.

To create a new route that starts the same as another route:

It is very common to have multiple routes that all start with the same few Waypoints. Example: a vessel may reside at a certain place which requires a few common Waypoints to exit, then heads in any of several directions from the exit point. Rose Point ECS includes a feature to help create this kind of route.

The Fork Route option, which is found on the menu for marks that are used in a Route, will create a new route that starts out with a copy of each of the Waypoints leading up to, and including, the mark that was clicked on to select the fork route command. The result is the same as if during the creation of a new Route the first few Waypoints of another Route were clicked and the prompt to reuse the existing mark was answered 'Yes'.

To use the Fork Route option, click the right mouse button on the Waypoint where the fork should begin and select Fork Route.

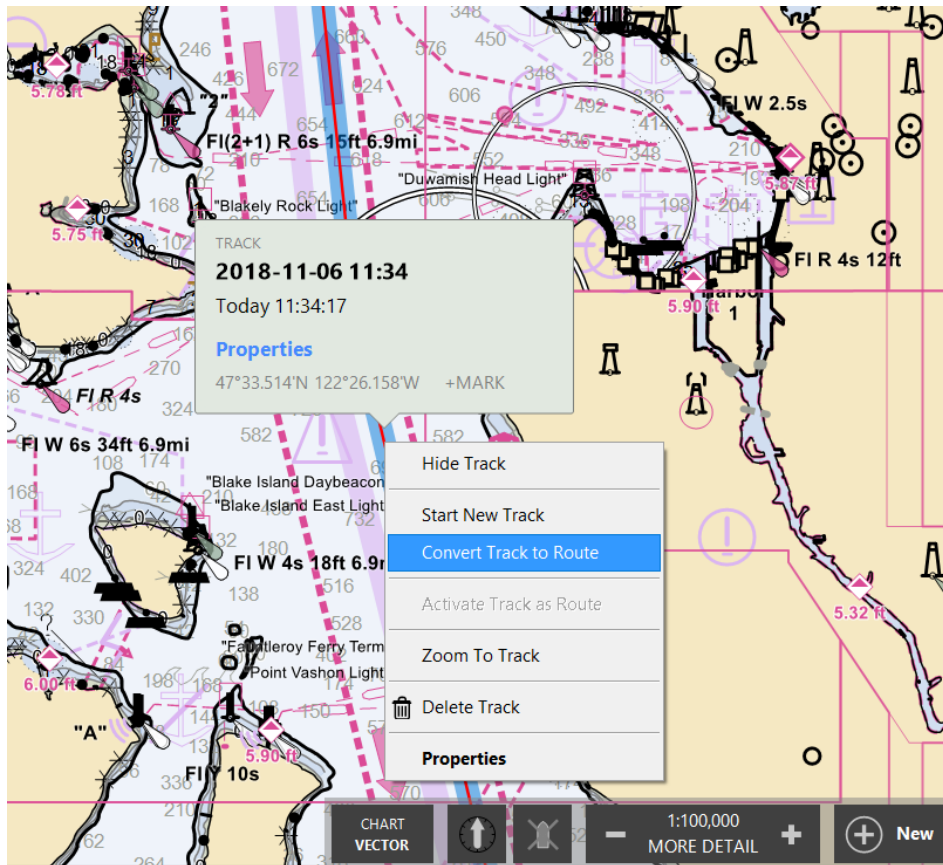


To quickly create a route to a new area using only one point:

Click the **New** button on the chart panel toolbar and select a mark from the palette. Click on the preferred location of the chart to set the mark. Then right click the mark and select the Activate option from the context menu.

A quick multipoint route can be set by clicking the **New > Quick** from the chart panel toolbar. Once the option is selected, begin clicking on the chart panel to place waypoints. Click the last waypoint a second time or press the **Esc** key on the keyboard to finish the route.

Tracks can be converted to routes by right-clicking on the track and selecting the **Convert to Route** option.



The resulting route will not contain all the track points from the original track and it is possible that the legs of the new route may fall closer to land or other obstacles, so it is very important to double check it and make any corrections that might be necessary after the conversion.

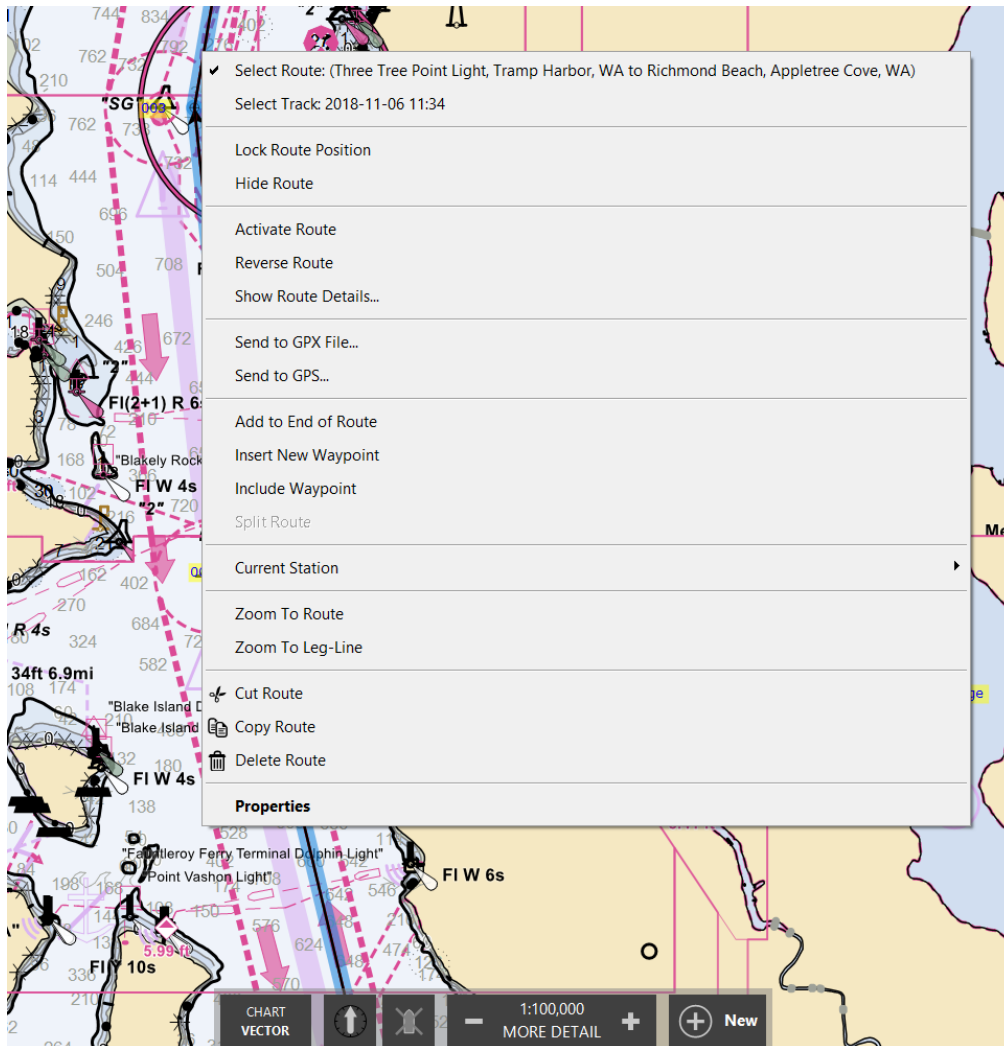
Manipulating Routes

Any of these route operations may be performed by clicking the right mouse button on a leg-line of the Route and selecting the appropriate option from the menu that appears. Some of them might also appear in other places for your convenience, but they will always work the same regardless of how you select them.

Locking a route against changes

The **Lock Route Position** option will prevent a route from being moved. Routes have their positions locked by default but may be unlocked in order to drag the entire Route to a new location.

The **Unlock Route Position** option will allow a Route to be moved.



Activating a Route

The **Activate Route** option will start navigation along the Route. The first waypoint of the route is selected as the current target and Rose Point ECS will begin displaying navigation information to the user and optionally send data autopilot to begin following the route.

The **Deactivate Route** option will stop all navigation information delivery.

Reversing a Route

The **Reverse Route** option will turn a route around so that the end becomes the start and vice-versa.

Splitting a Route in Two

The **Split Route** option will turn a single route into two routes by removing the leg-line in the location where the user right clicks and selects this option.

Adding Waypoints to the End of a Route

The **Add to End of Route** option will re-enter route creation mode to allow for the addition of more waypoints to the end of the route.

Inserting Waypoints into a Route

The **Insert New Waypoint** option will insert a new waypoint at the location along the leg-line that the user right clicked to display the context menu.

Removing Waypoints from a Route

To remove a waypoint from a route, select the waypoint's icon and press the **Delete** key.

Sending a Route to your GPS or Chart Plotter

The **Send to GPS** option allows a user to send (upload) a route (or several routes if more than one is selected) to a GPS or chart plotter.

View or Change the Properties and Options of a Route:

Right-click on the route and select **Properties**.

The Route Detail Page

The screenshot shows the 'Route Details' panel for a voyage plan. At the top, it displays the route name '(Saanich Inlet, Patricia Bay, Canada to Ganges, Ganges Harbour, Canada)' and the total distance of 20.348 mi. Below this, there are options to 'Activate', 'Reverse', and 'Set Speed'. The 'DEPARTURE TIME' is 'not set' and 'ETA' is 'N/A'. There are also options to 'Hide Obstacles' and 'Hide Warnings'. The main content is a table of 12 route segments, each with a unique ID, coordinates, distance, and current status (all are 'CURRENT').

ID	Coordinates	Distance	Status	
001	48°39.143'N 123°32.319'W	0.000 mi	CURRENT	
6 kn	3.336 mi 036.9° T / 020.8° M		CURRENT	
002	48°41.461'N 123°29.683'W	3.336 mi	CURRENT	
6 kn	4.373 mi 055.6° T / 039.6° M		CURRENT	
003	48°43.606'N 123°24.929'W	7.710 mi	CURRENT	
6 kn	3.618 mi 042.8° T / 026.8° M		CURRENT	
004	48°45.911'N 123°21.687'W	11.328 mi	CURRENT	
6 kn	0.828 mi 357.5° T / 341.4° M		CURRENT	
005	48°46.630'N 123°21.736'W	12.156 mi	CURRENT	
6 kn	0.531 mi 339.8° T / 323.7° M		CURRENT	
006	48°47.063'N 123°21.977'W	12.687 mi	CURRENT	
6 kn	0.471 mi 340.4° T / 324.4° M		CURRENT	
007	48°47.449'N 123°22.186'W	13.159 mi	CURRENT	
6 kn	0.994 mi 300.8° T / 284.8° M		CURRENT	
008	48°47.892'N 123°23.312'W	14.153 mi	CURRENT	
6 kn	1.973 mi 317.7° T / 301.6° M		CURRENT	
009	48°49.160'N 123°25.064'W	16.125 mi	CURRENT	
6 kn	2.053 mi 303.0° T / 286.9° M		CURRENT	
010	48°50.131'N 123°27.338'W	18.178 mi	CURRENT	
6 kn	1.135 mi 307.6° T / 291.5° M		CURRENT	
011	48°50.732'N 123°28.526'W	19.314 mi	CURRENT	
6 kn	1.034 mi 305.3° T / 289.2° M		CURRENT	
012	48°51.252'N 123°29.639'W	20.348 mi	CURRENT	

The Rose Point ECS Route Details page displays a single route in a tabular format along with various information about the route

To get to the Route Details panel:

- Voyage Plan > Routes > [Select Route] > Details, or
- Click the right mouse button on a displayed route and select Show Route Details, or
- Double-click on the route

The top part of the Route Details page displays information about the route. This includes the route name, route length, expected departure time, calculated ETA, and total anticipated duration.

The name of a route can be changed by double-clicking on the name, entering a new one, and pressing **Enter** (or **Esc** to cancel the change). This and other properties of a route can be changed by selecting Properties.

When ready to navigate a route, use the **Activate** option.

The **Reverse** option will change the direction of the entire route. If the route has a name like "From here to there" (a starting name, the word "to", and an ending name), reversing the route will also swap the starting and ending names.

The **Set Speed** option is used to quickly change the planned speed for the entire route. (When a route is first created, the planned speed will be set to the value configured in **Settings > Vessel > Cruising Speed**.)

Set the planned departure time by clicking the Change option next to the departure time. This will display a window where you can select a date and time, quickly set the departure time to "now", or have Rose Point ECS calculate a departure time based on either a desired arrival at any Waypoint or the "best" time within a window to depart to minimize total transit time.

The rest of the Route Detail Page is a table that provides information about each Waypoint and leg-line of the route. This information can include obstacles and warnings that are detected along the route based on the Hide/Show options above the table.

Waypoint names can be quickly changed in the table by double-clicking on the name, entering a new one, and pressing **Enter** (or **Esc** to cancel the change).

The planned speed can be adjusted for each leg individually by selecting the speed value corresponding to that leg. Current stations can be associated to individual legs as well by selecting CURRENT.

The planned speed and Current Stations are used to calculate an ETA for the route. When no Current Station is assigned to a leg, the transit time for that leg is simply calculated from the length and speed. When a Current Station has been assigned, and a departure time has been set, Rose Point ECS will factor in the predicted currents when calculating the ETA.

Clicking on the Current option on a leg will display a menu of nearby Current Stations (and a None option). When a station has been selected, the average speed of the predicted current during the transit time of that leg is displayed. (Or N/A if the departure time has not been set yet.)

It is not always appropriate to select a Current Station for a leg. Be sure to only select a station if it is known that the station will have a measurable and accurate effect on your transit time. This is not something that Rose Point ECS can do for you.

Route Properties

A Route's Properties may be viewed or changed with the Properties page when the Route is selected. The properties of Routes are:

General Properties

- **Name** The name of the Route. If a route name is not specified, Rose Point ECS will generate one based on the starting and ending Waypoints of the Route. The generated name will then be used everywhere that a Route's name would normally be shown, except in the Properties panel.
- **Waypoint Style** Controls how turns at Waypoints are displayed. The options are:

- **Arrival Circle** - This is the default style and shows each Waypoint as a hard turn with an arrival circle around it.
- **Wheel Over Line** - Uses the vessel's turn radius to determine where turning should begin to get to the next leg.
- **Predicted Log Race** – Also uses the vessels turn radius, but assumes a turn will not occur until the Waypoint is reached.
- **Direction Arrows** Controls the display of arrows point in the direction of travel at the end of each leg-line.
- **Display Leg Range/Bearing** Controls the display of the range and bearing values of each leg-line.
- **Display Cross Track Limit** Controls the display of lines that run parallel to each leg of the route at the distance specified for that leg's cross-track limit (where the cross-track error alarm would sound).
- **Total Length** The total length of the route (this value may not be changed).

Format Properties

- **Color** The color to display leg-lines when no Route is active.
- **Active Color** The color to display leg-lines when the Route is active.
- **Inactive Color** The color to display leg-lines when another Route is active.

Notes Properties

- **Description** An optional description or other notes about this Route.

Leg Line Properties

A leg line's properties may be viewed or changed with the Route Details Panel when the leg-line is selected. The properties of leg lines are:

- **Speed** The intended speed to run the leg. This is set to the vessel's cruising speed by default.

Waypoint Properties

A Waypoint's properties may be viewed or changed with the Properties Task Pane when the Waypoint is selected. The properties of Waypoints are:

General Properties

- **Name** The name of the Waypoint.
- **Show Name** Whether or not to show the Waypoint's name on the chart.
- **Color** The color used to draw the name.
- **Icon** The icon to show at the Waypoint.
- **Position** The latitude and longitude of the Waypoint.

- **Lock Position** Controls whether the Waypoint may be moved.
- **Arrival Circle Radius** Controls how close the boat must get to the Waypoint in order to have arrived.
- **Layover Time** How much time to stay at a Waypoint before proceeding to the next. This time will affect the ETA calculation and is useful for fuel and lunch stops.

Notes Properties

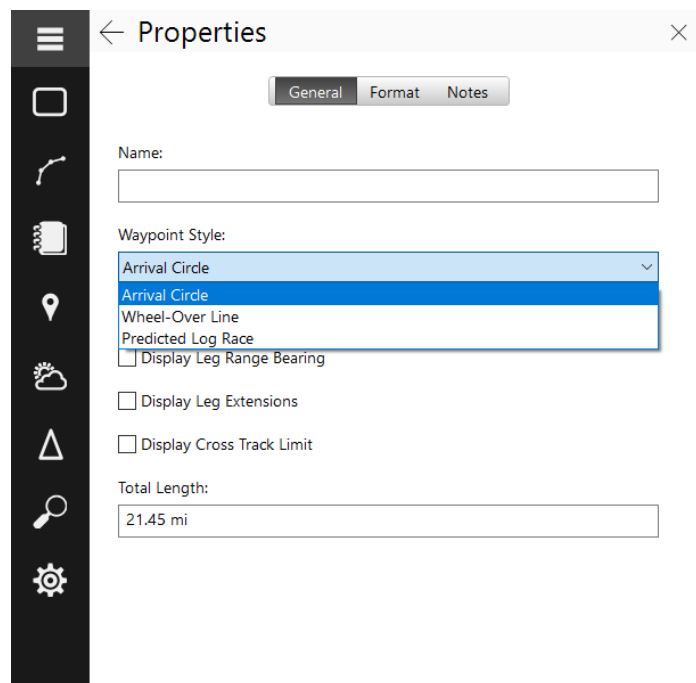
- **Show Description** Controls whether the description is shown on the chart.
- **Description** An optional description or other notes about this Waypoint.

About Waypoint Styles

Rose Point ECS provides several different styles of Waypoint. By default, the Arrival Circle style will be used, but the other styles are very useful in certain circumstances.

It is important to understand that the ONLY Waypoint style that makes sense when using an auto-pilot is the "arrival circle" style as this is how auto-pilots interpret a Waypoint.

Arrival Circle – This is how most navigation programs, chart plotters, and auto-pilots work. A route is a sequence of Waypoints that the vessel is supposed to follow by moving from one Waypoint to the next along the leg-lines formed between each point. When a vessel enters the Arrival Circle surrounding a Waypoint, or passes a line bisecting the angle between two leg lines, the vessel has reached the Waypoint and either the next Waypoint is selected or the Route is completed. In Rose Point ECS, these Waypoints are displayed as a circle that represents the Arrival Circle and a line representing the Passing Line.



Wheel Over Line – This style more correctly models how a vessel will travel through the water when following a Route. In this mode, the radius of the turn that must be made to get from one leg to the next is considered. Then a Wheel-Over Line is displayed at the point along each leg where the turn should be started. (The Wheel-Over Line is a short

line perpendicular to the leg-line at the point the turn should begin.) In Rose Point ECS, the predicted turn (based on the turning radius and angle between the leg-lines) is shown as a dashed curve starting at the wheel over line.

Predicted Log Race – This feature is exclusive to Rose Point ECS and is intended for predicted log racers. See the North American Cruiser Association website, www.predictedlog.org, for information about log racing. A predicted log race is a form of precision navigation oriented "race" for slow powerboats. In one of these races, the skipper always strives to precisely reach each Waypoint and then turn as quickly as possible to head towards the next. During the turn, a certain amount of "slide" is inevitable. The Predicted Log Race Waypoint style uses the vessel's turn radius to predict this slide and adjusts the following leg-line to show the turn and the bearing from the end of the turn to the next Waypoint (rather than the bearing from the first Waypoint to the next).

Automatic River Routes

Because of the nature of most rivers, manually creating standard routes along a river can be very tedious and require hundreds of waypoints. The +Inland Add-On has the ability to automatically create a special type of route that follows the path of the river without needing waypoints at every turn. These automatic river routes come with many of the benefits of using routes, such as ETA calculations, but are not meant to be used in exactly the same way as a standard route.

For example, a standard route should describe the exact planned track of the vessel and the cross-track distance is normally kept to a minimum while navigating the route. An automatic river route is usually based on the sailing line found on the chart and generally follows the center of the navigable part of the river. When following an automatic river route, you really just want to be heading in the right direction and not be concerned with staying on the line.

While river routes do not show waypoints at every course change like a standard route, special waypoint-like marks are displayed along the path and the Route Details page and Route Monitor will show ETA information for these marks. These special marks are added to your river routes automatically and include:

- River stage stations
- Bridges
- Locks
- User defined locations

The user defined locations are added using the **Add Mile Marker ETA** feature of the Route Monitor instrument.

River Routes may be constructed from the waterway network (based on the recommended tracks found in charts), or from past vessel tracks.

On the chart, these marks appear as dots along the path of the route. White dots represent the upcoming objects along the route and gray dots represents objects that have been passed already.

Clicking a mark on the route will provide information about the object in a popup tip.

Navigating a Route

Once you have created a route, looked up unfamiliar areas in the guide books, and double checked for obstacles and other hazards, you are ready to navigate. This section describes the process and tools Rose Point ECS provides to help you with this.

To start following a route, use one of the Activate Route commands. You can click on a Route and select Activate from the pop-up tip, right-click on a route and select Activate from the context menu, use the Activate command on the Route Details page, or use the Activate Route button on the Route Monitor Instrument Panel and then select the Route you want from the list that appears.

Watch your heading and cross track error and steer appropriately. Rose Point ECS provides you with several tools to determine how far off course you are and which way you should steer.

In the Chart Panel, you will see your boat with a line between it and the active Waypoint. If your Cross-Track-Error is getting a bit large, you will see a small red arrow next to your boat indicating which direction you should steer to get closer to your intended track.

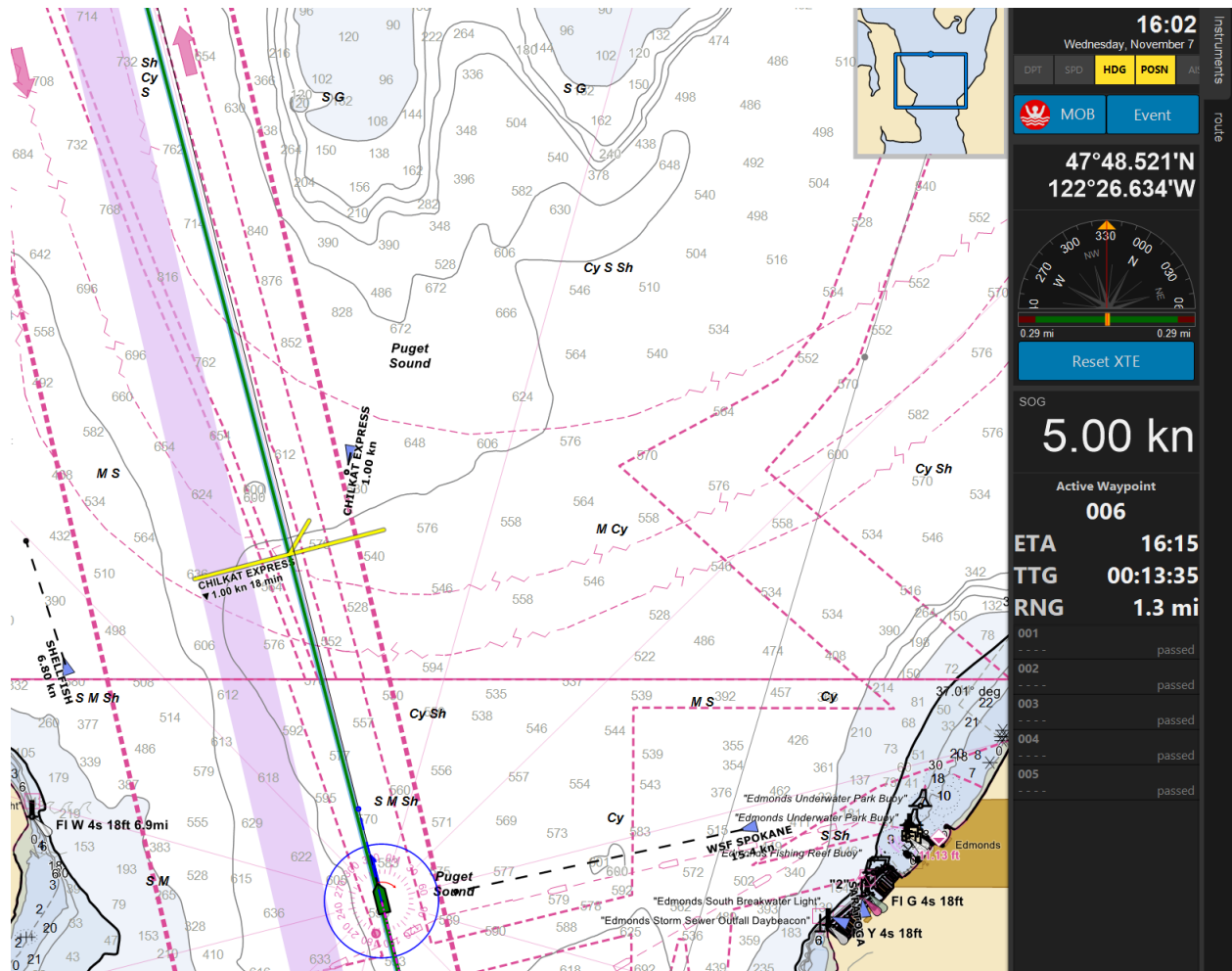
If you have selected the Navigation Compass Instrument Panel, it will show you a big orange arrow pointing in the direction of the active waypoint. The Course Overview instrument panel will show your route relative to your boat's position and course as well as a line between your boat and the active waypoint. It will also help you gauge your cross track error.

When you arrive at a waypoint, you will hear an alert and be given the bearing to the next waypoint. Waypoint arrival is determined by your boat entering the active waypoint's arrival circle, the radius of which is set with the waypoint mark's property pages, or by crossing the line through the waypoint and perpendicular to the leg line.

If you are off course and decide to go directly to the next waypoint without reaching either of these conditions, you can press the **Next Waypoint** button if you have it configured on an instrument panel or press the **W** key to activate the next waypoint.

If your cross track error gets large enough to start causing alerts, but you decide to head directly to the active waypoint without getting back on course, you may press the **Reset XTE** button or the **X** key. This will tell Rose Point ECS to reset the intended track to be from your current location to the active waypoint and the alerts will stop.

When you arrive at the end of the route, you will hear an alert and the route will be deactivated.



Using the Instrument Panels

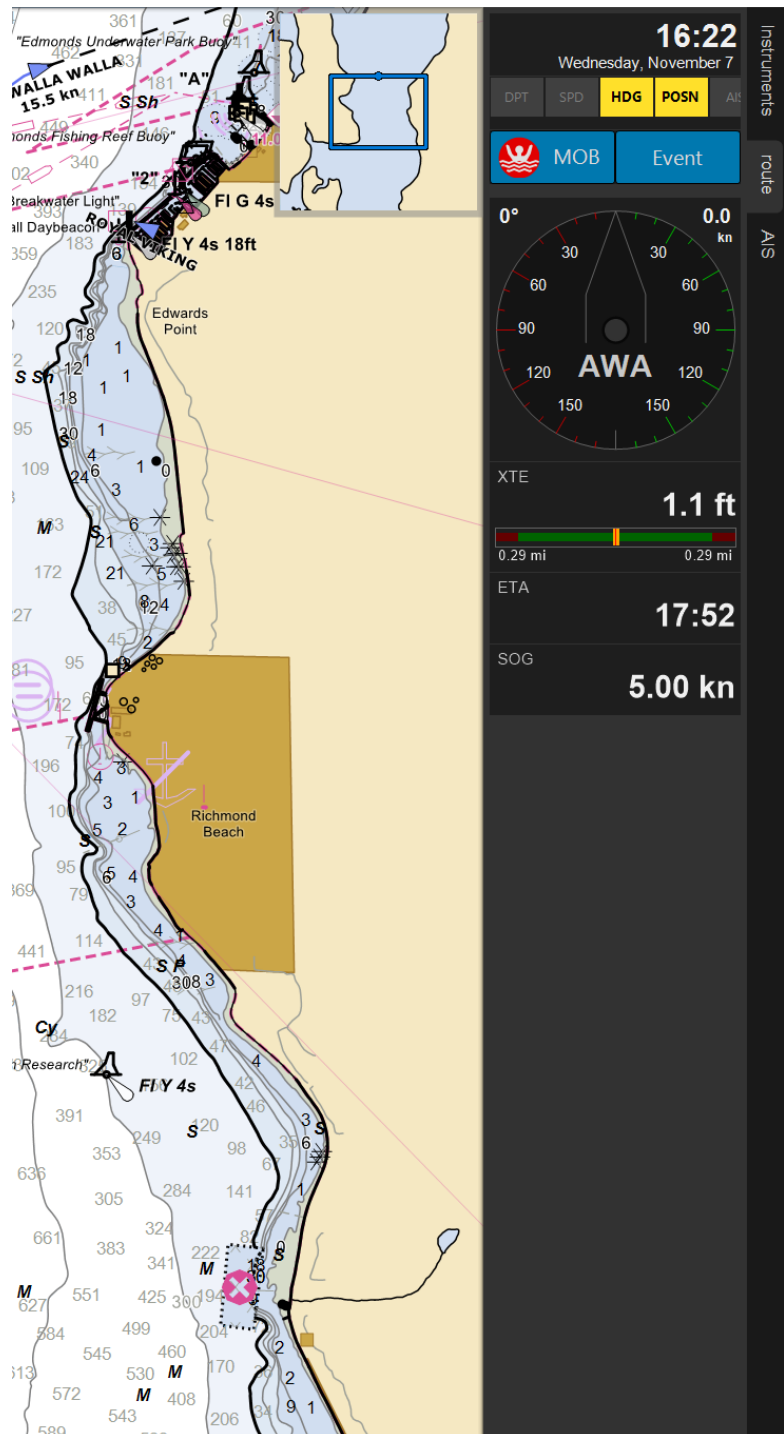
Rose Point ECS comes with an Instrument Panel configured with a few basic instruments. You can reconfigure this instrument panel as well as add more of them. Each Instrument Panel appears as a "tab" on the right side of the Rose Point ECS window. Many different Instruments are available, and you can decide which of them to display.

Showing an Instrument Panel

To show an Instrument Panel, click on one of the tabs on the right side of the screen. Clicking the tab for an open Instrument Panel will hide it. You can also hide and show the instrument panel with the **Ctrl+F1** key.

Scrolling an Instrument Panel

If the Rose Point ECS window is not tall enough for the list of Instrument Panels, you can scroll the list by dragging it with your mouse or clicking on the arrow buttons that will appear at the top and/or bottom of the list when scrolling might be necessary.



Configuring the Instrument Panels

Rose Point ECS includes a special mode for making changes to your instrument panels. You can get to this mode with **Screens > Instrument Panels** or click the gear button at the bottom of the instrument panel tab area.

While the instrument panel mode is active, you can add instruments, drag instruments to new locations, add more instrument panel tabs, add more columns of instruments, and make other changes.

Common Instruments

There may be some instruments that you want to have on every instrument panel. This can be done by utilizing the **Common Instruments** area. This is an area at the top of the right-most column of instruments and indicated by an orange bar in instrument panel mode. Instruments above the bar are "common instruments" and instruments below the bar are specific to the current instrument panel.

You can move an instrument to the common area by dragging it above the orange bar or make an instrument panel-specific by dragging it below the orange bar.

If you do not want the common instruments one of your instrument panels, then you can remove them with the **Show Common Instruments** option that appears on that instrument panel's property page in the browser panel.

Multiple Columns

In addition to creating different instrument panel tabs, you can also create multiple columns of instruments. Use the **Add Column** button that appears on the left side of the instruments to add columns.

Columns are automatically deleted if you remove all of their instruments.

Adding Another Instrument

While the instrument panel mode is active, an **Add New Instrument** button appears near the top of the browser panel. Clicking that button will show a list of instruments that can be added. Near the top of the list is an option labeled **Show** that you can use to select the category of instruments you want to see.

Once you've found an instrument you want to use, drag it to the right place in the instrument panel. When you let go, the browser will change to show any options that instrument has so you can make adjustments.

Making Changes to Instruments

When it's not showing you the list of instruments, the browser panel shows properties of either the selected instrument panel or the selected instrument. Click on an instrument to select it and access its options in the browser panel.

You can drag instruments to new locations while the instrument panel mode is active.

While dragging instruments, you can create gaps by dragging an instrument slightly down from the one above it. You can get rid of these gaps by dragging an instrument closer to the one above it.

Instruments

Rose Point ECS includes many different instrument types. Some of these simply display a value such as speed over ground and other more complex instruments provide options, buttons, and popup displays. Here are just some of the instruments you can choose from:

Sensor Status Panel



The Sensor Status Panel is one of the default instruments in the common area as it provides some very important information about your electronics at a glance. The Sensor Status Panel is divided into several indicators, each of which shows the status of a particular sensor such as your GPS, compass, AIS, etc. The status is indicated with a color and is one of the following:

Green This indicates that a sensor is working and providing data.

Yellow This is used to indicate that a sensor is using an estimated or simulated value, such as a dead-reckoned position.

Red This indicates that a sensor has stopped working.

Gray This indicates that a sensor has not worked since Rose Point ECS was started.

Clicking on a sensor indicator will display a popup panel that lists available sensors of that type, indicates which one is in use, and lets you choose a different one to use. The lists of sensors also provide settings buttons for each sensor. These settings buttons are a quick way to get to the sensor's page in the **Settings > Electronics** browser. Some of the popups also provide other information or options for the sensors they represent.

POSN Sensor Status

The POSN (position) sensor status indicator represents your position sensor which is typically a GPS receiver or an AIS transponder.

The POSN popup lists each of the available position sources, indicates which one is currently being used for your position, and lets you select a specific one to use.

Normally you should use the **Auto Select Position Source** option as it will pick the sensor with the highest priority that is currently working and automatically fall back to the next highest priority sensor if that one fails.

When the current position sensor is a GPS receiver, information about its signal and the satellites it is using appears below the list of sensors.

AIS Sensor Status

The AIS popup also lists each of the available AIS transponders, but that list will usually only contain one entry. Below that are a few AIS-related options and a panel displaying the information your AIS is broadcasting. The options include:

Safety Related Messages Selecting this option opens Tracking > Messages where you can see AIS safety related messages that have been received as well as broadcast one yourself.

Status Select this option to quickly change the navigation status being broadcast by your AIS transponder.

Show Own-Ship in Browser Select this option to open the browser to show all of the details of your vessel.

Navigation Compass

The Navigation Compass shows your vessel's heading (or course when the heading is unknown). Both the true and magnetic headings are shown numerically, and an analog compass display shows either the true or magnetic heading depending on the bearing setting in the Units of Measurement page of the options window. The analog compass display shows the current heading at the top of the dial.

When a Waypoint is active, the Navigation Compass also shows the range and bearing to that Waypoint and the Time to Go to that Waypoint. The bearing to the Waypoint is shown as an arrow in the analog compass display. When the arrow is pointing straight up, aligning with the red lubber's line, the vessel is heading straight for the active Waypoint. When the arrow is pointing to the right of the lubber's line, the vessel needs to be steered to starboard, and when it points to the left, the vessel should be steered to port.

Route Monitor

The route monitor instrument displays time and distance information about an active route and its waypoints. The top of the instrument show information about the current waypoint, the bottom of the instrument shows information about the destination, and the middle of the instrument shows a list of the waypoints along the way.

The route monitor can show a combination of the ETA, time-to-go, and distance. Clicking the right mouse button while pointing at the instrument will display a menu where you can select which of these you want to see.

If you are using an automatic river route (using the +Inland Add-On), the waypoints shown in the route monitor will be the bridges, locks, and river stage stations that were found along the route, as well as any mile marker locations you've added via **Add Mile Marker ETA** on the right-click menu.

Apparent, True, and Ground Wind Panels



All the Wind Panels require an NMEA 0183 or NMEA 2000 compatible wind vane and anemometer to be connected to the PC and some require your speed over ground, course over ground, and heading information as well.

Four different Wind Panels are available:

- **Apparent Wind Angle** This panel shows the apparent wind as it is measured from your wind vane and anemometer.

Active Waypoint	
I-65 Bridge	
ETA	17:41
TTG	00:27:58
RNG	18.7 mi
Starting Location	
----	passed
I-65 Bridge	
18.7 mi	17:41
I-65 Bridge	
18.7 mi	17:41
William Hudson Memorial ...	
23.1 mi	17:48
William Hudson Memorial ...	
23.1 mi	17:48
Decatur	
23.2 mi	17:48
Southern Railroad Drawbrid	
23.7 mi	17:48
Wheeler Dam Highway Brid	
53 mi	18:32
Wheeler Dam Highway Brid	
53 mi	18:32
General Joe Wheeler Lock &...	
53 mi	18:32
Wheeler Auxillary Lock Acc...	
53 mi	18:32
Wheeler Main Lock Access B...	
53 mi	18:32
Wilson Dam Hwy Bridge	
67 mi	18:53
Wilson Dam Hwy Bridge	
67 mi	18:53
Destination Waypoint	
ETA	22:18

- **True Wind Angle** This panel shows the true wind calculated from the apparent wind and your speed over ground.
- **True Wind Direction** This panel is like True Wind Angle, but the angle is converted to a compass direction by adding your heading. If your heading is not available from your instruments, your course over ground will be used, but the calculated direction will not be as accurate.
- **Ground Wind** This panel shows the wind speed and direction over ground using a compass display. The calculations for Ground Wind depend on having an accurate course and speed over ground, heading, and apparent wind. If any of these values is not available from your instruments, the Ground Wind will not display.

Depth and Water Temperature

The Depth and Water Temperature panels display the current depth and water temperature along with an auto-scaling graph of the past two minutes. Both panels show the current values of both Depth and Water Temperature, but only graph their own value.

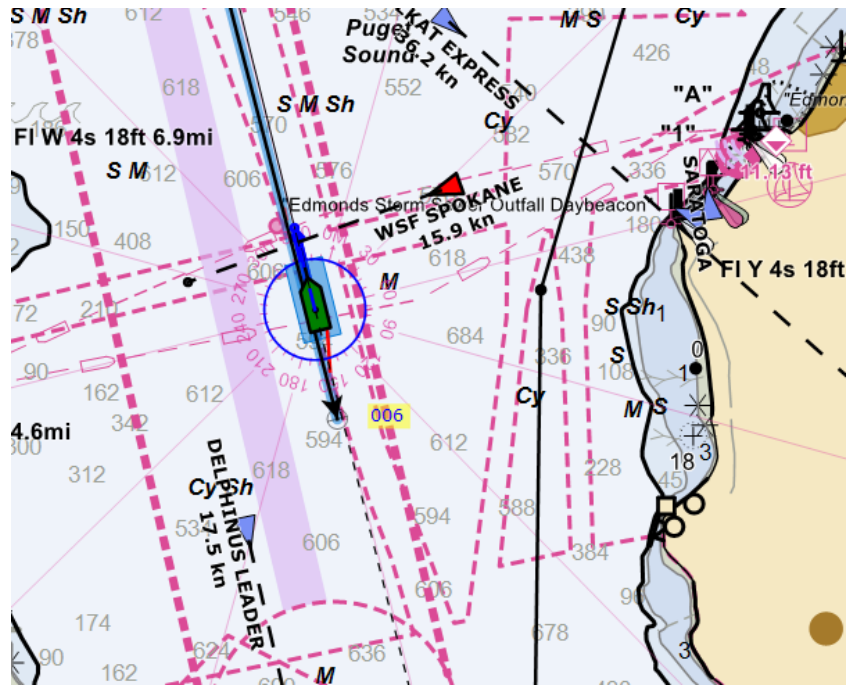
These consoles require an NMEA 0183 or NMEA 2000 depth sounder and the Water Temperature Console requires that it have a temperature sensor.

Using AIS

If you have an AIS receiver connected to your computer, Rose Point ECS will show you the locations and other information that it receives from other vessels in your area.

To configure Rose Point ECS to use your AIS receiver, use **Settings > Electronics** to setup the port the receiver is connected to. The automatic port detection should be able to find your AIS receiver. If you decide to manually configure the port, keep in mind that most AIS receivers use 38400 baud instead of the 4800 baud used by most other NMEA 0183 devices.

Once the port is configured, the AIS feature is mostly automatic; if Rose Point ECS receives AIS information, then the vessels will appear on the chart as small blue triangles pointing in the direction of the vessel's heading. If you zoom in on a vessel, and its size is being transmitted through the AIS, the symbol will scale with the chart (while the scaled symbol is longer than the normal triangle).



A few AIS related options are available in **Settings > AIS**. These options let you control how long a track to draw for each vessel and whether to draw predictor lines and names.

To get detailed information about an AIS vessel, click on its symbol on the chart. Information about the vessel will appear in a pop-up tip.

You can also see a table listing various properties of all the AIS vessels being tracked in the Vessels Browser.

When Rose Point ECS has not received a signal from a vessel for an extended period, it considers that target to be "lost" and will draw the vessel as a hollow triangle with a line through it. Lost targets will also flash until they are acknowledged by clicking on them unless the flashing option has been disabled in

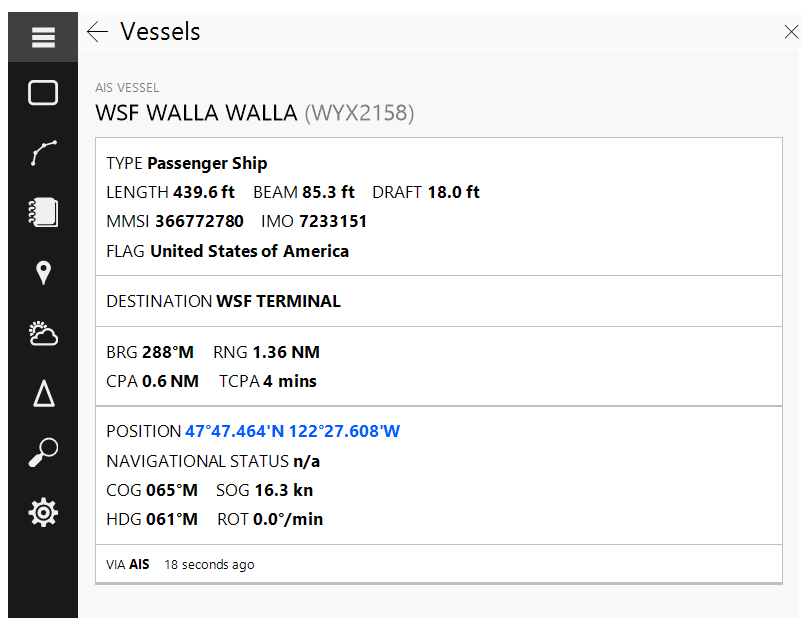
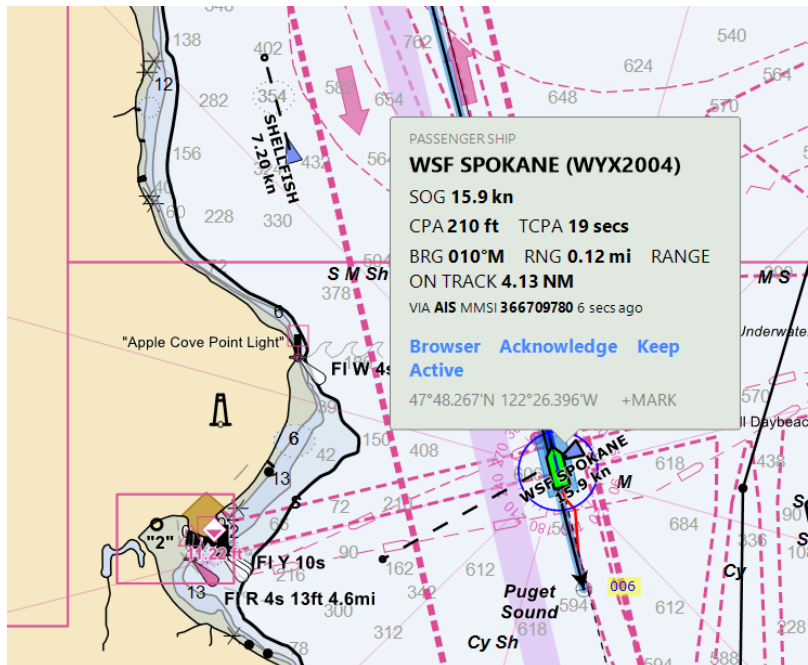
Settings > AIS. Targets that are lost for an extended period are removed from the chart.

Rose Point ECS will calculate the Closest Point of Approach (CPA) for each AIS target and warn you if your course and the course of another vessel will come within 0.25 NM within the next five minutes. These targets are considered Dangerous and will flash red until they are acknowledged. The minimum allowed CPA and Time to CPA (TCPA) can be adjusted in the **Settings > AIS**.

You can track an AIS target by selecting Show Info Panel in the target's pop-up tip. When an AIS target is being tracked, information about that target is displayed off to the right side of the chart in a box with a line pointing to the target. To stop tracking, simply click inside the information box.

You can cause the chart panel to auto-scroll to keep an AIS target on the screen by right-clicking on the AIS

target and select the Follow Vessel option. To cancel this mode, select the Follow Vessel



option on the same AIS target again, or select one of the following modes for your own-ship.

The screenshot shows a 'Vessels' window with a search bar and a list of five vessels. Each vessel entry includes its name, MMSI, IMO, speed (SOG), course (COG), heading (HDG), bearing (BRG), range (RNG), CPA, and ETA. The first vessel, WSF SPOKANE, has a red vertical bar on its right side. The second and fourth vessels, CHILKAT EXPRESS and ROYAL VIKING, are marked as 'lost'.

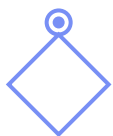
Vessel Name	MMSI	IMO	SOG	COG	HDG	BRG	RNG	CPA	ETA
WSF SPOKANE (WYX2004)	366709780	7214325	15.8 kn	226°M	225°M	023°M	0.4 NM	0.05 NM	IN 1 min 18 secs
CHILKAT EXPRESS (WDF8349)	366811470								
DELPHINUS LEADER (7JZH)	431550000	9174282	17.5 kn	151°M	151°M	170°M	1.68 NM		
ROYAL VIKING (WDG3449)	367526150								
SARATOGA (WDJ9181)	368023510	N/A	0.00 kn	336°M	336°M	062°M	2.02 NM		

AIS Aids to Navigation

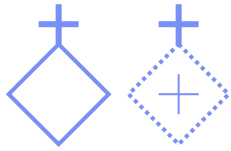
These symbols represent aids to navigation that are broadcasting on AIS and may be used along with a charted symbol. Solid diamonds represent physical aids while dashed diamonds indicate virtual aids.

These symbols will only appear if you have an AIS receiver working with Rose Point ECS, it is receiving information for the aids, and the **Settings > AIS > Show Aids to Navigation** option is enabled.

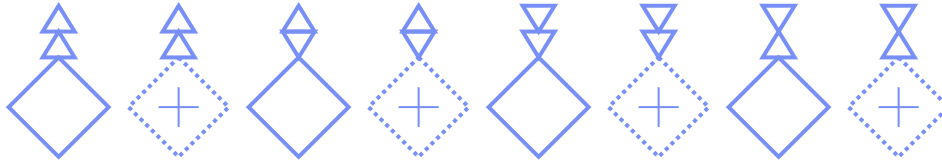
Racon



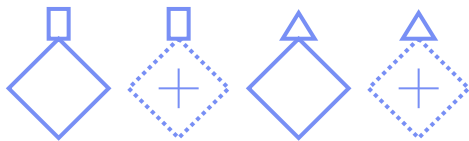
Emergency Wreck



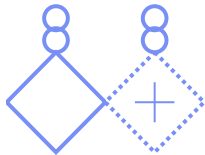
Cardinal Marks (N, E, S, W)



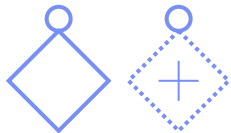
Port/Starboard Beacon or Mark



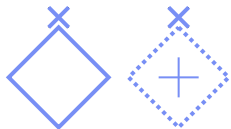
Isolated Danger



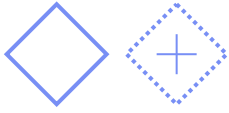
Safe Water



Special Mark



Other Types



Off Position



Missing

Missing



Using Radar

The Radar Display can be used in two different ways: as a stand-alone radar panel and as a chart overlay. The stand-alone radar panel can be alongside a chart panel, or it can be in a separate pop-up window (that can be moved to a secondary monitor if you have one). The radar chart overlay can appear on any chart panel, but it is normally used only with the Primary Chart Panel.

To create a standalone Radar Panel alongside a Chart Panel:

- Go to the Screens Browser
- Chose an unused screen to customize and press its Edit button
- Click the +Panel button and select Chart to add a chart panel
- Click the +Panel button and select Radar to add a radar panel

To create a standalone Radar Panel in a separate window:

- Go to the Screens Browser
- Click on the toolbar's menu button (it has three dots vertically)
- Select Show Radar Window

The standalone radar window can be closed, moved, and sized like any other window and the **F11** key will switch it between normal and Full Screen modes.

To enable or disable the Radar Chart Overlay:

- Click the Chart Type button on a Chart Panel
- Use the Radar command to turn Radar Overlay on or off in that Panel

Radar Controls

When they are enabled, the radar controls appear in the top-left corner of each Radar Panel and Chart Panel with Radar Overlay enabled. These controls appear as a RADAR button followed by range control buttons.

The radar controls may be enabled and disabled in **Settings > Electronics** after selecting the radar from the list of devices.

Clicking the RADAR button shows a small panel that contains the actual radar controls which may include:

Transmit – indicates the current status of the radar transmitter which can be:

- **OFF** - This indicates that Rose Point Radar has not detected the radar on the network which could mean that the radar does not have power or that the network is not configured correctly.

- **Warm Up** - This indicates that the radar is warming up and cannot be used yet. A countdown timer will indicate how much time is needed to finish warming up (in 5-second intervals).
- **Standby** - This indicates that the radar is ready to transmit. In this state, you can click this button to start transmitting.
- **XMIT** - This indicates that the radar is currently transmitting. In this state, you can click this button to place the radar in standby mode (which turns off the transmitter).
- **GAIN** - Use the AUTO button to turn automatic gain on or off and use the plus and minus buttons to manually adjust the gain level.
- **SEA** - Use the AUTO/HARBOR button to switch between manual, automatic, and harbor (close range) sea clutter control (STC). Use the plus and minus buttons to manually adjust the sea clutter control.
- **RAIN** - Use the On/OFF button to enable or disable rain clutter control (FTC) and use the plus and minus buttons to manually adjust the level of rain clutter removal.
- **SP/LP** - Use this button to control the pulse length; the current pulse length is shown on the button.
- **EXP** - Use this button to enable and disable Target Expansion. This indicator will be dim when target expansion is off and bright when it's on.
- **IR** - Use this button to control the level of Interference Rejection. This indicator will show the level of interference rejection (1, 2, or 3).

Adjusting the Radar Controls

If you are using a Koden radar, be sure to calibrate the radar before trying to adjust the normal controls!

- **Gain** should be set to high enough that a speckled background barely appears in the radar image. If the gain is too low, weak echoes may not be detected at all but if the gain is too high target echoes will start to blend together, and individual targets will be lost.
- **Rain Clutter (FTC)** can be adjusted to remove noise (clutter) caused by rain and can also provide better range definition at short ranges. Normally this should be set to zero unless clutter removal is needed.
- **Sea Clutter (STC)** should normally be set to zero in calm seas and adjusted as necessary to remove noise caused by heavy seas. When this is set too low you may see a lot of noise near your vessel, but if it is set too high you might not see real targets that are close by.
- **The Pulse Length** is automatically adjusted based on the range you select. However, most ranges allow for a manual selection between a shorter or longer

pulse. A short pulse will provide with better target size accuracy, but some targets that generate weak echoes might require a long pulse.

- **Target Expansion** simply makes targets appear a little bit larger on the screen, so they be seen easier.
- **Interference Rejection** may be used to eliminate spiral patters in the radar image that result from other radar systems being operated nearby. Normally this can be set to OFF.

Using the Standalone Radar Panel

The Standalone Radar Panel appears much like an ordinary radar display. Below the radar image are buttons to control orientation, scale, and overlay options. The separate radar screen also has a copy of the radar controls from the main window's toolbar.

The Radar Panel Toolbar

The radar-only panel has a toolbar with the following options:

- **Orientation** - This button indicates the currently selected orientation. Click the button to cycle through the options, which are:
 - H UP** Heading Up: your vessel's heading is up.
 - C UP** Course Up: the course of the current leg of the active route is up.
 - N UP** North Up: North is up
- **Center** - This button toggles between centered and look-ahead modes.
- **Range** - This control lets you adjust the range.
 - Options (Wrench)** - This button displays a menu of options for the radar panel. The Tools sub-menu controls the display of range rings, bearing lines (EBL), range markers (VRM), and guard zones (GZ). The Options sub-menu controls the display of the stern flash, active Waypoint, and AIS targets. The Colors sub-menu controls the colors used to display the radar returns.
- **HL OFF** - This button will temporarily hide the heading line and any other marks that are displayed on top of the radar image (including range rings, bearing lines, etc.). The marks are only hidden while this button is being held and will reappear when you stop pressing the button.

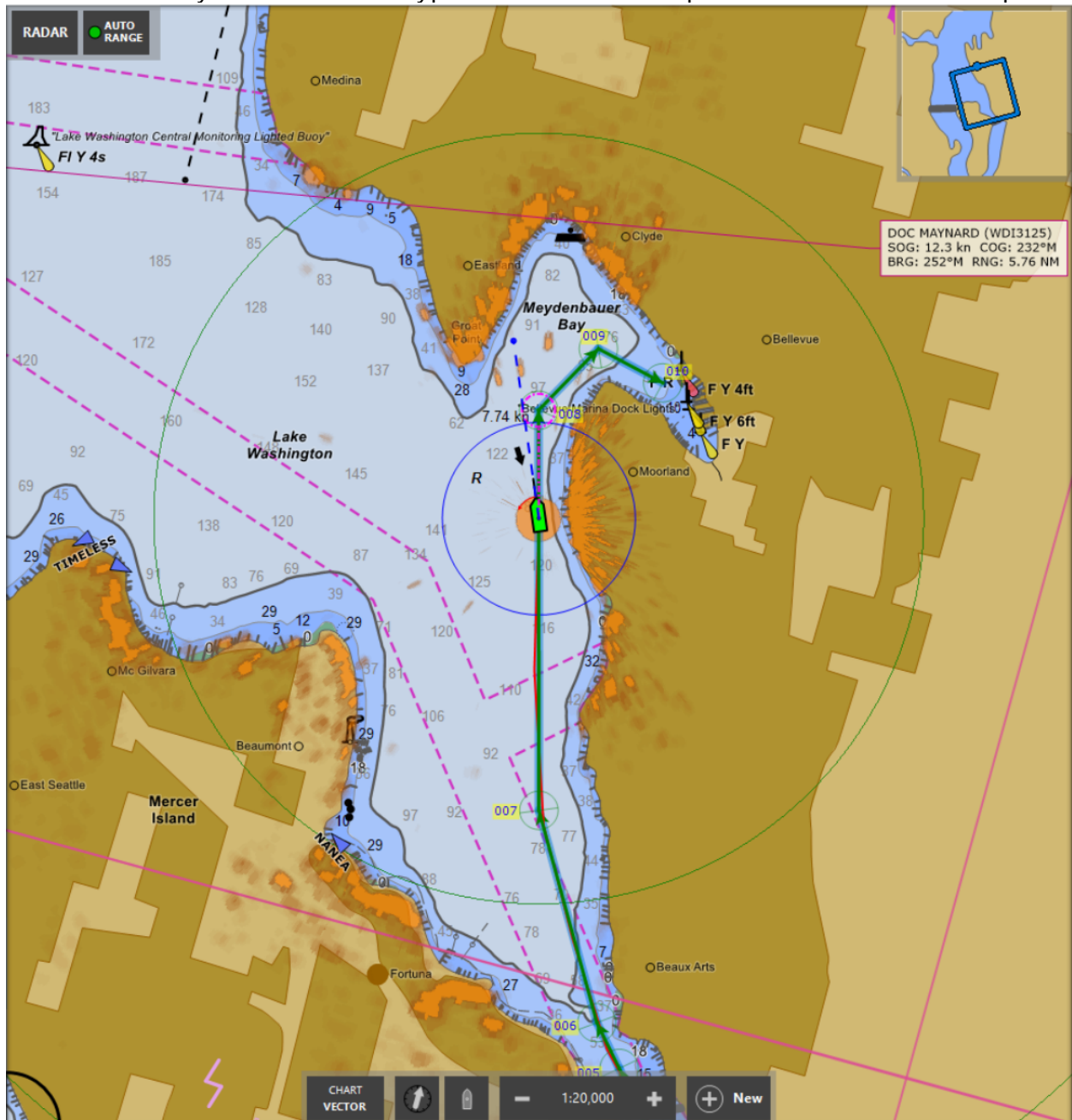
Off Center Display

Your vessel's location is indicated by a small circle in the center of the radar range circles. You can create an Off-Center Display by dragging this circle around the panel

with your mouse. Clicking on the CENTER button on the toolbar will toggle between centered and look-ahead modes.

Using the Radar Chart Overlay

The radar image can be displayed as an Overlay on a Chart Panel. To enable or disable the radar overlay, click the Chart Type button on a chart panel and use the Radar option.



For the radar image to line up with the chart, Rose Point ECS must have an accurate vessel position and heading input and the radar must be calibrated correctly. Just about

any GPS is going to position your vessel close enough to the right location that GPS accuracy is not usually an issue. However, slightly incorrect headings can cause very large and noticeable misalignment of the radar and chart.

Most electronic compasses have some sort of setup procedure for building internal magnetic deviation tables which can increase the accuracy of the heading reported by the compass. Please refer to the installation manual for your compass to find the appropriate procedure (which usually involves moving the boat slowly through a few tight circles). If you have a Koden radar, you should also follow our procedure for adjusting the Trigger Delay to make sure that target ranges are correctly represented. For other radars, check the radar's documentation for its calibration procedures.

After getting your compass as accurate as it can be, you might still want to use the deviation table offered within Rose Point ECS. To access this feature, open **Settings > Electronics**, select the port your heading sensor is connected to, and then select the Heading Sensor page in the port's configuration page.

If you do not have an electronic compass (or your compass is not very accurate), it is still possible to use the radar overlay but it is important to understand certain limitations. Since the radar image is inherently relative to your vessel's heading and the chart is inherently North Up, Rose Point Radar must use your heading to rotate the radar image in order to line it up with the chart. If Rose Point Radar is not receiving a heading, then it will use the course-over-ground value from your GPS instead. A vessel's course-over-ground is usually the same as its heading, except when the vessel is crabbing, turning, moving slowly, or stationary. At those times that the course-over-ground is not the same as the heading, the radar image will not line up with the chart. In many cases, though, that doesn't matter as much as it might seem because the human brain is very good at making the mental adjustment necessary to determine how the radar should line up with the chart.

Radar Tools on the Overlay

Radar tools such as range rings, variable range markers (VRM) and electronic bearing lines (EBL) can be displayed on the chart along with the radar image. To access these options, click on the chart panel's Chart Type button and then click the gear to the right of the Radar option.

The radar tools cannot be manipulated on the radar chart overlay. Use the standalone radar display to adjust the tool parameters.

Using Video Cameras

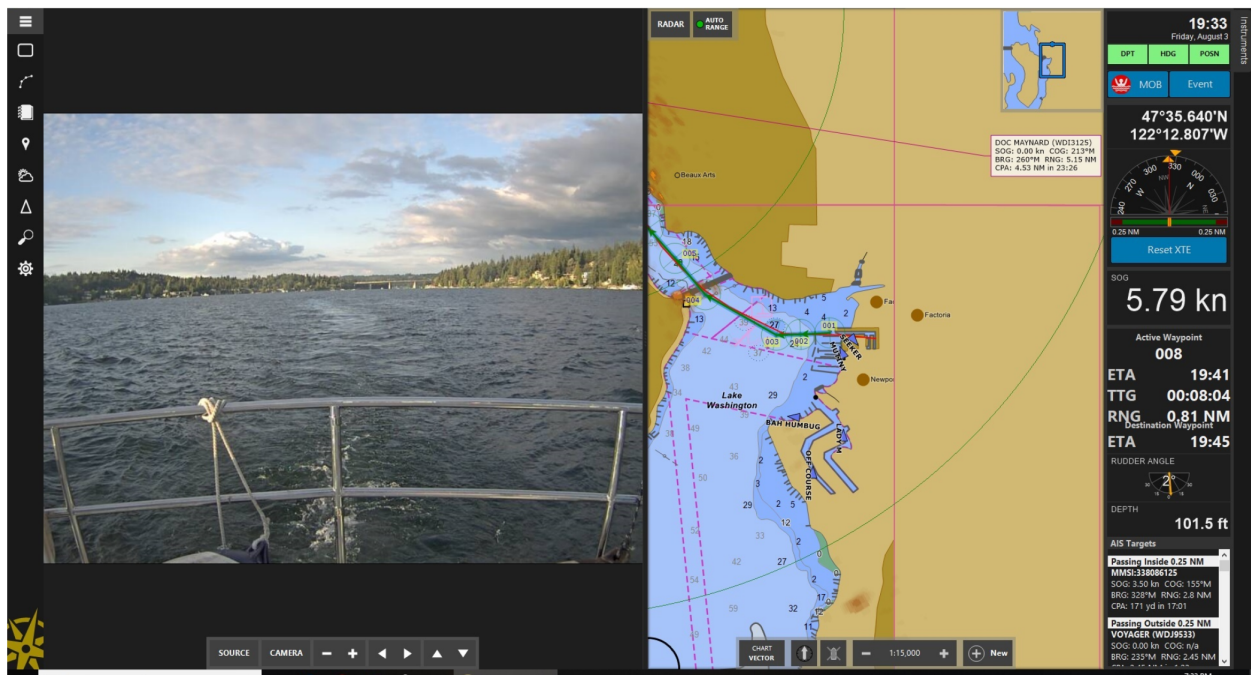
Rose Point ECS can display the image from video cameras connected to your PC. It is possible to use webcam style cameras that typically connect to a USB port, a network video camera, or a standard video camera connected to a video interface device (networked., USB, or internal) on your PC.

Rose Point ECS will let you select a source from all the cameras currently connected to your PC and display the video in either a small Instrument Panel in the Task Pane or in a larger panel alongside your charts.

Use the Screens Browser to setup a custom screen that includes a Video Panel to get started.

Video Panels

The Source button below the video panel lets you select the video source. Clicking this button displays a menu of all the live video sources available on your computer as well as options to open a file or network stream.



Selecting Open Video File will cause a standard file selection window to show so you can select a video file to play.

Selecting Open Network Stream will display a window prompting you for the network address of the video stream you want to display.

The rest of the options on the source menu represent the various video sources available on your computer. Selecting one will switch the video panel to that source.

Video Instrument Panel

To display video in an Instrument Panel, use the instrument panel editing features to add a Video instrument.

Right-click on the Video Instrument to access its options which will include the video source, any options provided by the video camera, and playback controls.

Printing and Print Preview

Rose Point ECS can print Charts, Tide Level and Tidal Current Predictions, Weather Forecasts, and Route Details.

When the Voyage Plan > Route Details browser is open, and you use the print feature, the page will include a Chart in the top half and the details of each leg of the Route in the bottom half. When the Route Details panel is not open, the Chart will cover the entire page.

Printed Charts have the same level of detail and other formatting options as the displayed Chart, so you should get the screen to look the way you want your page to look before starting to print.

When you are just printing a Chart, the page will contain the same area that is on the screen plus an additional area needed to fill out the page. If you are printing in portrait mode (a vertically oriented page), then the middle of the page will probably contain the same as what you see on the screen and additional area will be charted at the top and bottom of the page.

Use **Voyage Plan > Route Details > Share > Print** to access printing options, Print Preview, and to print.

When you use enter the Print mode, you can see a Print Preview of exactly what will appear on the page and even nudge the chart around and zoom in/out to get it just right.

When you are printing a Chart with route details, the area of the Chart that is printed is always the area covered by the route. (In this case, you cannot fine-tune the chart placement in Print Preview mode.)

To print Weather Forecasts, Tide Level or Tidal Current Predictions, open the appropriate Browser, select the station you want to print predictions or forecasts for, and then select the Print option from the Browser's menu.

Keyboard Shortcuts

Standard Shortcut Keys

Dealing with Files

Ctrl+N Create a New Voyage Plan Document

Ctrl+O Open an existing Voyage Plan Document

Ctrl+S Save the Voyage Plan Document

Ctrl+P Print

Editing

Ctrl+A Select All

Ctrl+X Cut

Ctrl+C Copy

Ctrl+V Paste

Ctrl+Z Undo the last editing action

Ctrl+Y Redo the last editing action

Del Delete

Alt+Enter Display the Properties Panel

Searching

Ctrl+F Find

F3 Find Next

Shift+F3 Find Previous

The Chart Panel

Arrow Keys Pan the chart

Shift+Arrow Keys Pan the chart faster

Page Up Pan the chart towards the vessel's heading (or course in Course Up mode)

Page Down Pan the chart away from the vessel's heading (or course in Course Up mode)

Ctrl+Right Rotate the chart clockwise

Ctrl+Left Rotate the chart counter-clockwise

+ **Zoom** the chart In

- **Zoom** the chart Out

U Cycle the chart orientation between North Up, Course Up, and Heading Up

Home Center the chart on the boat

End Stop following the boat

Ctrl+B Cycle the "Bearing Display Mode" between True and Magnetic

V Display vector charts

R Display raster charts

P Display photo charts

O Display topographic maps

H Turn the hybrid vector chart on or off (this shows vector charts on top of raster charts, photo charts, or topographic maps)

TIP:

The Shift key may be used in combination with the V and R keys in order to enable and disable the display of the corresponding chart types. This can be used to create combinations of chart types on the screen. For example, press R to select raster charts then Shift+V to turn on vector charts as well as the raster charts.

C Show or hide the Tidal Current Predictions on the chart

T Show or hide the Tide Level Predictions on the chart

Shift+C Show the Tidal Current Prediction Browser Panel

Shift+T Show the Tide Level Prediction Browser Panel

Y Cycle the Passing Point Predictor option between manual and automatic

Tab Select the next Navigation Object

Shift+Tab Select the previous Navigation Object

Enter Activate the property window when a Navigation Object is selected

Esc Hide the chart tip, cancel an operation that is in progress, or dismiss an active alarm

Dead Reckoning Mode

Ctrl+Shift+Up Speed the boat simulator up

Ctrl+Shift+Down Slow the boat simulator down

Ctrl+Shift+Left Turn the boat simulator to port

Ctrl+Shift+Right Turn the boat simulator to starboard

Function Keys

F1 Get help

F2 Edit the name of the selected Navigation Object

F4 Man Over-Board

F5 Add event mark at boat location

F7 Add a new mark at the next click

F8 Start adding a new route

F9 Set a bookmark at the current chart viewing area

F10 Go to the bookmark set with F9

F11 Turn Full Screen mode on or off

Ctrl+F1 Turn the Task Pane on or off

Navigation

W Skip the active Waypoint and activate the next one from the active route

Shift+W Activate the previous Waypoint from the active route

X Reset the Cross-Track Error

Miscellaneous

Ctrl+I Cycle between day, dusk, and night colors

Space (3x) Reset to Standard Display (tap the spacebar quickly three times)

1 through **9** Show one of the nine custom screens

The following keys require two key presses, **Ctrl+Q** followed by another key. The second key must be pressed less than one second after **Ctrl+Q**. These key combinations are

intended to be used with programmable keypads and provide direct access to modes that are normally set by cycling through various options.

Ctrl+Q C Select Course Up mode

Ctrl+Q N Select North Up mode

Ctrl+Q H Select Heading Up mode

Ctrl+Q F Select Follow Boat mode

Ctrl+Q A Select Look Ahead mode

Ctrl+Q L Select Follow Leg-Line mode

Ctrl+Q D Select Don't Follow mode

Ctrl+Q S Select the Selection Mouse Tool

Ctrl+Q Z Select the Zoom Mouse Tool

Ctrl+Q P Select the Pan Mouse Tool

Ctrl+Q M Display Magnetic Bearings

Ctrl+Q T Display True Bearings

Units and Abbreviations

The following table describes the units and abbreviations that may be used when entering values in Rose Point ECS. You may also use the plural form of most abbreviations (such as **fm** for fathoms). You may also use upper- or lower-case letters interchangeably.

In most cases, you may enter measurements without specifying units. Rose Point ECS will assume you are using the units you have selected in the Measurements page of the Options Window.

Distance, Depth, and Height

NM nautical miles

km kilometers

mi miles

yd yards

ft feet

in inches

cm centimeters

mm millimeters

m meters

fm fathoms

Speed

mph miles per hour

kph or **k/h** kilometers per hour

kn knots

Temperature

C Celsius

F Fahrenheit

Bearings

T true

M magnetic

Periods of Time

h or **hr** hours

m or **min** minutes

s or **sec** seconds

A time period can include a combination of hours, minutes and seconds. For example: "3 hrs 15 mins" is a valid time period. If you do not specify a unit of time, then seconds are assumed, so "45" means 45 seconds.

Time of Day

The time of day may be specified as h:m, h:m:s where h, m, and s are replaced with the hour, minute, and second. An hour of 0 or 13-23 indicates 24-hour format and a suffix of am or pm indicates 12-hour format. An hour of 12 with no suffix is assumed to be noon.

Location

A location is specified as latitude followed by longitude. You may specify each as a single number of degrees, two numbers of degrees and minutes, or three numbers of degrees minutes and seconds. You do not need to include the degree, minute, or second symbols after the numbers; as the number of numbers determines how they are interpreted. You may separate the numbers using spaces or hyphens. Before or after a latitude you must, however, include an N or S for north or south, and before or after a longitude you must enter an E or W for east or west.

Here are some example locations you can enter (they all refer to the same place):

- 48°36.565'N 123°09.237'W
- 48 36.565 N 123 9.237 W
- 48-36.565 N 123-9.237 W
- 48°36'33.90"N 123°09'14.20"W
- 48 36 33.90N 123 09 14.20W
- 48-36-33.90N 123-09-14.20W
- 48.6094°N 123.1539°W
- 48.6094N 123.1539W

Datum Conversion

Normally all coordinates are assumed to use the WGS 84 datum. However, if you need to enter a coordinate from WGS 72, NAD 83, or NAD 27 you can name the datum after the coordinate and Rose Point ECS will convert it for you. For example, entering "48N 123W NAD27" will result in a coordinate of "47°59.988'N 123°00.075'W" after conversion to WGS 84.

Using the Military Grid Reference System

Locations may also be entered using the Military Grid Reference System (MGRS). Only the AA scheme (also known as MGRS-New) is supported, not the AL scheme (MGRS-Old). Coordinates entered using MGRS are converted to a latitude and longitude using the WGS 84 datum.

Standard Terms and Abbreviations

ACK Acknowledge	BRG bearing
ACQ Acquire, Acquisition	BWW Bearing Waypoint to Waypoint
AZ Acquisition zone	BCR Bow Crossing Range
ADJ Adjust, Adjustment	BCT Bow Crossing Time
AFT	BRILL Brilliance
ALARM	BITE Built in Test Equipment
ALT Altitude	CAL Calibrate
AM Amplitude Modulation	CNCL Cancel
ANCH Anchor Watch	C Carried (for example, carried EBL origin)
ANT Antenna	CPU Central Processing Unit
RAIN Anti Clutter Rain	CENT Center
SEA Anti Clutter Sea	CHG Change
APR April	CP Circularly Polarized
AUD Audible	CLR Clear
AUG August	CPA Closest Point of Approach
AUTO Automatic	CDROM Compact Disc Read Only Memory
AFC Automatic Frequency Control	CCRP Consistent Common Reference Point
AGC Automatic Gain Control	CCRS Consistent Common Reference System
AIS Automatic Identification System	CONT Contrast
ARPA Automatic Radar Plotting Aid	UTC Coordinated Universal Time
AP Autopilot	CORR Correction
AUX Auxiliary System/Function	CRS Course
AVAIL Available	
AZI Azimuth Indicator	
BKGND Background	

COG Course Over Ground	E East
CTW Course Through Water	REF Echo Reference
CTS Course to Steer	EBL Electronic Bearing Line
C UP Course Up	ECDIS Electronic Chart Display and Information System
XTD Cross Track Distance	ECS Electronic Chart System
CURS Cursor	ENC Electronic Navigational Chart
DG Dangerous Goods	EPFS Electronic Position Fixing System
DATE Date	ERBL Electronic Range and Bearing Line
DAY Day	EPIRB Emergency Position Indicating Radio Beacon
DR Dead Reckoning, Dead Reckoned Position	ENH Enhance
DEC December	ENT Enter
DECR Decrease	EQUIP Equipment
DELAY Delay	ERR Error
DEL Delete	EP Estimated Position
DEP Departure	ETA Estimated Time of Arrival
DPTH Depth	ETD Estimated Time of Departure
DEST Destination	EGNOS European Geo-Stationary Navigational Overlay System
DEV Deviation	EVENT Event
DGLONASS Differential GLONASS	EZ Exclusive Zone
DGNSS Differential GNSS	EXT External
DGPS Differential GPS	F-Band F-Band (applies to radar)
DSC Digital Selective Calling	FEB February
DISP Display	FWD Foreward
DIST Distance	FREQ Frequency
DRMS Distance Root Mean Square	FISH Fishing Vessel
DTG Distance to Go	FIX Fix
DRIFT Drift	FM Frequency Modulation
D Dropped (for example, dropped EBL origin)	

FULL Full
GAIN Gain
GEOG Geographic
GDOP Geometric Dilution of Precision
GMDSS Global Marine Distress and Safety System
GNSS Global Navigation Satellite System
GLONASS Global Orbiting Navigation Satellite System
GPS Global Positioning System
GC Great Circle
GRID Grid
GND Ground
GAS Grounding Avoidance System
GRI Group Repetition Interval
GZ Guard Zone
GYRO Gyro
HS Harmful Substances (applies to AIS)
H UP Head Up
HDG Heading
HCS Heading Control System
HL Heading Line
HF High Frequency
HSC High Speed Craft
HDOP Horizontal Dilution of Precision
I-Band I-Band
ID Identification
IN In
INCR Increase
IND Indication

INFO Information
INF RED Infrared
INIT Initialization
INP Input
I/O Input/Output
INS Integrated Navigation System
IRCS Integrated Radio Communication System
IR Interference Rejection
ISW Interswitch
INT Interval
JAN January
JUL July
JUN June
LBL Label
LAT Latitude
L/L Latitude/Longitude
LWY Leeway
LIM Limit
LOP Line of Position
LOG Log
LP Long Pulse
LR Long Range
LON Longitude
LORAN Loran
LOST TGT Lost Target
LF Low Frequency
MAG Magnetic
MOB Man Overboard
MVR Maneuver

MAN Manual	ON On
MAP Map(s)	OUT Out/Output
MAR March	OS Own Ship
MMSI Maritime Mobile Services Identity number	PANEL Panel Illumination
MP Maritime Pollutant (applies to AIS)	PI Parallel Index Line
MSI Maritime Safety Information	PAST POSN Past Positions
MKR Marker	PASSV Passenger Vessel
MSTR Master	MON Performance Monitor
MAX Maximum	PERM Permanent
MAY May	POB Person Overboard
MF Medium Frequency	PIN Personal Identification Number
MP Medium Pulse	PILOT Pilot Vessel
MENU Menu	PORT Port/Portside
MIN Minimum	POSN Position
MISSING Missing	PDOP Positional Dilution of Precision
MUTE Mute	PWR Power
NAV Navigation	PRED Predicted
NT Night	PAD Predicted Area of Danger
NORM Normal	PPC Predicted Point of Collision
N North	PL Pulse Length
N UP North Up	PM Pulse Modulation
NLT Not Less Than	PRF Pulse Repetition Frequency
NMT Not More Than	PRR Pulse Repetition Rate
NUC Not Under Command	PPR Pulses Per Revolution
NOV November	RACON Racon
OCT October	RADAR Radar
OFF Off	RP Radar Plotting
OOW Officer on Watch	RAD Radius
OFFSET Offset	RAIN Rain

RNG Range	SEQ Sequence
RR Range Rings	SET Set (i.e., set and drift, or settings a value)
RCDS Raster Chart Display System	TIME Ship's Time
RNC Raster Navigational Chart	SP Short Pulse
ROT Rate of Turn	SNR Signal to Noise Ratio
RTK Real-Time Kinematic	SIM Simulation
RX Receive	SLAVE Slave
RCDR Receiver	S South
RAIM Receiver Autonomous Integrity Monitoring	SPD Speed
REF Reference	SDME Speed and Distance Measuring Equipment
REL Relative (When combined with another abbreviation, "R" should be used instead of "REL")	SOG Speed Over Ground
RM Relative Motion	STW Speed Through Water
RPM Revolutions Per Minute	STAB Stabilized
RL Rhumb Line	STBY Standby
RoRo Roll On/Roll Off	STBD Starboard/Starboard Side
RMS Root Mean Square	STN Station
ROUTE Route	SYM Symbol(s)
SF CNT Safety Contour	SYNC Synchronized/Synchronous
SAIL Sailing Vessel	TGT Target
SAT Satellite	TT Target Tracking
S-BAND S-Band	TEST Test
SC/SC Scan to Scan	TIME Time
SAR Search and Rescue	TD Time Difference
SART Search and Rescue Transponder	TDOP Time Dilution of Precision
SARV Search and Rescue Vessel	TOA Time of Arrival
SEL Select	TOD Time of Departure
SEP September	TCPA Time to CPA
	TTG Time To Go

TWOL Time to Wheel Over Line	DRG Vessel Engaged in Dredging or Underwater Operations
TRK Track	TOW Vessel Engaged in Towing Operations
TCS Track Control System	NUC Vessel Not Under Command
TRKG Tracking	RIM Vessel Restricted in Maneuverability
TXRX Transmit and Receive	VTS Vessel Traffic Service
TCVR Transceiver	UWE Vessel Underway Using Engine
TPL Transferred Line of Position	VID Video
TX Transmit	VDU Visual Display Unit
TMTR Transmitter	VOY Voyage
THD Transmitting Heading Device	VDR Voyage Data Recorder
TPR Transponder	WARNING Warning
TRIAL Trial	WAT Water
TRIG Trigger Pulse	WPT Waypoint
T TRUE	WCV Waypoint Closure Velocity
TM True Motion	W West
UHF Ultra High Frequency	WOL Wheel Over Line
UPS Uninterruptable Power Supply	WOP Wheel Over Point
UTC Universal Time, Coordinated	WOT Wheel Over Time
UTM Universal Transverse Mercator	WGS World Geodetic System
UNSTAB Unstabilised	X-BAND X-Band
VRM Variable Range Marker	Standard Units of Measurement and Abbreviations
VAR Variation	cbl cable length
VECT Vector	cm centimeter
VHF Very High Frequency	cps cycles per second
VLf Very Low Frequency	deg or ° degree(s)
GRND Vessel Aground	fm fathom(s)
ANCH Vessel at Anchor	ft feet/foot
VCD Vessel Constrained by Draft	
DIVE Vessel Engaged in Diving Operations	

GHz Gigahertz
hPa hectopascal
Hz Hertz
hr(s) hour(s)
in inch
kHz kilohertz
km kilometer
kPa kilopascal
kn knot(s)
MHz Megahertz
m meter
min or ' minute(s)
NM Nautical Mile(s)
s or " second(s)

Where to Get Survey Files

Many US Army Corps of Engineer districts make XYZ survey files available on their websites. Instructions for getting to the files from several districts are provided below.

Mobile District

Website: <http://navigation.sam.usace.army.mil/surveys/>

Survey data is not available in XYZ format for all surveys. When it is available, it is bundled with a DXF file in a ZIP file. The availability of the XYZ file is usually indicated in the name of the file on the website.

Some of the XYZ format is supplied in Excel files (.XLS). These files can be converted to XYZ files by opening them with Excel, selecting the Easting, Northing, and Elevation columns, copying them to the clipboard, and then pasting them into Notepad. The resulting file can then be saved as an .XYZ file. Be sure the file you save does has a type of ".XYZ" and not ".TXT"!

Settings

Spatial reference system: Several state plane systems are used. Check the corresponding PDF files to find the correct zone for a survey.

Vertical units: Feet.

Vertical datum: MLLW.

Vertical mode: height.

New Orleans District

Website:

<http://www.mvn.usace.army.mil/Missions/Navigation/ChannelSurveys.aspx>

The New Orleans district website offers survey data in various formats, all of which are delivered at once in a ZIP file. In order to use the survey data in Rose Point ECS, you will need to extract the *.DAT files from the ZIP file and rename them to have a file type of ".XYZ".

Settings

Spatial reference system: The download pages indicate which system to use.

Vertical units: Feet.

Vertical datum: MLLW.

Vertical mode: height.

San Francisco District

Website:

<http://www.spn.usace.army.mil/Missions/Surveys,StudiesStrategy/HydroSurvey.aspx>

XYZ files can be downloaded directly from the website. However, your browser may just try to show you the file rather than letting you download it. To get around this, we recommend you right-click on the link to the XYZ file you want and use the "Save" command on your browser's pop-up menu.

Settings

Spatial reference system: Several California Zones are used. Check the corresponding PDF files to find the correct zone for a survey.

Vertical units: Feet.

Vertical datum: MLLW.

Vertical mode: depth.

Automatic Loading of Survey Data

Rose Point ECS will monitor the \$data\Surveys folder for changes to any *.rpxyz files. New files will automatically be loaded, deleted files will be removed the display, and modified files will be re-loaded.

To access the Surveys folder in Windows File Explorer:

- Start Rose Point ECS.
- Go to the Search browser, enter \$data into the search box, and press Enter. Windows File Explorer will open and show the Rose Point ECS data folder.
- Create a new folder inside the Rose Point ECS data folder and call it Surveys.

Rose Point ECS will only monitor files with a file type of "rpxyz". These are standard .XYZ files with a small header you must add in order to describe the format of the data within.

The header is made up of several lines containing name/value pairs and is terminated by a blank line which is followed by the original XYZ data.

Many of the header values are only used to provide information to the user in the Property Panel when a sounding is clicked and are optional. However, the values marked as required must be present in the header in order to describe how to interpret the XYZ values in the rest of the file.

The name/value pairs that may be included in the header are:

- **name:** A name for the survey. (optional)
- **location:** A description of where the survey was done. (optional)
- **date:** The date of the survey. (optional)
- **agency:** The agency that performed the survey. (optional)
- **srs:** The spatial reference system of the X and Y portions of the data. (required - see below for details)
- **vertical-unit:** The unit of measurement used for the Z portions of the data. (required)
 - meters:** Meters
 - ft:** Feet
 - ftUS:** US Survey Feet
- **vertical-datum:** The vertical datum used by the Z portions of the data. (optional)
- **vertical-mode:** Either "depth" if positive Z values represent depths, or "height" if negative Z values represent depths. (optional - defaults to "depth")

Spatial Reference Systems

In order to process the X and Y coordinates from the file, Rose Point ECS must know which coordinate system is used. Most USACE survey files use the state-plane coordinate system for the area of the survey and the unit of measurement is the US Survey Foot. The following table describes the codes that may be specified for the srs header.

SPCS:ALE Alabama East (#0101)	SPCS:AK7 Alaska Zone 7 (#5007)
SPCS:ALW Alabama West (#0102)	SPCS:AK8 Alaska Zone 8 (#5008)
SPCS:AK1 Alaska Zone 1 (#5001)	SPCS:AK9 Alaska Zone 9 (#5009)
SPCS:AK2 Alaska Zone 2 (#5002)	SPCS:AK10 Alaska Zone 10 (#5010)
SPCS:AK3 Alaska Zone 3 (#5003)	SPCS:AZE Arizona East (#0201)
SPCS:AK4 Alaska Zone 4 (#5004)	SPCS:AZC Arizona Central (#0202)
SPCS:AK5 Alaska Zone 5 (#5005)	SPCS:AZW Arizona West (#0203)
SPCS:AK6 Alaska Zone 6 (#5006)	SPCS:ARN Arkansas North (#0301)

SPCS:ARS Arkansas South (#0302)
SPCS:CA1 California Zone 1 (#0401)
SPCS:CA2 California Zone 2 (#0402)
SPCS:CA3 California Zone 3 (#0403)
SPCS:CA4 California Zone 4 (#0404)
SPCS:CA5 California Zone 5 (#0405)
SPCS:CA6 California Zone 6 (#0406)
SPCS:CON Colorado North (#0501)
SPCS:COC Colorado Central (#0502)
SPCS:COS Colorado South (#0503)
SPCS:CT Connecticut (#0600)
SPCS:DE Delaware (#0700)
SPCS:FLE Florida East (#0901)
SPCS:FLW Florida West (#0902)
SPCS:FLN Florida North (#0903)
SPCS:GAE Georgia East (#1001)
SPCS:GAW Georgia West (#1002)
SPCS:HI1 Hawaii Zone 1 (#5101)
SPCS:HI2 Hawaii Zone 2 (#5102)
SPCS:HI3 Hawaii Zone 3 (#5103)
SPCS:HI4 Hawaii Zone 4 (#5104)
SPCS:HI5 Hawaii Zone 5 (#5105)
SPCS:IDE Idaho East (#1101)
SPCS:IDC Idaho Central (#1102)
SPCS:IDW Idaho West (#1103)
SPCS:ILE Illinois East (#1201)
SPCS:ILW Illinois West (#1202)
SPCS:INE Indiana East (#1301)
SPCS:INW Indiana West (#1302)
SPCS:IAN Iowa North (#1401)
SPCS:IAS Iowa South (#1402)
SPCS:KSN Kansas North (#1501)
SPCS:KSS Kansas South (#1502)
SPCS:KYN Kentucky North (#1601)
SPCS:KYS Kentucky South (#1602)
SPCS:LAN Louisiana North (#1701)
SPCS:LAS Louisiana South (#1702)
SPCS:LASH Louisiana Offshore(#1703)
SPCS:MEE Maine East (#1801)
SPCS:MEW Maine West (#1802)
SPCS:MD Maryland (#1900)
SPCS:MAM Massachusetts Mainland (#2001)
SPCS:MAI Massachusetts Island (#2002)
SPCS:MIN Michigan North (#2111)
SPCS:MIC Michigan Central (#2112)
SPCS:MIS Michigan South (#2113)
SPCS:MNN Minnesota North (#2201)
SPCS:MNC Minnesota Central (#2202)
SPCS:MNS Minnesota South (#2203)
SPCS:MSE Mississippi East (#2301)
SPCS:MSW Mississippi West (#2302)
SPCS:MOE Missouri East (#2401)
SPCS:MOC Missouri Central (#2402)
SPCS:MOW Missouri West (#2403)
SPCS:MT Montana (#2500)
SPCS:NE Nebraska (#2600)
SPCS:NVE Nevada East (#2701)
SPCS:NVC Nevada Central (#2702)

SPCS:NVW Nevada West (#2703)
SPCS:NH New Hampshire (#2800)
SPCS:NJ New Jersey (#2900)
SPCS:NME New Mexico East (#3001)
SPCS:NMC New Mexico Central (#3002)
SPCS:NMW New Mexico West (#3003)
SPCS:NYE New York East (#3101)
SPCS:NYC New York Central (#3102)
SPCS:NYW New York West (#3103)
SPCS:NYL New York Long Island (#3104)
SPCS:NC North Carolina (#3200)
SPCS:NDN North Dakota North (#3301)
SPCS:NDS North Dakota South (#3302)
SPCS:OHN Ohio North (#3401)
SPCS:OHS Ohio South (#3402)
SPCS:OKN Oklahoma North (#3501)
SPCS:OKS Oklahoma South (#3502)
SPCS:ORN Oregon North (#3601)
SPCS:ORS Oregon South (#3602)
SPCS:PAN Pennsylvania North (#3701)
SPCS:PAS Pennsylvania South (#3702)
SPCS:RI Rhode Island (#3800)
SPCS:SC South Carolina (#3900)
SPCS:SDN South Dakota North (#4001)
SPCS:SDS South Dakota South (#4002)
SPCS:TN Tennessee (#4100)
SPCS:TXN Texas North (#4201)
SPCS:TXNC Texas North Central (#4202)
SPCS:TXC Texas Central (#4203)
SPCS:TXSC Texas South Central (#4204)
SPCS:TXS Texas South (#4205)
SPCS:UTN Utah North (#4301)
SPCS:UTC Utah Central (#4302)
SPCS:UTS Utah South (#4303)
SPCS:VT Vermont (#4400)
SPCS:VAN Virginia North (#4501)
SPCS:VAS Virginia South (#4502)
SPCS:WAN Washington North (#4601)
SPCS:WAS Washington South (#4602)
SPCS:WVN West Virginia North (#4701)
SPCS:WVS West Virginia South (#4702)
SPCS:WIN Wisconsin North (#4801)
SPCS:WIC Wisconsin Central (#4802)
SPCS:WIS Wisconsin South (#4803)
SPCS:WYE Wyoming East (#4901)
SPCS:WYEC Wyoming East Central (#4902)
SPCS:WYWC Wyoming West Central (#4903)
SPCS:WYW Wyoming West (#4904)
SPCS:PRVI Puerto Rico and Virgin Islands (#5200)

River Codes

The following codes are used by Rose Point ECS to indicate positions on US waterways by mile marker:

AG Allegheny River	CW Clearwater River
AL Alabama River	EC White River
AN Algiers Canal	EK Elk River
AP Apalachicola River	EM Emory River
AT Atchafalaya River	ET Elk River
ATB Atchafalaya River, Above Berwick Lock	FB Freshwater Bayou
ATM Atchafalaya River, Morgan City to Gulf	FC Flint Creek
AY Arroyo Colorado	FN Flint River
BB Black Bayou	GB Green River
BK Berwick Bay	GE Gulf Intracoastal Waterway (GIWW) - East
BL Bayou Lafourche	GW Gulf Intracoastal Waterway (GIWW) - West
BO Bayou Segnette	HC Houston Ship Channel
BR Black River	HN Houma Navigation Canal
BS Big Sandy River	HO Holston River
BT Bayou Teche	HW Hiwassee River
BV Beaver River	IL Illinois River
BW Black Warrior River/Tombigbee River	IS Illinois Waterway (Calumet-Sag Channel)
BY Barataria Bay Waterway	IW Intracoastal Waterway (IWW) - Alternate (Port Allen Waterway)
CA Calcasieu River	KA Kanawha River
CH Chattahoochee River	KS Kaskaskia River
CI Clinch River	KY Kentucky River
CO Columbia River	LI Licking River
CU Cumberland River	

LM Lower Mississippi River
LO Locust Fork River
LT Little Tennessee River
MB Mobile River
ME Mermentau River
MF Mulberry Fork River
MG Mississippi River Gulf Outlet
MK McClellan-Kerr Arkansas River
Navigation System
MN Monongahela River
MO Missouri River
MT Minnesota River
MU Muskingum River
OB Ouachita-Black Rivers
OD Old River
OH Ohio River
PL Pass a Loutre
PM Potomac River
PR West Pearl River
PT Pocatlico River
PU Poteau River
RD Red River
RK Robert S. Kerr Reservoir
RP Rappahannock River
SC St. Croix River
SN Snake River
SP Mississippi River, South Pass
SV Savannah River
SW Mississippi River, Southwest Pass
TN Tennessee River
TP Mississippi River, Tiger Pass
TT Tennessee-Tombigbee Waterway
UM Upper Mississippi River
VR Arkansas-Verdigris River Canal
WB White River
WI Willamette River
YZ Yazoo River

What's New in Rose Point ECS 4

We think you'll find that the new version is both very different and very familiar and will help streamline your use of Rose Point ECS. One major difference is that Planning Mode and Cruise Mode have been merged into a single user interface that works great for planning as well as while underway. In fact, this new user interface looks very much like the old Cruise Mode but we've made the planning tools much easier to access than they were before.

The tabs from the old Planning Mode have been changed to sidebar buttons and a few buttons have been added. The first is Screens which lets you select and adjust up to nine custom screen layouts. The Search box has been moved to a Search panel which keeps track of past Searches and has many other new features. The Options, Configure Vessel and Electronics, Licensing and Add-Ons, Chart Portfolio and Store, and Sync window have all been combined into a new Settings panel.

Rose Point ECS has had a GPS status indicator in both Planning Mode and Cruise Mode, and the Cruise Mode version would let you select which GPS to use if you have more than one. The new user interface provides sensor status indicators for your GPS, compass, depth sounder, and other sensors, and provides more status and control when you click on the indicators.

Where did the commands go?

Here's a quick reference guide to where commands from the older menus and toolbars of Rose Point ECS wound up in the user interface of Rose Point ECS 4.0.

Main Menu and Tabs

- **New, Open..., Save, Save As..., Recent Files** These are all available in Voyage Plan > Files.
- **Print** This is available on the Chart Panel's context menu (right-click menu) as well as in the Voyage Plan and Conditions browsers (for printing routes and tide tables).
- **Planning Mode and Cruise Mode** These are no longer needed.
- **Customize Mode** (part of the Instrumentation Add-On) This is available on the Screens browser toolbar.

- **Chart Portfolio, Configure Vessel and Electronics, Options, Licensing and Add-Ons, Help and Product Support** These are all in the Settings area.
- **Exit** Use the window close button (or the Alt+F4 key).
- **Browser Tabs** All of the browser tabs are now Sidebar Buttons, except Home which is no longer needed.
- **Guide Book** This browser is now called Places.
- **Tracking** This browser is now called Vessels.
- **News and Sync** These are available in the Settings area.
- **Search** This function has been enhanced and has its own button on the sidebar. (You can still use **Ctrl+F** to access it as well.)
- **Home Toolbar** The commands for creating navigation objects are all available on the + New button on the Chart Panel.

Screen Split Options and Panel Types

The button that used to be for splitting the screen into multiple chart, video, radar, and fish-finder panels and the Cruise Mode SCREEN menu feature have been replaced by the new Screens button in the sidebar.

Clicking the Screens button shows the nine custom screens that are available. Click on one of the screens to use it, or on an undefined screen to configure that custom screen. Configured Screens each have an Edit button that can be used to change that screen's configuration.

When you are editing a screen configuration, use the + Panel button on the toolbar to add the panels you want to the screen and then drag each panel to the desired location on the screen. Use the red close button on a panel to remove that panel from the screen. When you have the screen configured the way you want it, press the Done button on the toolbar.

The 1 through 9 keys on your keyboard can be used to quickly select one of the custom Screens to be used. You might want to customize the first screen to show a single chart and the second screen to show two charts in order to get the old behavior of the 1 and 2 keys.

Task Pane

The task pane is now used only for Instrument Panels. The Property panels have moved to the Browser. You can quickly access the Boat properties using the Chart Panel Options button. The Places task pane has been removed with the Places browser. The Vessels task pane can be re-created by adding a new Instrument Panel and then adding the AIS Targets instrument to it.

Cruise Mode

RESET Button This feature is currently available only via the keyboard (quickly press spacebar three times). You can save the current screen configuration as the Reset Configuration by using the menu button on the Screens browser toolbar.

SCREEN Button This feature has been enhanced and moved to the Screens sidebar button.

NEARBY Button Now that it is easy to get to the Guide Book and Conditions browsers, and they both open showing you what's nearby, this button is no longer needed.

ROUTE Button Use the Voyage Plan browser to create new routes and activate routes for navigation. Buttons may be added to an Instrument Panel for the Next Waypoint and Reset XTE actions, or you can use the W and X keys.

Clock A clock instrument has been added that works just like the clock that was on the Cruise Mode toolbar. Now you can decide if you want a clock or not. The Daylight Mode and Brightness options have been moved to the Settings home page.