

# MaxSea Time Zero v 1.7 manual

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# MaxSea Time Zero v1.7

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## Introduction

MaxSea Time Zero is a nautical navigation software application based on the most sophisticated display technology available. MaxSea Time Zero features a full 3D operating environment with unparalleled speed of zooming, powerful tools and an intuitive easy to use interface. The 3D environment of MaxSea Time Zero combines nautical charts, 3D data, and satellite photographs that provides the best maritime navigation information and situational awareness for the navigator that has ever been achieved by a nautical navigation software application.

### Standard Features:

- Seamless electronic chart display in 2D or 3D
- Chart Orientation: North Up / Course Up / Head Up
- Unlimited Waypoints & Routes
- Loran TD support
- Active and Historic Track
- USA Tidal Current
- Worldwide Tidal Height Data
- Free Weather Service and Weather Overlay
- Navigation Logbook
- Display of AIS and ARPA Targets on the navigation chart



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## Getting Started

MaxSea Time Zero can be used in two modes. Upon starting the software choose "Home Planning" or "Navigation" mode.

### Home Planning

Choose the "Home Planning" mode when planning on shore.

In "Home Planning" mode, the vessel icon is not displayed on the chart, the alarms are disabled and routes cannot be activated. All the other functions such as creating waypoints, planning routes, or ordering and viewing weather files are available.

The Status Bar (Title Bar) appears in yellow when the "Home Planning" mode is used.

### Navigation

Choose the "Navigation" mode when the computer is physically connected to sensors and instruments. (GPS, AIS, NavNet...)

In this mode, the sensor and instrument data is displayed, alarms are enabled, and a route can be activated.

Note: The "Home Planning" and "Navigation" start-up mode are independent from the WorkSpaces (which can be used to plan a route while in the navigation mode)

### Chart Compatibility

MaxSea Time Zero is compatible with Mapmedia "MM3D" charts. Mapmedia .mm3d charts are available in Raster Chart format or in Vector Chart format. Mapmedia Raster Charts are scanned from official hydrographic office and select private sourced paper charts. Mapmedia Vector Charts are manufactured from official hydrographic office vector charts called S-57 or from privately furnished vector charts from Navionics known as "Datacore by Navionics".

Note: Navionics is one of the world's leading specialists in nautical vector charts. Mapmedia .mm3d vector charts combine the comprehensive data from Navionics, with the expertise of Mapmedia.



MaxSea Time Zero is furnished in North America with the complete NOAA library of Raster charts (RNC), S-57 Vector charts (ENC) and 3D Bathymetry in the Mapmedia .mm3D chart format. This data is provided on five DVDs, one DVD containing the Vector Charts and four DVDs containing the Raster Charts.

Additionally, free USA Satellite Photographs are downloadable from the "My MaxSea" section of <http://www.maxsea.com>. To access the "My MaxSea" section, first register your copy of MaxSea Time Zero; and then, click on the "Download" link.

1. **Note:** The Satellite Pictures can also be downloaded from the [Mapmedia Catalog](#) under the "NOAA (USA)" tab.

2. Outside of North America, Mapmedia offers a complete range of nautical charts for purchase.

### Each .mm3d Charts Pack includes:

- *Raster* or *vector* charts
- 3D Data
- Satellite Pictures

[Read more and get the latest Mapmedia data updates on MaxSea Time Zero Web site](#)

## Installing Charts

Chart DVD(s) are provided with MaxSea Time Zero or when a Chart Pack is ordered. Mapmedia .mm3 charts and data can also be downloaded online from the [Mapmedia Catalog](#).

**Note:** MaxSea Time Zero needs to be installed and correctly activated on the computer prior to installing charts

### Charts Installation from DVD(s):

1. Insert the first "Chart" DVD into the computer's DVD drive.  
If MaxSea does not start automatically, use Microsoft Windows Explorer to browse to the file "ClickMeToInstall.mm3d" on the DVD and double-click on it.
2. If the Charts need to be activated, MaxSea will prompt you to enter a 22 digits Unlock Code beginning with "UC".  
The Unlock Code for the Charts can be retrieved online at <http://www.maxsea.com> under the "My Products" section of "My MaxSea" or by contacting the Technical Support.
3. The charts are then copied automatically from the DVD to the correct location on the computer's Hard Drive.
4. Repeat the same process with every DVD provided

1. Note: If the computer is connected to the Internet, the chart activation code is automatically loaded for the charts upon installation.

### Charts Installation from file(s) downloaded on-line:

Every Chart Pack can be downloaded online from the [Mapmedia Catalog](#). The Charts consist of multiple files that are downloaded individually. Chart and data files are stored as .zip files. The file shave to be unzipped or extracted prior to installation. To unzip, right click on the file and select "Extract Here..."; usually to the computer's Desktop

#### Explanation of file extensions:

- File ending with a ".dbv" extension are Vector type charts
- File ending with a ".dbr" extension are Raster type charts
- File ending with a ".dbb" extension are Fishing type charts
- File ending with a ".dba" extension are Satellite Pictures
- File ending with a ".dbt" extension are 3D files

#### To install charts from a file:

1. Double click on the file. MaxSea Time Zero opens automatically
2. If the Charts requires an Unlock Code, MaxSea will ask you to enter a 22 digits Unlock Code beginning with "UC".

The Unlock Code for the Charts can be retrieved online at <http://www.maxsea.com> under the "My Products" section of "My MaxSea" or by contacting the Technical Support.

3. The charts will be copied automatically to the correct location on your Hard Drive.
4. Repeat the same process with every files that were downloaded (and Unzipped)

1. Note: Once the installation is complete, you can erase the original files to free up space on your Hard Drive

MaxSea Time Zero can utilize information from many different instruments on your boat. A GPS will be the most common type of instrument, but depth sounders, speed sensors, wind vanes, and AIS receiver can supply information to MaxSea Time Zero.


These instruments can be connected to the PC through an NMEA0183 interface, through the network (if a Furuno NavNet MFD/sensor is used) or through USB (for Garmin GPS).

## Connection Overview


MaxSea can be connected to instruments using the following methods:

- Serial port: 

In most cases, connecting a GPS to a computer is straightforward, and is accomplished by simply connecting the serial cable supplied by the GPS manufacturer to the serial port on the PC. The serial port is a nine-pin male port on the back of the computer often identified by an IO or COM symbol.

- Serial-to-USB adapter: 

Newer computers – especially notebooks – may not include a serial port. One can be added by using a serial-to-USB adapter, which can be obtained from most MaxSea resellers or computer stores. A Serial-to-USB adapter will create a "virtual COM port" on your computer that can be viewed in the "COM and Ports" section of the Device Manager.

- Active GPS antenna: 

Active USB or Bluetooth GPS antenna are an easy way to provide MaxSea with the vessel's position. To be recognized by MaxSea make sure the driver of the GPS antenna creates a virtual COM port. MaxSea Time Zero is also compatible with the proprietary Garmin USB format.

- Ethernet:

If the boat is equipped with a NavNet series Furuno Chart Plotter (NavNet1, NavNetVx2, NavNet3D) or AIS (FA30 AIS, FA50 AIS), your computer can be connected to the NavNet network using a standard Ethernet Cable.

Assign a fixed IP address to the computer connected to the NavNet network such as 172.31.3.50 with a subnet mask of 255.255.0.0.

## Automatic Instrument Configuration

MaxSea Time Zero can automatically locate most sensors and instruments connected to the computer. To use this feature, start MaxSea in "Navigation" mode to enable sensor and instrument connections. Next, launch the Automatic Configuration Wizard:



- Click on the MaxSea Button located on the top left of the screen:
- Click on "Connection Wizard"
- Select the "Automatic Ports Configuration"; and then, click "Next".
- Follow the on screen instructions

To manually select the correct port and configuration or to setup a Pilot , refer to the "Connection Wizard" paragraph.

Note: The Connection Wizard option will not appear in "Home Planning" mode or if the computer is connected to NavNet3D (in which case the configuration is done directly from the Installation Wizard of the NavNet3D)

## User Interface



1. **MaxSea Button:** Click on this button to access the Menus and Options of MaxSea Time Zero.
2. **Status Bar:** This area provides access to the "Undo/Redo" functions and displays the general status of the software; Gray for regular Navigation Mode, Yellow when MaxSea is running in Home Planning mode, and Red when an Alarm is active. The minimize button (minus sign) is on the far right of the Status Bar.
3. **Ribbons:** The Ribbons display a series of buttons according to the selected window and WorkSpace. When a button has a little yellow down arrow (on the bottom right) you can right click on it to access sub-categories.
4. **NavData:** The NavData displays the data received from external instruments such as the GPS, wind sensor, depth sounder etc... It also displays the cursor position and the range and bearing of the cursor from the vessel icon. Route information including Course to Steer, Range to Waypoint, ETA and other graphic data can also be displayed.
5. **Compass:** The Compass displays the orientation of the top of the screen in relation to North.
6. **Ship Icon:** The Ship Icon displays the vessel's position and course from the connected GPS data. When an Heading Sensor such as a fluxgate compass is also connected, the heading data is used to orient the Ship Icon.
7. **Scale and Range:** This displays Scale and Range of the chart. When the chart display is *Overzoomed*, the scale is displayed in red.



8. **Customize:** This button displays the configuration window providing for the addition or removal of icons for the ToolBar and Ribbons. The configuration is independent for each Workspace.

9. **ToolBar:** The ToolBar groups all the tools that can be used with the current Workspace. Once a Tool is selected, an action with the cursor on the chart is required such as creating a Waypoint, for example. The first button of the ToolBar centers the display on the vessel icon on the chart display.

## Full screen

When the mouse or keyboard is not touched for a period of time, MaxSea Time Zero automatically activates the full screen mode. The ToolBar and WorkSpaces are automatically hidden and will appear again as soon as mouse is moved or a key pressed the keyboard. This feature is setup from the General Options menu.



**Normal Display**



**Full screen Display**

## WorkSpaces

MaxSea Time Zero is designed to perform multiple navigation tasks. These tasks include planning a voyage, navigating to that plan, downloading weather information, viewing and controlling the NavNet3D Radar (MaxSea Time Zero Explorer only). These activities require different tools, so MaxSea Time Zero has introduced the concept of "WorkSpaces". The WorkSpaces help to simplify the User Interface by only showing the tools that are required for a specific task at a specific moment.

To change Workspace, click on the corresponding tab under the Status Bar.

Note: The WorkSpaces configuration varies according to the product configuration, the module available, and sensors connected.

1. **Navigation Workspace:** The Navigation Workspace is selected by default when MaxSea Time Zero is started in "Navigation" mode. This Workspace intentionally has limited functionality available to simplify operation while underway. To access more advanced planning functions such as animation, for example, select the Planning Workspace.
2. **Planning Workspace:** The Planning Workspace is selected by default when MaxSea Time Zero is started in "Home Planning" mode. This Workspace provides for the planning of routes, the display of weather forecast, animations of tidal height and currents and certain weather patterns. The Planning Workspace also is used to launch the weather routing if the module is enabled.

3. **Dual Nav WorkSpace:** The Dual Navigation WorkSpace allows you to display two Plotter windows side by side. Each Plotter window can be managed independently. For example, one Plotter could be set up in 3D with Satellite Pictures while the second Plotter could display a more traditional 2D view. The Dual Navigation WorkSpace shares the same configuration settings as the Navigation WorkSpace.
4. **Update WorkSpace:** The Update Workspace is dedicated to requesting and downloading Weather Forecast. This WorkSpace has an "Update Area" tool in the ToolBar that allows the definition of the Weather Forecast area. The "Weather Update" button located in the Ribbons allows retrieval of the updated file.

### **If MaxSea Time Zero Explorer is connected to a NavNet3D Radar system two additional WorkSpaces will be available**

1. **Radar:** The Radar WorkSpace allows the display and control of a NavNet3D Radar. This WorkSpace provides all the Radar tools and Controls such as Gain, Sea Clutter and Rain Clutter.
2. **Nav & Radar:** The Navigation & Radar WorkSpace allows to display a Radar and Plotter screen side-by-side. The tools available vary according to whether the Radar or Plotter window is selected).



Tips: The ToolBar and Ribbons can be customized to individual preferences. Click on this button available in the ToolBar and Ribbons to display the Configuration Windows.

## Working with Charts

Thanks to Time Zero, MaxSea offers a new ultra fast cartographic engine with unparalleled seamlessness and speed of zooming. MaxSea Time Zero will always select the best charts as you scroll around and zoom in and out. Because scrolling and zooming are so important, MaxSea Time Zero provides you with several ways of doing them both using the mouse or keyboard.

### Scrolling the Charts



#### Panning Tool

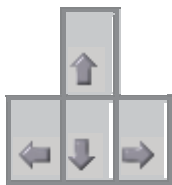
Left click on the Panning tool (hand) located on the ToolBar and move the cursor over the chart to the center of the screen.

- Press and hold the left mouse button while moving the cursor to scroll or drag the chart around
- Double-click with the hand tool on a chart point to center automatically on that point

**Note:** The panning tool is automatically selected by default after every action. This feature can be disabled from the "General" menu.

#### Using the keyboard

The Arrow Keys on the keyboard can also be used to scroll the chart. Holding down an Arrow Key moves the displayed chart area in the direction of the arrow.



**Note:** This method allows retention of the Full Screen mode while scrolling the chart.

### Zooming the Charts

MaxSea Time Zero allows you to seamlessly zoom in or out to the exact magnification level you like without steps or limitations.

#### Using the mouse Scroll Wheel

If the mouse has a wheel, roll the wheel up and down to zoom in and out. By default, the chart will be zoomed at the location of the cursor. This can be changed to the center of the screen by enabling this option in the General Menu.

**Note:** This method is recommended to change chart scale without having to change the active tool.



## Using Zoom tools

If the mouse does not have a wheel, use the Zoom tool:

- Left click to Zoom In on cursor position.
- Right Click to Zoom Out on cursor position

For touch screens (that don't have right click mouse compatibility) the reverse Zoom tool can be used:

- Left click to Zoom Out on cursor position.
- Right Click to Zoom In on cursor position

**Note:** The reverse Zoom tool is hidden by default. Click on the Configure button to add it to the configuration

## Using the keyboard

Use the Page Up or Page Down key to zoom in or out.

- **"Page up"** ↑ = Zoom In on the center of the chart
- **"Page Down"** ↓ = Zoom Out on the center of the chart

**Note:** This method allows retention of the Full Screen mode while zooming.

## Scale value

The Scale and Range of the chart is displayed on the bottom left of your screen. When the chart display is *Overzoomed*, the scale is written in red.

## 2D & 3D Chart Orientation

MaxSea Time Zero operates in a fully rendered 3D environment. You can switch from the traditional 2D view to the impressive 3D perspective at the click of a mouse for a true perspective and wider area of view around the ship.

## 2D Chart Orientation

In 2D mode, the chart can be displayed in North Up or in Head Up.

Change the 2D chart orientation by using the 2D button available in the Ribbon. A simple left click on the 2D button will cycle the various modes (North Up and Head Up) while a right click on the button will allow you to directly pick and choose a mode.



2D North Up

This mode displays the North at the top of the screen.



2D Head Up

This mode orients the bow of the vessel to the top of the screen. The chart rotates as the vessel's bow is always pointed toward the top of the screen.

Note: The Head Up mode is only available in Navigation Mode (when a valid Heading or Course over Ground data is received)

In Head up mode, pay close attention to the Compass icon (on the bottom right). It provides information about the direction of the North.



## 3D Chart Orientation

In 3D, the chart can be displayed in North up, Head Up or "Unlimited View".

Change the 3D chart orientation by using the 3D button available in the Ribbon. A simple left click on the 3D button will cycle the various modes while a right click on the button will allow you to directly pick and choose a mode.



- 3D North Up: In this mode, the azimuth is fixed pointing toward the North. The pitch or inclination is adjusted by holding the middle click button and moving the mouse. If the mouse does not have a middle button, press and hold the Shift key of the keyboard while moving the cursor.



- 3D Head up: In this mode, the azimuth is fixed pointing along the current Heading. The pitch or inclination is adjusted by holding the middle click button and moving the mouse. If the mouse does not have a middle button, press and hold the Shift key of the keyboard while moving the cursor. Note that this mode is only available in Navigation Mode (valid Heading or Course over Ground data required)



- 3D Unlimited: In this mode, the azimuth and pitch can be freely adjusted by holding the middle click button and moving the mouse. If the mouse does not have a middle button, press and hold the Shift key of the keyboard while moving the cursor.




**Note:** 2D and 3D mode will cancel each other (exclusive)


**i** To enable the Bathymetry view in 3D, the Depth Shading must be turned ON. Please refer to [Selecting Chart Types](#).

## Selecting Chart Types and Overlays

MaxSea's Time Zero powerful graphics engine adds new chart presentation options to the conventional method of electronic chart plotting. MaxSea Time Zero can display vector, raster or fishing charts and merge them with satellite pictures and depth shading. With 3D charts and our new Satellite PhotoFusion, satellite imagery blends with critical chart data in an easy to understand, useful way that greatly enhances situation awareness. These new presentation options aid identifying the exact position of the vessel while navigating near land, together with information about the surrounding area.

### Charts:


 <p><i>Vector</i> Charts</p>	<p>Click on this button to display <i>Vector</i> Charts.</p>
 <p><i>Raster</i> Charts</p>	<p>Click on this button to display <i>Raster</i> Charts.</p>
 <p><i>Fishing</i> Charts</p>	<p>Click on this button to display <i>Fishing</i> Charts. Note that the Fishing Charts Button is hidden by default. Click on the Configure button to add it to the WorkSpace configuration.</p>

 When the "Chart Boundaries" option is selected from the Plotter Display menu, **Purple boundaries** outlines are displayed where chart detail is available.


### Satellite Pictures:

Satellite pictures can now be fused with raster or vector charts by a method called PhotoFusion. Land areas are completely opaque, so that these areas are displayed as high-resolution satellite photos on the chart. As the depth increases, the satellite photography becomes more transparent so that the shallows are displayed along with the chart information. As the deeper water begins, the photograph disappears leaving the raster or vector chart.

High-resolution satellite photography aids in seabed classification enabling easier identification of sand, rock, coral or other obstructions.

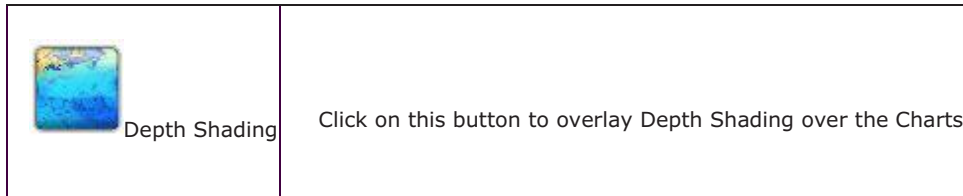
 <p>Sat Photo</p>	<p>Click on this button to overlay Satellite pictures over the Charts.</p>
--	--

Note: PhotoFusion is only displayed where 3D Bathymetry data is available. If no 3D data is available for a particular area, the Satellite pictures can be manually adjusted from the Plotter Display menu.


 When the "Chart Boundaries" option is selected from the Plotter Display menu, **Green boundaries** outlines are displayed where Satellite picture is available

### Depth Shading:

A depth color scale can be applied on vector, raster or fishing charts. This unique feature allows you to view water depths at-a-glance with vibrant colors. The transparency levels can be adjusted from the Plotter Display menu so that the chart data is visible beneath the color shading. By default the color scale is set automatically but you can manually adjust it (set a specific range) from the Plotter Display menu.



The Depth Shading is only available where 3D Bathymetry data is available.

 To enable the Bathymetry view in 3D, the Depth Shading must be turned ON

## Adjusting Vector Charts Display

Unlike Raster charts, Vector charts can provide control over the level of displayed information. Vector charts are made up of individual objects and data layers such as navigations aids, spot soundings and land features that can be displayed or hidden. These adjustments are made from the Vector Charts Option menu.

The **S52 Vector Chart Display Mode** provides quick access to five different levels of detail for vector charts.

- "base" shows the minimum set of objects necessary for planning
- "standard" adds other objects that are necessary for safe navigation
- "Other"
- "Fishing"
- "Custom" uses the settings defined under the **S-52 Custom** menu

The Shallow/Safety/Deep contour parameters are used to color the various depth area of the Charts.

The **Chart Color Palette** parameter allow you to change the colors (or "theme") of the Charts.



## Route & Waypoints

### Overview

A *route* is a travel from a spot (1) to another spot (2), and is composed of series of route points or waypoints.

When you are on the route, it is in **ACTIVE ROUTE** mode. The navigation calculation according to the received data is automatically activated and displayed in the **NavData** palette.

You can simultaneously work on a route and follow your navigation on the active route. All routes recorded are displayed by default.

You have different ways to create and plan your routes according to your needs.

This Chapter and the following ones **Create a Route** and **Active Route** explain briefly how to create a route thanks to different tools and how to activate a route.

- [Show/Hide routes & waypoints](#)
- Waypoints & Routes tools
- [Create Waypoints](#)
- [Create a Route](#)
- [Waypoints List](#)
- [Route List](#)

### Waypoint and Route tools

**MaxSea Time Zero includes several tools to add routes and waypoints:**



**Waypoint** tool: to create a Waypoint or Mark on the chart.



**Route** tool: to build a planning route on the chart.



**Go To** tool: to create an quick active Waypoint by clicking anywhere on the chart. This tool can also be used to activate a planning route by clicking on it.

Note: MaxSea Time Zero allows for the creation of an unlimited number of routes, but only one route can be activated at a time. An active route displays in red and has a special priority in the navigation system. When a route is activated, the first Waypoint also becomes active and is surrounded in yellow.

## Show/Hide Routes and Waypoints

Waypoints and Routes can be hidden or displayed using the corresponding layer buttons located in the ribbon. Please note that these buttons are hidden by default. To display these buttons in the ribbon, click on the "Configure" button; and then, add them to the list of available buttons.



Click to show or hide all waypoints



Click to show or hide all planning routes. Note that the Active Route will always be displayed.

Note: When the Routes or Waypoints are hidden, they are automatically displayed when a Waypoint or Route is created.

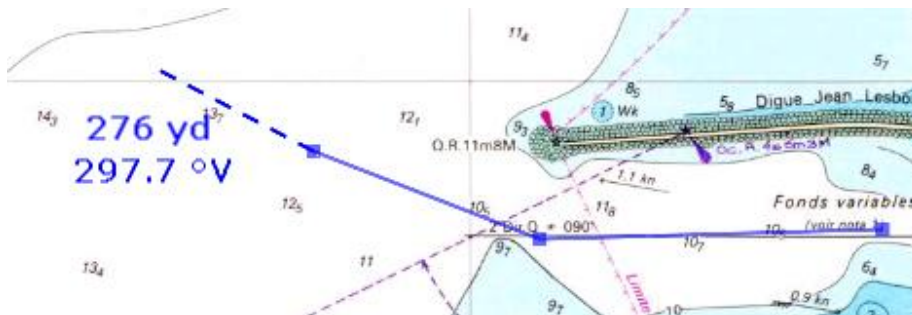
## Creating a route

To create a new planning **route**:



1. Click on the Route Tool located in the *ToolBar*
2. Place the cursor at the starting point and click on the chart; This sets the location of the first RoutePoint
3. Move the cursor to the next desired destination and click on the chart. Continue with this procedure to add additional RoutePoint
4. When all of the desired RoutePoints are added, right click to create the last RoutePoint and choose "End Route" or press the Esc key on the Keyboard. Alternatively, double click at the creation of the last RoutePoint.

While in route creation mode, the mouse cursor will display a small plus sign to indicate that a RoutePoint will be added when the mouse is clicked. After the creation of the first RoutePoint, a dashed line will be drawn between the last RoutePoint and the cursor. This line represents the leg-line that is about to be created. In addition, the distance and bearing of the leg-line from the previous RoutePoint is also displayed near the mouse cursor.



While creating a route the chart will moves automatically to follow the route. To move the chart manually, move the cursor to the edge of the screen where you want the chart to scroll to. The arrow keys on the keyboard can also be used to scroll the chart while building a route.

When clicking on an existing Waypoint or Mark while creating a route, the route will use that Waypoint or Mark instead of creating a new RoutePoint sharing it with any other routes that might be using it, too. Moving, deleting, and changing a shared Waypoint or Mark will affect all of the routes that share it.

## Great Circle Route:

MaxSea Time Zero is capable of displaying great circle or rhumb line routes. The great-circle route is the shortest path between two points on a sphere, like the Earth. A rhumb line route crosses all meridians of longitude at the same angle. Since the charts displayed by MaxSea Time Zero are Mercator projections, rhumb line routes appear as straight lines and great-circle routes appear as curved lines.

When the "Great Circle" option is enabled, MaxSea Time Zero divides the route into shorter rhumb line segments that follow the great circle path. You can adjust in the General menu the minimal distance at which MaxSea will start to divide the route into shorter rhumb line segments. The length of the segments themselves is fixed at 150 NM.

## Route Detail

The Route Detail displays the selected planning route in a tabular format together with information about the route as a whole. The Route Detail can also be used to calculate an ETA for each RoutePoint along the route.

**Note that the Route Detail is only available in the Planning WorkSpace.**

### Open the Route Detail

To open the Route Detail, select the Planning WorkSpace, right click on a leg-line of the route you want to see and then select "Show Route Detail".

Double-clicking on any leg-line of the route will also display the detail.

Note: If the lists are already open, click on the "Route Detail" button on the left panel to display it.

### Close the Route Detail

To close the Route Detail, Click the **X** button on the right side of the top of the route detail list or click on the Lists button located in the Ribbon.

### Using Route Detail

The top part of the Route Detail displays information about time of departure and ETA (Estimated Time of Arrival). The time of departure can be selected as the present time or another selected date. When a time of departure is selected, MaxSea will calculate the ETA according to the parameters available in the table (speed, current,...).

MaxSea Time Zero also allows a date of arrival instead of date of departure to be set. This is useful when you need to arrive at a specific time (because of tidal currents for example). In this case, MaxSea Time Zero will calculate the time of departure.

The information appearing in Bold in the table can be edited by double clicking on the cell to be edited. After changing the value, press the Enter key, or click outside the value to accept the new value, or press the Esc key to cancel the change.

Values that can be changed include: the Waypoint name, the intended speed and the routing option (only available with the Sailing Routing module). The other values are calculated by MaxSea Time Zero, so cannot be changed directly.

1. Leg To: Sequence number of the RoutePoint
2. Name: Name of the RoutePoint or Waypoint
3. COG: Bearing to the Waypoint
4. SOG: Speed over Ground being calculated

5. Speed: Intended speed of the boat (can be edited individually for each leg)
6. Distance: The distance of the leg
7. Total: The total distance so far
8. Routing: The constraint that will be use when performing a Weather Routing over the route (only available with the Sailing Routing module)
9. TTG: The time to navigate on the leg
10. Total TTG: The total time to navigate so far
11. Current D: Current direction when the information is available (from weather or tidal current)
12. Current S: Current speed when the information is available (from weather or tidal current)
13. Position: The position of the RoutePoint
14. ETA: The Estimated Date of Arrival to that RoutePoint
15. Heading: The Heading being calculated according to current information

The Route Detail Option menu provides quick access to main functions and parameters. It can be found on the left side panel under the Route Detail button. It includes the following options:

1. Activate Route: To activate the planning route and start navigating Note that this option is not available when MaxSea is started in Home Planning mode
2. Reverse Route: To reverse the direction of the planning route.
3. Set Speed of all legs: To adjust the intended speed for all the legs of the planning route.
4. Configure List: To add or remove columns of the Route Detail table

#### Tips:

- Double click on a non-editable cell to center the chart on the selected RoutePoint.
- When a line of the Route Detail table is selected, the virtual time will change to match the ETA at the selected RoutePoint and a virtual boat (blue icon) will appear. This function is very useful when Weather Data or Tidal information is displayed because they will automatically adjust to the predicted time.

**Note:** When the Route is activated, the line corresponding to the active Waypoint becomes red and waypoints that were passed become gray.

## Navigating a Route

### Activating a Route

Once a route is created and checked for obstacles and other hazards, the route can be activated for navigation. This section describes the process and tools MaxSea Time Zero provides to do this.

**Note:** MaxSea Time Zero needs to be started in "Navigation" mode with a valid GPS fix for the route activation to be available.

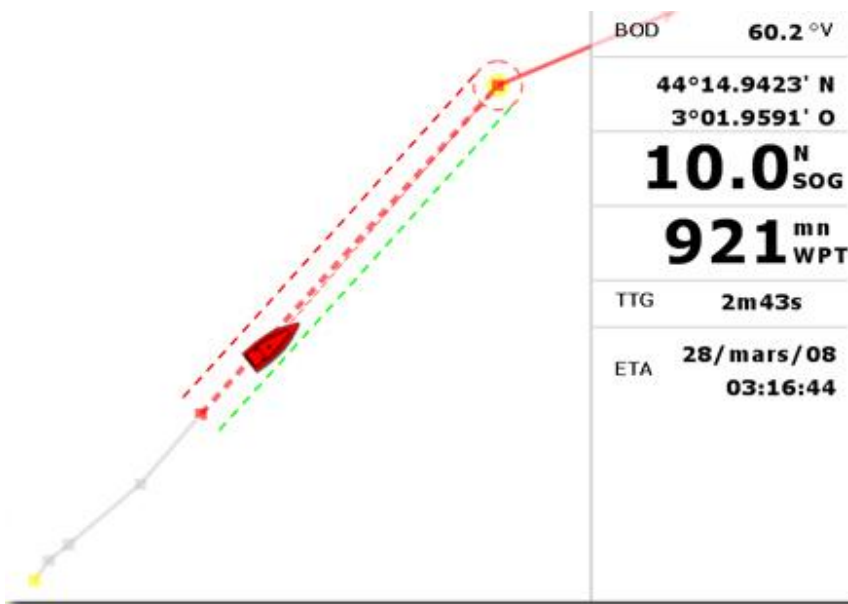
First, select the "Navigation" workspace. Right click on the desired route to navigate; then choose "Activate Route". A route can also be activated by right clicking on a RoutePoint and choosing "Activate Route from this Point". This automatically skips all previous RoutePoints from activation.



The "Go To" tool may also be used to activate a specific route:

Select this tool from the ToolBar and click on the route to activate for navigation. If a RoutePoint is clicked on, this will activate the route from this point and automatically skips all the previous Waypoints.

### When a Route is activated:




- The Active Route is displayed in red
- The Active Leg is drawn with dashed lines
- The *Active Waypoint* is surrounded in yellow
- When the "Display *XTE* Alarm lines" option is checked from the "Waypoints and Route menu", the Cross Track Limit Area appears delimited with two colored dashed lines: green on the starboard of the Ship icon, red on the port of the Ship icon. This value can be adjusted from the "Alarm" menu ("XTE Alarm Value").
- The Active Route information such as *Bearing*, distance to next Waypoint, ETA, etc ... are displayed in the NavData.
- The Waypoint Arrival Circle is drawn with a red dashed line.
- The Active Waypoint Distance and Bearing information are transmitted to the Pilot, if connected.

If the vessel is off course, the next Waypoint can be activated by right clicking on the active Waypoint and choosing "Skip" from the drop down menu.

If the cross-track-error gets large enough to start causing alerts, right click on the route or on the boat and choose "Restart", to realign the intended course and head directly to the active Waypoint without reverting to the original course. MaxSea Time Zero then resets the intended track from the current location to the active Waypoint.

## Quick Go To (Instant Active Waypoint)

### To create a quick Go To Waypoint:

- Select the **Go To** tool 
- Click on the chart or on an existing *Waypoint*

This will create an Instant Active Waypoint for navigation.

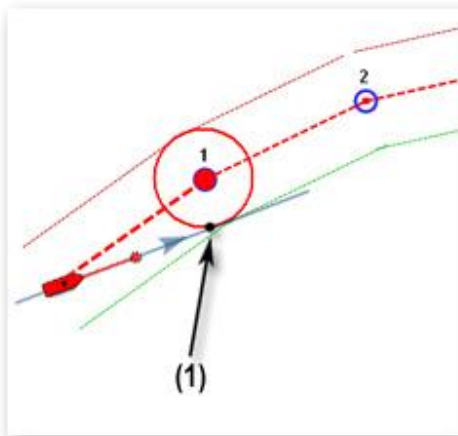
**Tips :** An Instant Active Waypoint can also be created by a right clicking anywhere on the chart and selecting the GoTo option from the drop down menu.

**Note:** Any Instant Active Waypoint created with the Go To tool will be erased when the Active Route is canceled. To save the destination drop a Waypoint using the Waypoint Tool onto the Active Instant Waypoint.

## Waypoint Switching Mode

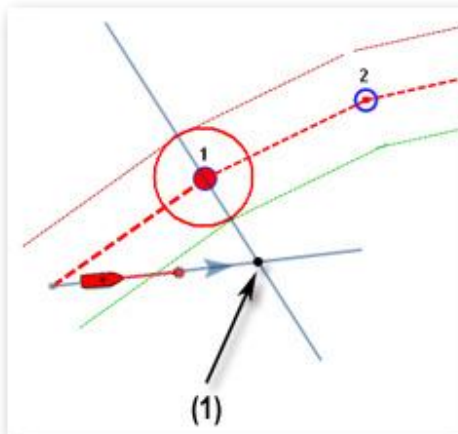
Upon arrival at a Waypoint, an audible alarm is sound if enabled, the bearing to the next to the next Waypoint is displayed. Waypoint arrival parameters are determined by the "Waypoint Switching Mode" selected:

### CIRCLE:



In this mode, the next Waypoint is automatically switched when your boat icon enters the active Waypoint's arrival circle.

### CROSS LINE:



In this mode, the next Waypoint is automatically switched when your boat crosses the line through the Waypoint that is perpendicular to the leg line.

### **CIRCLE AND CROSS LINE :**

This is the default selection. In this mode, the next Waypoint is automatically switched when the boat enters the active Waypoint's arrival circle or crosses the line through the Waypoint that is perpendicular to the leg line.

The "Waypoint Switching Mode" parameters are changed from the "Routes and Waypoints" menu.

Note: Upon arrival at the last Waypoint of the route, it will deactivate automatically.

## **Cancelling the Active Route**

To deactivate or stop the navigation on an Active Route, either:

- Double click on the **GOTO** tool
- Right Click on the Route and Choose "Cancel Route"


When a Route is deactivated, it reverts to a Planning Route.

Note: Upon arrival at the end of the route, it is automatically deactivated.

## **Manipulating Route**

Most of the advanced route editing operations can be performed by right clicking directly on any leg of a route and selecting the appropriate option from the drop-down menu. To move a RoutePoint or Waypoint place the cursor on top of it, then click and drag the Waypoint to the new location.

MaxSea Time Zero offers a very powerful unlimited Undo/Redo function. Every editing operation can be Undone

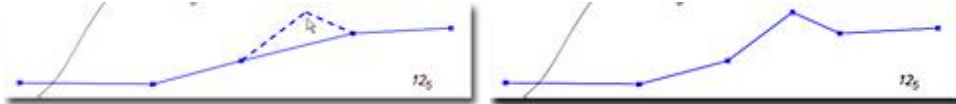
or Redone multiple times by clicking the arrows in the status bar: . The corresponding keyboard shortcuts (CTRL-Z, CTRL-Y) can also be used.

### **Extend a Route**

To add RoutePoints to the end of the route, Right Click on any leg of the route and choose "Extend Route". MaxSea Time Zero will automatically center the display on the last Waypoint and enter into Route Building mode.

## Insert RoutePoint

To insert a new RoutePoint in the middle of a route, to avoid an obstacle, for example, Right Click on any leg of the route and choose "Insert RoutePoint". Move the cursor to the new position desired to insert the RoutePoint, and then, left click.



## Reverse Route

To reverse the direction of a route, click on any leg of the route, and then, choose "Reverse Route".

## Delete Route

To delete a Route, Right Click on any leg of the route and choose "Delete Route".

Note: An Active Route cannot be deleted; it must be deactivated first.

## Split Route

To split a route into two parts, Right Click on any leg of the route; and then, choose "Split Route". This will turn the route into two routes by removing the leg-line that was right clicked on.

## Route List

All Routes are displayed in the Routes List.



To access click on the "Lists" button in the Planning Workspace.

The lists window appears at the bottom of the screen.

Click on the "Route List" button on the left Panel to display the routes list.

Click on a line to select the route and center it on the screen.

A double-click a line will display the [Route Detail](#) of the corresponding Route

The information displayed in the table can be customized by clicking on "Configure List" under the "Route List" button on the left panel.

## Creating Waypoints

Waypoints are used to mark specific locations such as fishing spots, harbors or preferred anchorages. All Waypoints are displayed in the Waypoints List. Waypoints can be created graphically by placing the cursor at the desired location on the chart and clicking the left mouse button or manually by entering the Latitude/Longitude.

Note: RoutePoints (Waypoints created using the Route Building tool) will not appear in the Waypoint List. Only the Waypoints created with the Waypoint Tool will. The RoutePoint list is available in the [Route Detail](#) table when the corresponding route is selected.

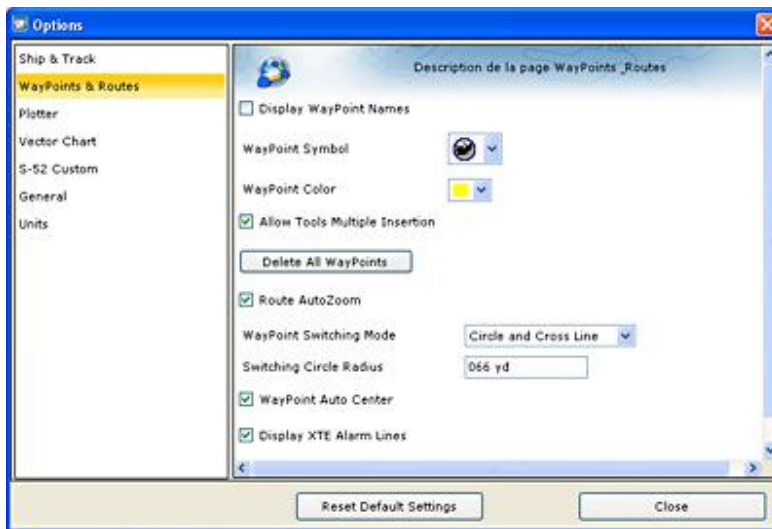
### Creating Waypoints graphically :



Click on the Waypoint Tool located in the ToolBar and click on the Chart to drop a Waypoint.

You can also right click anywhere on the Chart and choose "Create Waypoint".

The default icon and color defined in the "Waypoints and Routes" menu will be used.



To modify the icon and color, double click on the Waypoint or right click and choose "Waypoint Properties" to open the Waypoints & Routes options menu.

Note: by default, MaxSea Time Zero will automatically select the Panning Tool (Hand) when a Waypoint is dropped using the Waypoint Tool. To add several Waypoints without having to select the Waypoint Tool each time, deselect "Enable Auto Hand Tool Selection" in the "General" menu. When in this mode and finished creating Waypoints, the Panning Tool must then be manually selected.

### Creating Waypoints Manually:

To create a Waypoint by entering the Latitude/Longitude, double click on the Waypoint Tool located in the ToolBar. This will display a window to enter the Latitude/Longitude numerically.

A Waypoint may also be created by right clicking anywhere on the Chart and choose "Create Waypoint by Lat/Long".

Note: If the Position Unit is set to "Loran-C" (in the "Units" menu), you will be able to enter Waypoints by TDs.

## Waypoint List

All Waypoints created with the Waypoint Tool or manually are displayed in the Waypoint List.

Iker Word



Click on the "Lists" button in the Planning Workspace.

The lists window appears at the bottom of the screen.

Click on the "Waypoints" button on the left Panel to display the Waypoints list.

A simple-click on a line will select the Waypoint and center it on the screen.

The information displayed in the table can be customized by clicking on "Configure List" under the "Waypoints" button on the left panel.

Note: RoutePoints (Waypoints created using the Route Building tool) will not appear in the Waypoint List. Only the Waypoints created with the Waypoint Tool will. The RoutePoint list is available in the [Route Detail](#) table when the corresponding route is selected.

## Importing & Exporting Waypoint and Route

The "Import/Export" option available under the MaxSea Button will allow you to Import or Export navigation objects to a file.

MaxSea Time Zero can Export or Import information in various formats:

- GPX (GPS eXchange Format) is an XML format designed for describing GPS data between software applications. This is the native format used by MaxSea Time Zero
- KML or Keyhole Markup Language is an XML-based language format for expressing geographic annotation and visualization on existing or future Web application such as Google Earth
- CSV or Comma separated values is a text format structured in a table of lists form. The CSV format used by MaxSea Time Zero was designed to be directly compatible with NavNet3D

Note: Only the GPX format will transfer Data with complete integrity. When other formats are used, some information might be lost during the transfer.

To Import or Export data, click on the **MaxSea menu button**



the **Import/Export** option



## Ship & Track

### Ship Icon

When MaxSea is started in Navigation mode and is receiving a valid position from a GPS or other sensor, MaxSea Time Zero displays a boat icon on the chart, as in the example below:



The icon in red represents the boat and indicates its position and heading, or course if the heading data is unavailable.

Note: If the position source is lost the Ship icon is displayed in black at the last known position value and the GPS alarm is triggered.

### Size of the Icon

The size of the icon can be selected from the "General" menu ("Size of Static Icon").

When sufficiently zoomed in on the chart, the ship icon will be displayed in a size according to the scale of the chart and the "Boat Length" parameter.

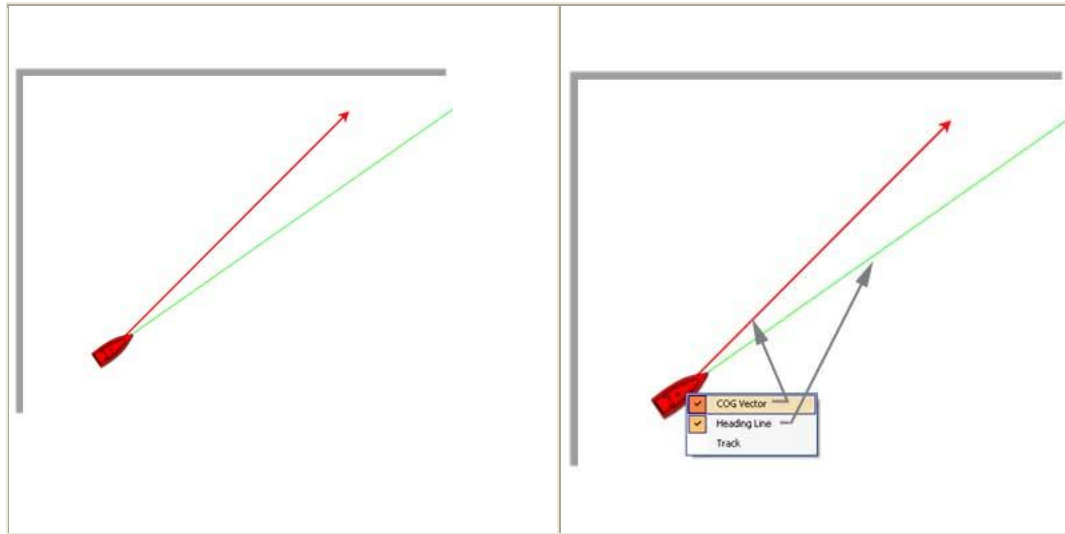
When the Plotter is displayed in 3D, a 3D model of the vessel icon is displayed. This can be customized from the same menu ("Boat Icon").

### Course & heading Vector

The Heading and/or Course vector can be displayed. To do so, right click on the Ship Icon and enable or disable the corresponding option.

The COG vector is calculated by the GPS and indicates the direction of movement relative to a ground position. The length of the COG vector varies according to the speed of the boat and can be configured to show the predicted position in a specified amount of time. This setting is available in the "Ship and Track" menu.

The Heading Line is sent by a Gyrocompass, a Satellite or other Electronic Compass and shows the direction of the bow of boat.

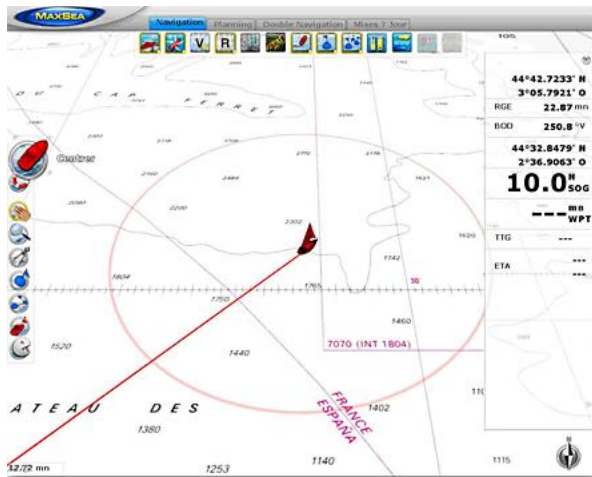


## Centering on the Boat



Clicking on the first button of the ToolBar allows you to center the boat on your screen:

## Relative Motion Circle



When your boat is on the screen and the chart is scrolled or zoomed, a red circle appears in the middle of the screen. This is the "Relative Motion Circle", a new and intuitive way to control the Relative/True motion as well as the Shift and Look ahead mode.

When the Ship icon is inside the Relative Motion Circle, the chart will scroll on the screen and the Ship icon will always stay at the same relative position inside the circle (Relative motion mode). When the Ship icon is outside the Relative Motion Circle, the screen will not scroll (True motion mode).

To shift the position of the relative motion mode, scroll the charts using the Panning Tool or the Keyboard arrows until the Ship icon is at the desired location on the screen, making sure to keep the Ship icon inside the Relative Motion Circle.

## Track

MaxSea Time Zero introduces a new innovative way to manage your tracks. The track of your boat is always recorded in the background (you don't need to turn the track recording ON or OFF anymore).

To avoid cluttering the screen, MaxSea offers two different ways to access or filter the track data.

### Active Track

The "Active Track" is a line that is displayed behind the boat indicating the actual track of the vessel through the water. The track is displayed or hidden by clicking on the "Track" button located in the Ribbon:



The Active Track parameters (color, thickness) and duration (amount of track you want to have displayed behind your boat) is available in the "Ship and Track" menu.

The Active Track is very useful for short trip when you want to follow your track back to return to your point of origin.

Note that you can convert your track into an Active Route (that will give you ETA and will be able to steer the Pilot) by right clicking on the Track and choosing "Trackback"

### Historic Track

The "Historic Track" is a powerful feature that enables the display of any track at a specified date and time. To display a Historic Track, right click on the "Track" button located in the Ribbon and choose the Calendar. This will open a dialog box prompting for the following parameters:

- Time and Date: Select the desired time and date to see the Historic Track around
- Historic Track Start: Select the time for the Historic Track to start. Note this time is relative from the date and time selected above
- Historic Track End: Select the desired time for the Historic Track to end. Note this time is relative from the date and time selected above

After clicking "OK", the Historic Track is displayed on the chart in the same color and thickness as the Active Track.

Right click on the Historic Track to convert it into a route.

The Historic Track is very useful to recall a specific passage of a trip. If used with the logbook, the Historic Track can be displayed with the logbook events by opening and selecting the logbook table.

Note: To reset the track database, click on "Reset Active and Historic Track" from the "Ship and Track" menu.

## Man Over Board

The "Man Over Board" button is hidden by default. To make it available in the ToolBar, click on the "Configure" button and add it to the WorkSpace configuration.



Double-click on the **MOB** button to activate the MOB function.

**When the MOB is activated:**

1. An Instant Waypoint is created at the current ship position and the Route is activated
2. The chart is automatically centered on the MOB location
3. The MOB alarm is activated in the status bar.

Note: When a MOB is triggered, the Waypoint Switching parameters are disabled and the MOB Waypoint remains active until manually cancelled

**To return to Normal Mode**

Cancel the **MOB** by double-clicking on the Go To Tool or choosing "**Cancel Route**" from the right-click menu.

Note: Simple Clicking on the MOB button will create a Waypoint at the current location (event)

## Tides & Tidal Currents

### Getting Tide Prediction

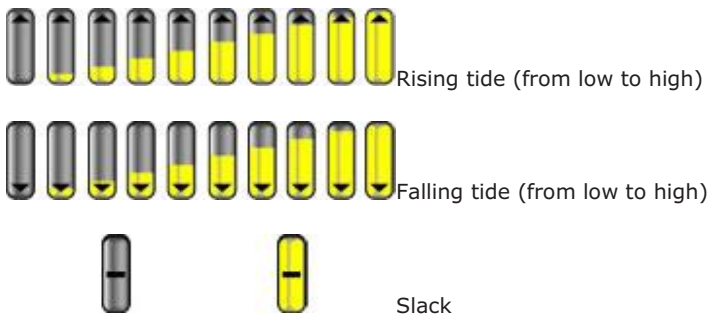
MaxSea Time Zero can predict the tide level for thousands of tide stations around the world. These predictions can be displayed as graphs over time or for a particular instant directly on the chart.

#### Tide Icon

To show and hide the tidal height stations on the chart, click on the Tide button located in the Ribbon:



The tides icons are dynamic and show you a preview of the tide level:



Note: All tidal height prediction times are adjusted for the local time currently selected for your computer. To change the computer's time zone or daylight savings time setting, use the "Date and Time" option in the Windows Control Panel.

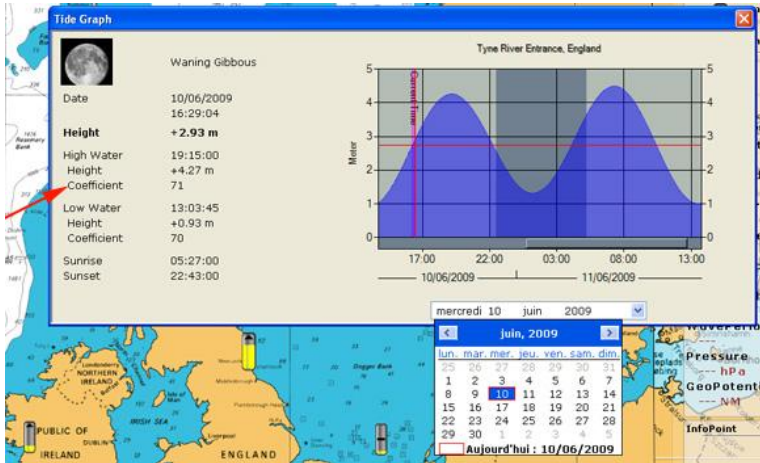
If you are in the Navigation WorkSpace, only the current tide can be displayed (current time of your computer). If you are in the Planning WorkSpace, you can change the time and date (virtual time) by using the "Play" or "Calendar" button in the Ribbon.

The Tide Station name and Tide Height can be viewed by rolling over the tide icon with the cursor



#### Tide Graph

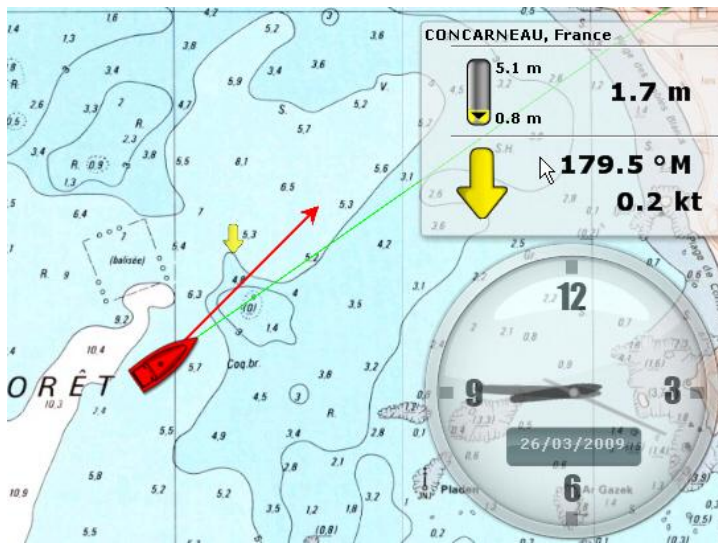
To display a Tide Graph, double click on the Tide Station or right click and choose "Open Tide Graph":



Click on the Date pop-up menu on the bottom of the window to change the prediction date.

### Tide and Current NavData

You can display a Tide and Current NavData. This will always give you the information of the nearest Tide and Current station from your boat. Simply display the NavData, click on the "plus" sign to add a new NavData and select the Tide and Current NavData



### Getting Tidal Current Prediction

MaxSea Time Zero can predict the tidal current set and drift for thousands of location around the USA. In Europe, high density tidal currents are available as an option for some areas.

Note: Tidal currents appear in yellow while Oceanic currents (providing offshore with Weather Data) appear in blue

### Tidal Current Icon

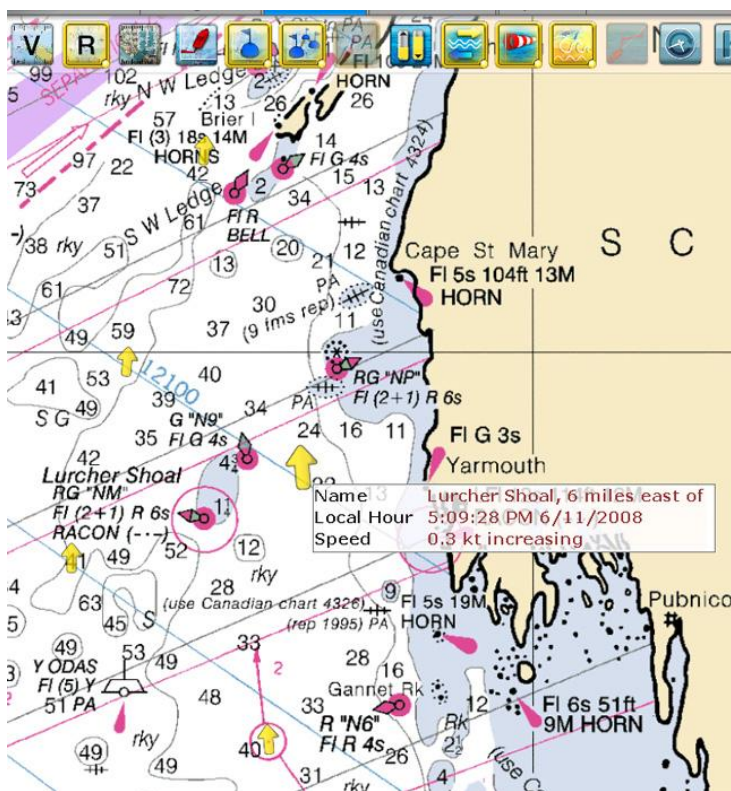
To show and hide the tidal current stations on the chart, click on the Currents button located in the Ribbon:



Note: All tidal height prediction times are adjusted for the local time currently selected for your computer. To change the computer's time zone or daylight savings time setting, use the "Date and Time" option in the Windows Control Panel.

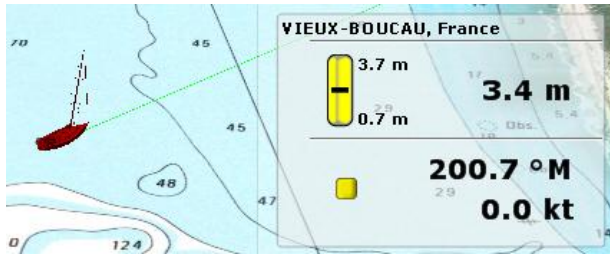
When in the Navigation WorkSpace, only the current tidal current can be displayed according to the current time of the computer. In the Planning WorkSpace, a different time and date of the tidal current can be displayed by utilizing the "Play" or "Calendar" button in the Ribbon.

The Tidal Current name, direction and speed can be viewed by rolling over the icon with the cursor:



### Tide and Current NavData

You can display a Tide and Current NavData. This will always give you the information of the nearest Tide and Current station from your boat. Simply display the NavData, click on the "plus" sign to add a new NavData and select the Tide and Current NavData



## Play tides & Tidal Currents Animation

The Planning workspace allows playing of time-lapse movies of Tides and Tidal currents.

In order to make an animation,

- Display either the Tide Height and Tidal Currents information or both on the chart
- Click on the "Play" button located in the Ribbon to start a 24H time lapse movie.

By default the current time is the starting point, but the starting point can be changed by clicking on the "Calendar" button.

The virtual time is display on the lower right of the computer screen. It appears in red when the virtual time is different from the present time. To set the virtual time back to the present, click on the "Actual Time" button in the Ribbon.

## Weather Forecast

### Requesting a Weather file

In order to be able to request a weather file, you have to register your copy of MaxSea at [www.maxsea.com](http://www.maxsea.com).

You can request a Weather file from the "Update" WorkSpace. This WorkSpace offers dedicated buttons and tools that allows you to define an area and request a weather file. If you have a direct Internet connection, the Weather file can be downloaded directly from MaxSea. If you are using a Satellite Phone or low-bandwidth connection, you can request the file by E-mail.

#### To request a weather file:

1. Select the "Update" workspace. Pan and zoom the chart to display roughly the area where you want to receive a weather forecast



2. Select the **Update Area** Tool from the ToolBar

3. Click and drag the cursor on chart to draw an area



4. Click on the **Weather Update** button in the Ribbon to launch the Wizard that will help you to configure and retrieve your weather file.

5. Follow the on screen instructions to select the type of data you want to receive and the days of forecast

- Accurate/ Normal data: Selecting "Accurate Data" will generate a weather file with the best grid accuracy available. Selecting "Normal Data" will generate a weather file with a lower grid accuracy reducing its file size (and download time)

6. When you choose to retrieve the Weather file by e-mail or when subscribing to a request, you can choose the type of compression used. Some e-mail providers will only allow to transfer attachment file that are compressed or have a specific extension.

- No Compression: No compression will be used and the plain GRIB file (.grb) will be sent
- ZIP Compression: A ZIP compression will be used
- BZ2" A BZ2 compression will be used

7. When you choose to subscribe to a request, e-mails with an updated weather file will be sent automatically on a specific schedule that you can define. To cancel a subscription before

Note: When subscribing, the parameters used to create the request will be used for every weather file. To cancel a subscription before its schedule ending, you can log on to My MaxSea and click on "Weather".


Tips: When requesting a Weather File by e-mail or when subscribing to a request, MaxSea will use the default e-mail client. To change the default e-mail client of the computer, open Internet Explorer, select the TOOLS menu, INTERNET OPTIONS, PROGRAMS.

## Opening a weather file

When you download a Weather File from the Update WorkSpace, MaxSea automatically opens the file and display it on the screen.

When receiving the GRIB file by e-mail or from a third party provider, you need to open the GRIB file in MaxSea

### Open a GRIB file from MaxSea

- Click on the MaxSea Button and select "Open Weather File" 
- Browse and select the GRIB file then click on "Open"

### Open a GRIB file from the E-mail Client

When receiving an e-mail with the weather file attached, open the attachment (double click on it) to open and load the file in MaxSea

**Note:** The weather files that are automatically downloaded from the "Update" WorkSpace are stored in the "Weather" folder located in "My MaxSea"

## Viewing Weather Data

### Displaying Weather Overlay on the Charts

Select the "Planning" WorkSpace to access the full weather functions.

Use the Weather Layer Buttons in the Ribbons to show/hide the various weather data:



This button shows/hides the Oceanic Currents (in blue) and the Tidal Currents (in yellow)










This button shows/hides the Wind Direction and speed using Wind Feather (showing direction and intensity)



This button shows/hides any type of weather data in color. Right click on this button to choose the type of data that is displayed in color:

1.

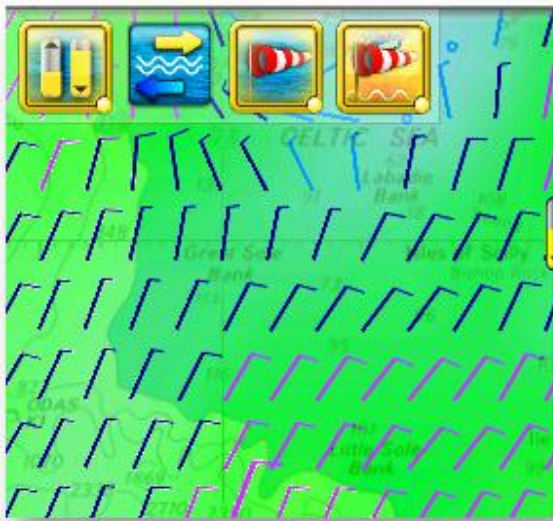
1.  Wind,

2.  Surface Pressure,
3.  500mB pressure.
4.  Waves,
5.  Current,
6.  Sea Surface Temperature (only available with MaxSea Time Zero Explorer),
7.  Altimetry or Sea Height Anomalies (only available with MaxSea Time Zero Explorer),
8.  Biomass density (only available with MaxSea Time Zero Explorer)

A color scale is available at the bottom left of the screen when a Weather Layer is displayed in color.

Note: When a specific data is not available, the corresponding button appears transparent. Request a new weather file from the Update WorkSpace with the corresponding data. you want to display on the chart.

Example: The following screenshot displays the wind being displayed with feather and color



### Displaying Numerical Value

When the Wind is displayed using Feather, rollover any wind feather to access Wind Speed and Wind Direction.

To display every other Weather Data using numerical value, display the NavData, click on "+" to add a NavData and select "Weather Information". The "Weather Information" NavData will display the weather condition under the Cursor (even if the weather is not displayed on the charts).

### Play Weather Animation

The Planning workspace allows you to play time-lapse movies of Weather Forecast.

In order to make an animation,

- display the weather information on the chart
- click on the "Play" button located in the Ribbon to start a movie from the current time up to the end of the weather forecast file.

By default the current time is chosen as a starting point, but you can change it by clicking on the "Calendar" button.

The virtual time is display on the lower right of your screen. It appears in red when the virtual time is different from the current time. To set the virtual time back to the current time, click on the "Actual Time" button in the Ribbon.



Play

This button allows to Play or Pause the animation



Start File

These buttons are hidden by default but can be added to the Workspace configuration by clicking on the "Configure" button. The "Start file" button allow to rewind and set the virtual time to the beginning of the Weather File.



Next  
Step

The "Next" and "Previous step" buttons allow to animate the weather file step by step.



Previous  
Step



Actual  
Time

This button allows to set the virtual time to the current time

## Using Navimail



Navimail is a subscription based Weather download service provided by Meteo France. If you want to use this service, you will have to download the Navimail software and install it on your computer. [Click here for more information and download the program.](#)

Once the Navimail software has been installed on your computer, you can configure MaxSea to use Navimail directly from the Update WorkSpace.



1. Select the Update WorkSpace and click on the **Configure** button to add the NaviMail button
2. The first time you will click on the Navimail button, MaxSea will ask for the location of the Navimail software.

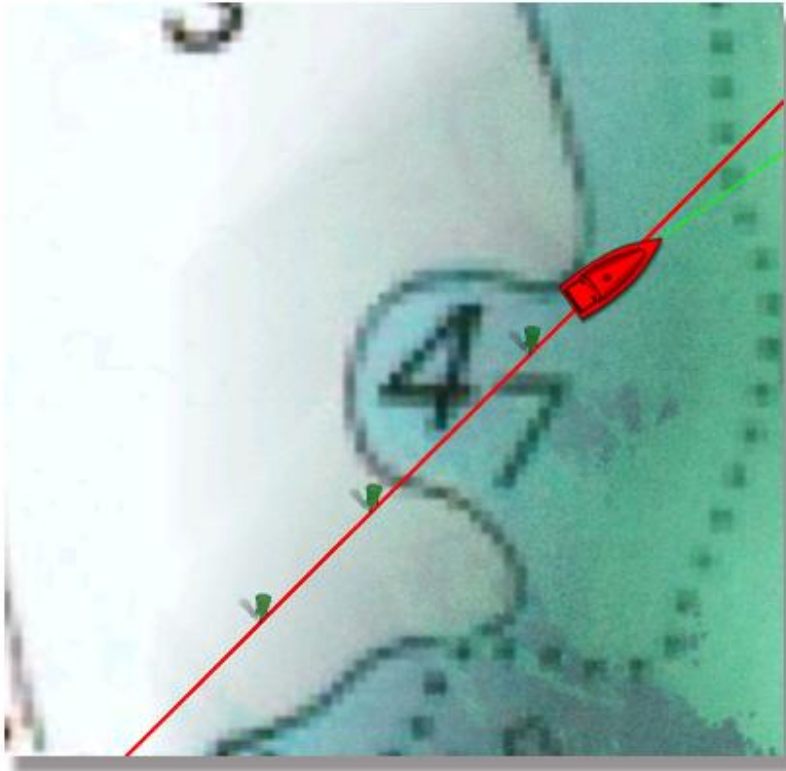
Note: MaxSea does not handle the subscription to the Navimail service. Please contact Meteo France if you want to subscribe to this service.



## Logbook

### Display Logbook on the Chart

Select the **Logbook** tool in the Ribbon to **show or hide** Logbook points on the chart. By default, the Logbook tool is not selected in Ribbons, click on **Ribbon Configuration** tool and add it.



All points of the logbook are represented by green pictos along the boat's active track as it is shown in picture above. Each point are separated in regular interval for an automatic recording and in unpredictable intervals when recording manually events in the logbook.

**To show information which were seized or recorded for every event of the logbook, 2 ways :**

1. Move the mouse over an event to display the **Info Point tool tip**.
2. You can also always display the "**InfoPoint**" **NavData** to get information each time you select an event along the logbook track.

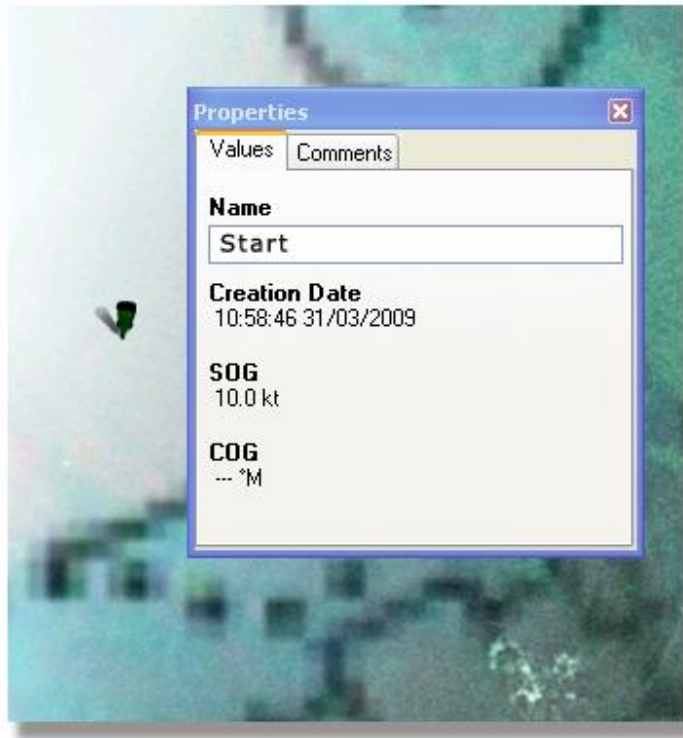
### Add Comments in the logbook

Ergonomic user interface allows you to easily add comments in the logbook on each event plotting on the chart during navigation.

Use the right-click on a chosen point to display the contextual menu.

Iker Word

Double-click on a chosen point of the logbook to display properties dialog box which depends on the selected event. The selected picto is darkened when it is selected:



This dialog can be used to consult recorded navigation parameters, to enter the name and information concerning the selected event.

In the comment part you have an access to a text editor where you can add text, hypertext link and picture as you will do for an html page.

## Historic Track in the logbook



Select a Logbook point with the left-Click to show the track historic on the chart.

The historic track is displayed on chart on both sides of the selected point at a predefined period (by default the interval is defined between +6h and -6h).

Right-click on the **Track** tool and left-click on the **Track History** tool to change interval duration of track recording from a selected point (choose **Historic Track Start** and **Historic Track End** values and click **OK** to valid).

## To import / export logbook information

You can open a logbook that you have already recorded and saved as a GPX or KML (Google Map) or CSV (SD-Card NN3D). Each file format is compatible with various software.

read more in related topic: ["To Import / Export waypoints and routes"](#)

## Logbook List

Display all logbook information as a list under the Planning workspace by clicking on the List tool.

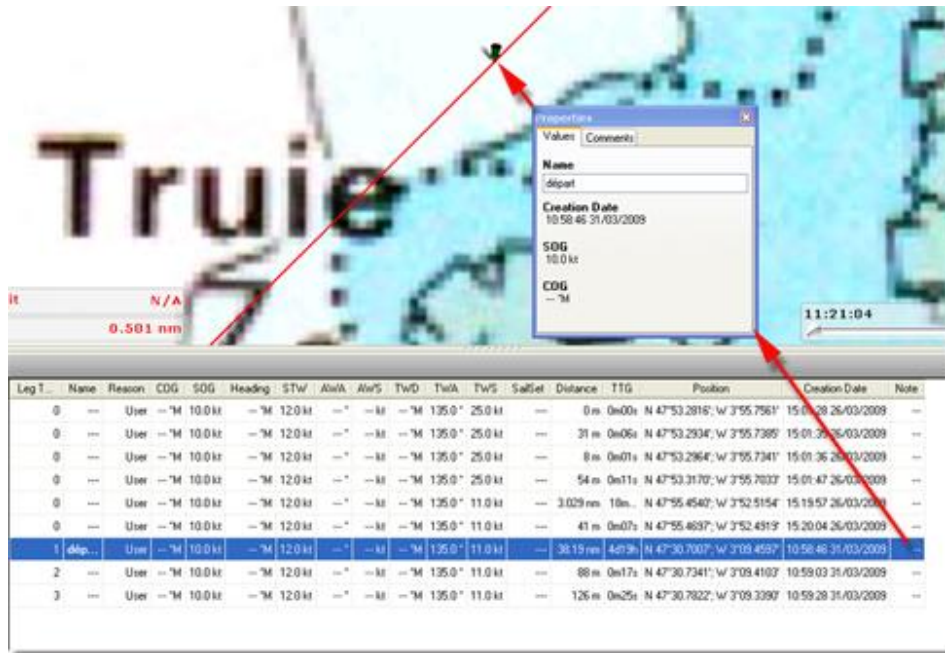
Click on Logbook in the left column to display information.

The logbook list shows a list of events as an excel sheet without having to display the logbook on chart.

Displayed and centered automatically the logbook on an event drawn on the chart by double-clicking a chosen line in the list.

You can also define setting contents in the logbook by clicking on "**Configure List**" and choose what information you want to show in the List.

This list can be exported and saved as a text file, click on the "**Export list**" and choose the path where you want to save it (by default all lists are saved in **My MaxSea** folder in **My Documents**).



## Setting up logbook parameters

The logbook allows recording the parameters connected to the navigation, as well as the comments user. You can also use the logbook as the ship track history.

By default the logbook is selected in Manual Mode, to activate the automatically recording mode.

Click on **MaxSea** and choose **Option** menu and **Logbook** item.

Check the "Record Logbook" box

You can change the step recording frequency (selected by default on 20minutes) and the time frequency recording depends on Historic track start and end recording time (read more in "[Setting up Ship & Track parameters](#)" related topic)

**You can also add four event conditions more in your logbook by choosing additional Condition.** We would advise you to use this function when experiencing excessive changes in conditions (notable increase in wind direction and force factor, for example) or an unprecedented event occurs such as depth alarm.

Click on "**Delete ENTIRE logbook**" to reset all logbook recordings.

## Weather Routing

### Optimizing a Route

The following features are only available if you purchased and activated the "Weather Routing" module. To see if the Routing module is activated on the computer, click on the MaxSea button (top left corner of the screen) and select "About".

#### Introduction

"Routing" is seeking the best route according to meteorological factors (wind), currents, wave and the characteristics of your sailing boat (polar).


MaxSea needs a weather file, a starting and ending point to compute the best route possible. MaxSea uses a default Polar that come pre-installed with the software however it is recommended to replace the default polar file by the polar of your boat. You can download Polar file for popular sailing boats at <http://www.maxsea.com> in the My MaxSea section ("Wind Polar") or you can create your own using the Excel sheet provided.

The unique Routing algorithm developed by MaxSea uses the isochrons method. Each isochron represents a group of points that the selected sailboat can reach in a fixed amount of time, dependent upon the weather forecast and the boat speed.

#### Launching a Routing between two points

In order to launch a routing, MaxSea needs to know the weather forecast on the area. It is always recommended to download the weather file just before launching a routing. The weather forecast length should be greater than the estimated trip duration (if not, MaxSea will use the last forecast available and display transparent isochrones).

To launch a routing:

1. Select the Planning Workspace
2. Display the Wind information to display the coverage of the weather file
3. Select a date using the calendar or click on "Actual Time" in the Ribbon to set a departure date
4. Adjust the screen to see the starting and destination point (pan and zoom the charts accordingly)
5. Click on the "Launch Routing" tool located in the ToolBar 
6. Click once to drop the Starting Waypoint
7. Move your cursor and click a second time to set the destination
8. MaxSea will compute the best route and launch an animation drawing the isochrones

Note: If you want to start the routing from your ship position (provided by the GPS), select the "Launch Routing" tool and double click on the destination.

Isochrones are the yellow and purple lines. They connect places of equal travel time from the departure point. By default, the step in between the isochrones is automatically set by MaxSea but you can change it manually from the Routing menu.

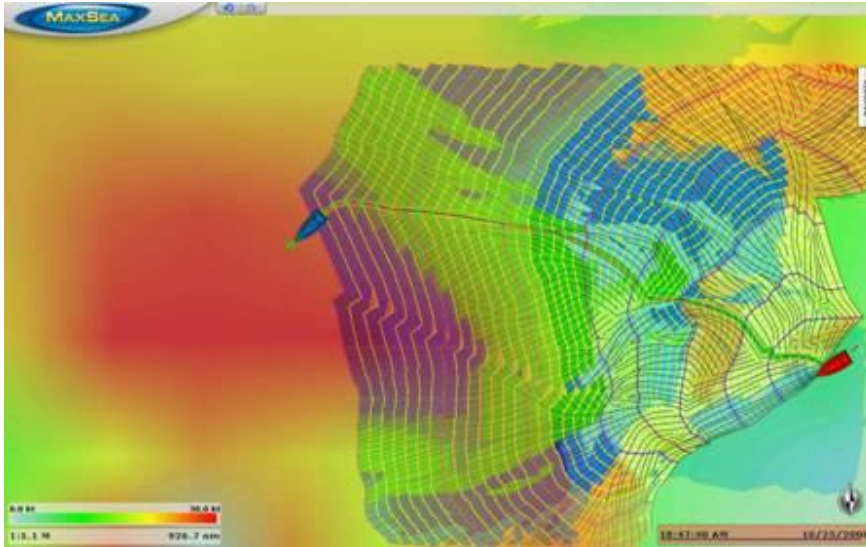
The color displayed under the isochrones are the SailSets. This information tell you the type of Sails that you will have to use along the route or in nearby area (if you choose an alternate way). The SailSets give you also the "type" of navigation:

- Green Areas for Downwind

Iker Word

- Blue Areas for Reaching
- Red area for Upwind

The "intensity" of the SailSets color gives you the wind speed. The darker the color, the stronger the wind.



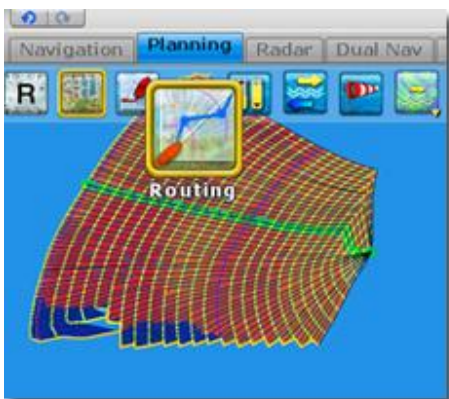
To display every information related to the routing in a table format, click on the List



button in the Ribbon to display the Lists at the bottom of the screen (make sure that "Route Detail" is selected on the left panel).

## Weather Routing displayed on the Chart

**Weather Routing** is displayed by default on the chart along with the isochrons.



- Isochrons and SailSet colors are displayed on the chart as alternate yellow and purple curves.

- All route plans indicated by isochrons are optimal route plans (drawing in black); they show route plans according to the varying criteria ( bearing a horizontal angle, measured from 0 to 90 degrees, fixing the direction of a line or direction of travel with respect to either a north or south direction. more to the north, more to the south, etc.) with varying distances from the target waypoint A predetermined geographical position used for navigation along a route or for storing the position of a particular feature.
- Once the last isochron has been drawn the program calculates the optimum route plan (drawing as a route) for reaching the selected waypoint.
- Launching a new routing will automatically hide the previous weather routing (By default last five Routings and its Isochrons are saved in MaxSea).

The form of the isochron displayed is particularly important for an overall evaluation of both **options** and **risk**.

Sail set colors display allows you to identify quickly:

- Strong/light winds.
- Risky zone.
- True Wind Angle and True Wind Speed.

Read more in related [SailSet Polar](#) Chapter



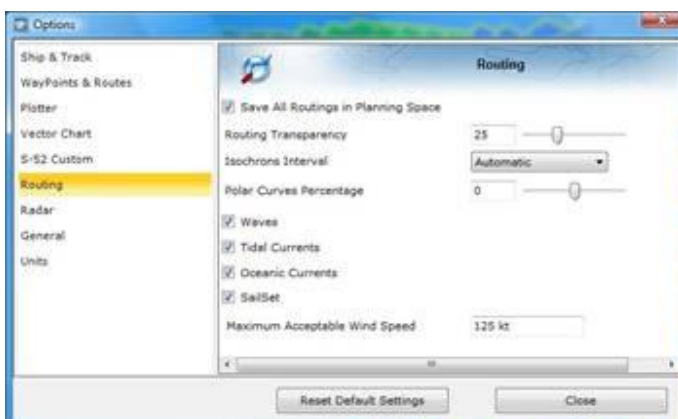
Click on the corresponding button to Show or Hide **Isochrons** and **SailSet** (color in Routing Tree).

Read more in related topic for [Setting Up Weather Routing](#)

## Setting up weather routing

The routing is calculated by the program using a set of powerful and sophisticated algorithms. It also takes into account any open tide or ocean current files, waves, Sailset as defined in the Routing Option.

Go to the **MaxSea Menu** and select the **"Routing"** option to call up Settings dialog.



**This is where you set :**

- To **save all routings in planning Space**. This option is checked by default, uncheck the box for unsaving routings.
- **Routing Transparency :** allows you to adjust Routing SailSet Color Transparency from 0 to 80 % (by default 25%).
- **Isochron Interval:** The time interval specified dictates the level of accuracy of your study; a value which is half the value specified for time intervals in the weather file should be correct (4 or 6 hours in the case of typical files based on 12 hour intervals). Isochrons interval can be defined automatically or manually from the PopUp windows. (from 10mn to 6 h). In very changeable weather conditions you may need to use a value which is a quarter of the one specified in the weather file in order to obtain a very precise study.
- **Polar Curve Percentage:** The Polar Curve Percentage can be modified to take into account speeds which are different from those contained in the speed polar (in the case of a sea which is particularly hard to navigate, problems with the sails, the crew being tired, equipment not working properly, etc.) Adjust Polar Curve Percentage from -50 % to 50 %
- **Waves option checked,** takes into account waves polar in the Routing calculation. (If there are Waves data in your navigation zone area, the software will calculate the Weather Routing with Waves data).
- **Tidal Currents option checked,** takes into account Tidal Currents values in the Routing calculation. (If there are Tidal Currents data in your navigation zone area, the software will calculate the Weather Routing with Tidal Currents data).
- **Oceanic Currents option checked,** takes into account Oceanic Currents values in the Routing calculation. (If there are Oceanic Currents data in your navigation zone area, the software will calculate the Weather Routing with Oceanic Currents data).
- **Maximum Acceptable Wind Speed,** allows you to define a Maximum Wind Speed acceptable when routing calculation. In case routing tree cross such kind of wind speed, it stops.
- **Minimum Acceptable Wind Speed,** allows you to define a Minimum Wind Speed acceptable when routing calculation. In case routing tree cross such kind of wind speed, it stops (0kt by default).
- **Maximum Acceptable Wave Height,** allows you to define a Maximum Wave Height value acceptable when routing calculation. In case routing tree cross such kind of wind speed, it stops.

## Weather Routing from several Waypoints

First select the route to follow before launching the routing.

Depending on your choice you can launch a Multi-waypoint Routing

### From Boat Position

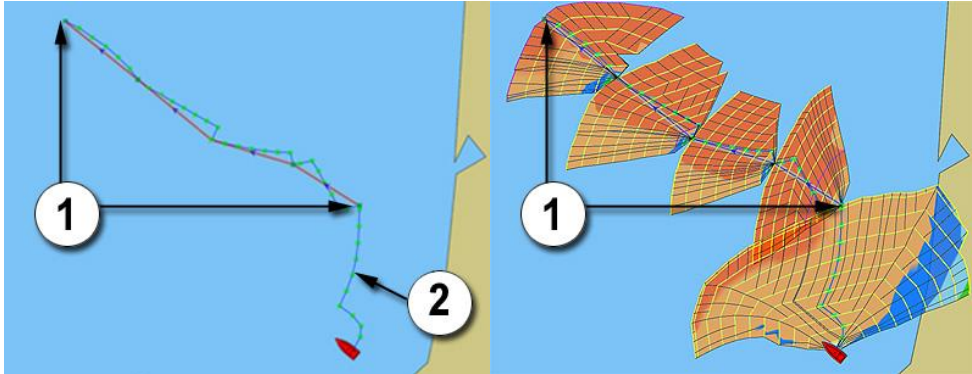
MaxSea's multi-waypoint routing allows you to define an optimal route plan from the boat position to the active waypoint then from this waypoint to each subsequent waypoint to the end of the route.

Plot or select a route drawn on chart.

1. Select the **Routing** tool



2. Move the cursor on the selected route and Double Click on it.
3. Routing is then drawn from actual boat position.

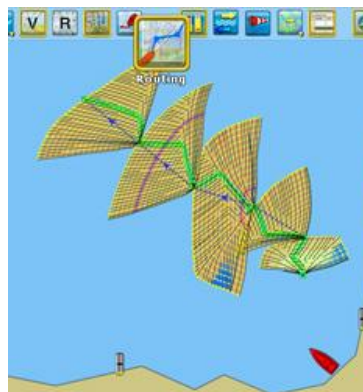


On pictures above, number (1) shows you limits of the selected Route and number (2) is the part of the weather routing from boat position to first waypoint of selected route.

### From a point



Start Point of Routing represented by Flag P



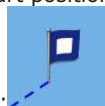
Multi-Legs Routing



Optimal Route represented from series of green points displayed on chart



1. Select the **Routing** tool
2. Move the cursor on the start position and click on the chart to ADD the departure point of the routing



is marked with the Flag P :

3. Move the cursor on the selected route and Double Click on it.
4. Routing is then drawn from start point to the latest point of the selected route.

**Obtain the best optimal route, you can launch again a routing :**

1. From selecting an alternative Weather Routing.
2. From changing direction when passing a waypoint.

**Polar File**

Your ship’s potential performances are saved as speed polars. MaxSea Time Zero Routing module uses 3 types of polar:

1. Wind\_Polar
2. Wave\_Polar
3. SailSet\_Polar

Polar files are located in "**My Document/My MaxSea/Polar**" Folder.

**Wind Polar**

In the first column all True wind angle (**TWA**) theoretic values (cells under first column)

In the first line all True wind Speed (**TTrue Wind Speed** is abbreviated as **TWS**. When the vessel is in motion, onboard wind speed measurements - the **AW** Apparent Wind Speed. This is abbreviated as **AWS**. When the vessel is in motion, onboard wind speed measurements - the **AWS** - will differ from stationary measurements (True Wind Speed, or **TWS**). Your Visual Series product derives TWS from **AWS** by taking the vessel's motion into account. S - Will differ from stationary measurements (**TWS**). Your Visual Series product derives **TWS** from **AWS** by taking the vessel's motion into account.) theoretic values (cells under first line)

Following columns correspond to the optimum sailing boat speed according to True Wind Angle and True Wind Speed values.

**Example of Polar file**

T W A	3	4	6	8	10	12	14	16	20	24	28	32	
30	2	2,6	3,5	4,4	4,9	5,1	5,2	5,3	5,4	5,4	5,4	5,3	To edit this Polar using Excel : - Use Wind_Polar.xlsm - Modify the values. - Save the polar using MACRO
31	2	2,6	3,5	4,4	4,9	5,2	5,3	5,4	5,5	5,5	5,5	5,4	
32	2	2,6	3,6	4,4	5	5,2	5,4	5,4	5,5	5,6	5,5	5,4	
33	2	2,6	3,6	4,5	5	5,3	5,4	5,5	5,6	5,6	5,6	5,5	
...	...	...	...	...	...	...	...	...	...	...	...	...	
50	2,6	3,4	4,6	5,7	6,3	6,5	6,7	6,8	6,9	7	7	7	"SaveWindPolar AsXML".
51	2,7	3,4	4,7	5,8	6,4	6,6	6,7	6,9	7	7,1	7,1	7	

5 2	2,7	3,4	4,7	5,9	6,4	6,7	6,8	6,9	7,1	7,1	7,1	7,1	
...	...	...	...	...	...	...	...	...	...	...	...	...	
1 4 9	2	2.6	3.7	4.8	5.8	6.5	7.2	7.7	8.8	9.9	11. 1	12.3	
15 0	1 .9	2 .6	3 .7	4 .7	5 .7	6 .5	7 .1	7 .7	8 .8	9 .8	1 1	1 2 .2	

TWA
  TWS
  Boat Speed

**Note:** you don't have to fill in every field of the spreadsheet. MaxSea will interpolate values that are not available

### Wave Polar

Wave Polar values allow adjusting the wind polar values according to wave power (height, length, angle).

Sample: Wave polar for a 15 m wave Height.

15	1	5	10	15
0	0.5	0.6	0.7	0.9
90	0.7	0.8	0.9	0.9
180	1	1.2	1.3	1.5
15	Wave Heigh			
0	Angle between boat direction and waves			
1	Period (second)			
1	Coefficient used to modify the wind polar speeds			

	A	B	C	D	E	F
1	2	1	5	10	15	
2	0	0.9	0.9	0.9	0.9	
3	100	1	1	1	1	
4	180	1	1.1	1.15	1.2	
5						

To edit this Polar using Excel :

- Use Wave\_Polar.xlsm
- Modify the values.
- Save the polar using MACRO "SaveWavePolarAsXML".

Used TAB to switch from one wave Height to another

### SailSet Polar

Sail Set Polar values allow adjusting MainSail and FrontSail configuration according to True Wind angle and speed.

This configuration (mainsail + frontsail) are displayed inside the routing route List and are displayed inside the routing tree,

Sail set display allow you to identify quickly:

- Strong/light winds.
- Risky zone.
- True Wind Angle (TWA) and the True Wind Speed (TWS)

TWA	4	8	14	20	25	30	40
30							
40	GV	GV	GV	1Reef	2Reef	3Reef	Off
60	GV	GV	GV	1Reef	2Reef	3Reef	Off
80	GV	GV	GV	1Reef	2Reef	3Reef	Off
90	GV	GV	GV	1Reef	2Reef	3Reef	Off
110	GV	GV	GV	GV	1Reef	2Reef	Off
130	GV	GV	GV	GV	GV	2Reef	Off
150	GV	GV	GV	GV	GV	2Reef	Off
180							

To edit this Polar using Excel :

- Use SailSet\_Polar.xls
- Modify the values.
- Save the polar using MACRO "SaveSailSetPolarAsXML".

Used TAB to switch between :

- **MainSail (GV)** : describe mainsail configurations according to True Wind angle and speed.
- **FrontSail (VoileAV)** : describe front sails configurations according to True Wind angle and speed.
- **Couleur\_Voile** : describe the colors codes to be used to represent front sail configuration.

### MainSail (GV) : Default values

Describe mainsail configurations according to True Wind angle and speed.

TWA	4	8	14	20	25	30	40
30							
40	GV	GV	GV	1Reef	2Reef	3Reef	Off

60	GV	GV	GV	1Reef	2Reef	3Reef	Off
80	GV	GV	GV	1Reef	2Reef	3Reef	Off
90	GV	GV	GV	1Reef	2Reef	3Reef	Off
110	GV	GV	GV	GV	1Reef	2Reef	Off
130	GV	GV	GV	GV	GV	2Reef	Off
150	GV	GV	GV	GV	GV	2Reef	Off
180							

TWA
  TWS

**FrontSail (VoileAV) : Default values**

Describe frontsails configurations according to True Wind angle and speed.

TWA	4	8	14	20	25	30	40	50
30								
40	Light Up Wind	Light Up Wind	Medium Up Wind	Medium Up Wind	Strong Up Wind	Strong Up Wind	Gale Up Wind	Storm Up Wind
60	Light Up Wind	Light Up Wind	Medium Up Wind	Medium Up Wind	Medium Up Wind	Strong Up Wind	Gale Up Wind	Storm Up Wind
80	Light Reaching	Light Reaching	Medium Reaching	Medium Up Wind	Medium Up Wind	Strong Up Wind	Gale Up Wind	Storm Up Wind
90	Light Reaching	Light Reaching	Medium Reaching	Medium Reaching	Medium Reaching	Strong Up Wind	Gale Up Wind	Storm Up Wind
110	Light Down Wind	Light Reaching	Light Reaching	Medium Reaching	Strong Down Wind	Strong Down Wind	Gale Down Wind	Storm Up Wind
130	Light Down Wind	Light Down Wind	Medium Down Wind	Medium Down Wind	Medium Down Wind	Strong Down Wind	Gale Down Wind	Storm Down Wind
150	Light Down Wind	Light Down Wind	Medium Down Wind	Medium Down Wind	Medium Down Wind	Strong Down Wind	Gale Down Wind	Storm Down Wind
180								

TWA
  TWS

Iker Word

**Couleur Voile : Default values**

Colors codes to be used to

Voile	Babord	Tribord
LightUpWind		
LightReaching		
LightDownWind		
MediumUpWind		
MediumReaching		
MediumDownWind		
StrongUpWind		
StrongDownWind		
GaleUpWind		
GaleDownWind		
StormUpWind		
StormDownWind		

## AIS & ARPA Targets

### Targets Overview

MaxSea shall process all tracked targets reported across its interface and shall present all reported targets in accordance with the system equipment connected to MaxSea.

Depending on the system unit connected to MaxSea you can access to miscellaneous target's layer which stack there transparency on displayed chart and on which user add marks and save his data.



Targets tool in the Ribbon allows you to quickly Show/Hide all of them.

Depending on the system unit connected to MaxSea, you can access under the Target Layer Zone in the chart Tool Bar to :

1. [ARPA Targets](#)
2. [AIS Targets](#)
3. [Targets options](#)

### ARPA targets displayed on chart

MaxSea automatically detects ARPA targets transmitted from the connected Radar system. MaxSea provides an overview of ARPA transmitting signals.



Two symbolic representations are displayed if targets are lost or not.



ARPA's Target Symbol (direction's vector drawn with a red arrow)



ARPA's Target lost Symbol

### Get More details on each target



1. Go to the Planning Workspace and click on Lists Button to display lists
2. On left side of the table, click on ARPA to display ARPA targets list
3. Each line corresponds to a target

### Type of information on :

- Status : Track or Lost
- Danger : indication for Dangerous Target
- ID : number
- CPA : Closest Point of Approach from boat to target
- TCPA : Time to CPA
- Range : Range from boat to target
- Bearing : Bearing from boat to target
- COG : Target Course Over Ground
- SOG : Target Speed Over Ground
- Position

## AIS Targets displayed on chart

After connecting the AIS System, MaxSea automatically detects AIS targets and MaxSea provides an overview of vessels transmitting AIS signals. The vessels are shown with different symbols depending on zoom level, and all information about individual vessels are presented in an easily accessible way.



Two symbolic representations are displayed if targets are lost or not.



AIS's Target Symbol




AIS's Target lost Symbol

Note : only latest hundred targets are displayed on chart.

### Get More details on each target

1. Go to the Planning Workspace and click on Lists Button  to display lists

2. On left side of the table, click on  to display AIS target list

3. Each line corresponds to a target

### Type of information on :

- Status : Normal or Lost
- Danger : indication for Dangerous Target
- Name : Ship's name

## Iker Word

- MMSI Number
- Call Sign
- CPA : Closest Point of Approach from boat to target
- TCPA : Time to CPA
- Range : Range from boat to target
- Bearing : Bearing from boat to target
- COG : Target Course Over Ground
- SOG : Target Speed Over Ground
- Heading : Heading target
- Destination of the target
- Vessel length
- Vessel Width
- Vessel type (cargo, etc...)
- Cargo type
- Navigation : Under way Sailing / Under Way Using Engine, etc...
- Position

## Targets options



Click **MaxSea**, then **Options** and **Targets** for setting up parameters according to targets display

Check or uncheck the box to **Show / hide IDs** (targets identities) of all targets displayed on chart

**Only for AIS targets** : choose in the pull down menu how many AIS targets you want to display on chart and in the Target List, depending on from a distance around (from 0.500 MN to 84.00MN). By Maximum value is selected.

## NavNet3D

### Radar Overlay Overview

NavNet 3D and Radar functions are exclusively included in MaxSea Explorer.



**Before starting MaxSea with NavNet 3D, make sure that :**

1. Settings Up MaxSea-NavNet 3D are configured
2. NavNet 3D is powered on
3. Your Computer is correctly connected to NavNet 3D network

Radar Solutions are an optional add-on to MaxSea which allow users to interface Radar Antenna to the software.

MaxSea can display in real time, radar overlay image at any scale on the cartography. It can display as well, targets coming from NavNet Radar or other FURUNO Radar using network for transferring in MaxSea.

Connect your system unit to an Ethernet network for transmitting data information to Maxsea.

1. Go to the chapter to read more on Radar Equipment "Installation and Configuration"
2. Displaying Radar Image Overlay on Chart
3. RADAR Workspace

### RADAR Workspace

You can access to the Radar Overlay display under The Radar Workspace and also under Nav and Radar Workspace.

Radar ribbon includes all setting tools for choosing the best display according to sea and working conditions

#### Radar Tools



Heading Line

show /hide Heading line on the chart



Rings

Show hide Radar Rings displayed on Chart



Gain level

Left click on the button to select automatic Gain Level settings. This action cancels manual settings.



1. Right click on the button to display the slide.
2. Adjust the range from 0 to 100% using the wheel of the mouse or the finger left border of the track pad.



Left click on the button to select automatic AC Sea level settings. This action cancels manual settings.

Sea level



1. Right click on the button to display the slide.
2. Adjust the range from 0 to 100% using the wheel of the mouse or the finger left border of the track pad.



Left click on the button to adjust the AC Rain level value automatically

Rain Level



1. Right click on the button to display the slide.
2. Adjust the range from 0 to 100% using the wheel of the mouse or the finger left border of the track pad.



Transmit

Click on to transmit to get signal transmitted from Radar.

### Modify the Range from using tools in toolbar



Range Minus

the [R-] expands the chart range. When the Range function is operated in MaxSea, the Range key is simultaneously applied in NavNet



Range plus

the [R+] the chart range. When the Range function is operated in MaxSea, the Range key is simultaneously applied in NavNet



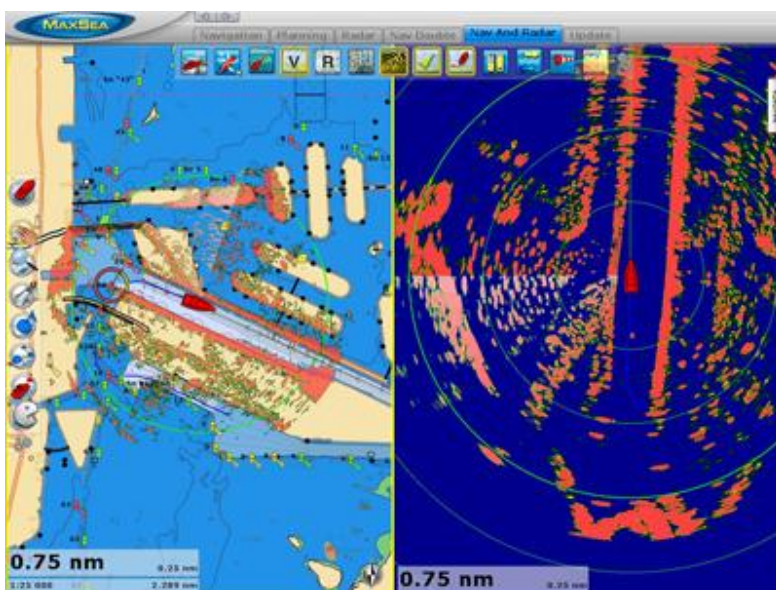
Range Synchronisation

The Range Synchronisation, when clicking on this tool an order is sent to the Radar to adjust its range according to MaxSea chosen Range.

## Displaying Radar Image Overlay on Chart

There are several ways to use Radar with your MaxSea including radar overlay.

You can display several windows and choose the **"Nav and Radar"** Workspace. One frame will be dedicated to your navigation and the second to show your radar overlay.




Radar overlay when the radar image is viewed on the top of the chart.



1. Click On  Radar Button to display Echo overlay the chart in the Navigation Frame.



2. Click on  to display the Heading Line.

If the Radar unit is turned on and is properly connected to the computer. The Radar image provides on the opened chart is automatically displayed in the radar operating area as shown Above:

## Sharing Charts between MaxSea and NavNet

This function is only available for MaxSea Explorer installed on your computer connected to NavNet 3D network.

The NN3D Server option allows to share all available charts in MaxSea to NavNet3D.

Click on **MaxSea** and check the **Activate** radio button to allow the NN3D Server. This option is unchecked by default and all parameters appear in gray color.

A process to search available Chart's server is launched. if more than one server is found then a message warns you that only one chart server can be used at same time on the network.

If a Chart's server is found then following information is displayed :

- The server IP address is displayed in the header (172.31.xx.xx) following from MFD's available on network.
- List of all types of data sharing between MaxSea and NN3D:

1. Rater Charts box checked by default
2. Vector Charts box checked by default
3. Satellite Pictures box checked by default
4. 3D data box unchecked by default

- all boxes are in gray color when the server is turned off.

## Routes & Waypoints Synchronization

This function is only available for MaxSea Explorer installed on your computer connected to NavNet 3D network.

### The Active Route is automatically synchronized:

- The active route is synchronized in real time when the Goto function is activated (as same way for MaxSea to NavNet 3D and NavNet 3D to MaxSea).
- If an active route is available in NavNet 3D, MaxSea will automatically inherit it next time running MaxSea.
- If you close MaxSea when NavNet 3D is still running, active route will not be deleted.

### Routes and Waypoints are not automatically synchronized. the Synchronization must be activated from MaxSea Menu options:

1. Click on **MaxSea** and choose **NN3D Synchronization**
2. Routes and Waypoint Synchronization wizard is launched and allows to choose of:
  - Importing from NavNet 3D to MaxSea
  - Or exporting from MaxSea to NavNet 3D
3. After choosing an option click on next
4. A message warns you that active database will be replaced by synchronization database and will erase all previous routes and waypoints.
5. At the end of the synchronization a report informs about the number of routes and waypoints which were imported or exported.

**Important:** this operation will erase all waypoints and routes locally plotted. Attention it is possible that certain information is lost during this synchronization.

## Setting Up Radar System

Setting up Radar parameters by choosing **Options** from the **MaxSea** menu.

**Select Radar for setting up general parameters of Processing signal :**

1. Choose a background Color in the pop-up between 3 options : Auto (selected by default) / Black / Dark Blue
2. Choose a Color for Radar Echo : True (selected by default) / Green or Yellow
3. Adjust the echo overlay transparency : scroll on the slide from 0 to 80% (20% by default)
4. Check **Sweep fade** Box to start the Radar Scan in real time to display
5. Check **Own Ship Icon** to display.



## Connecting Instruments

### Connecting Equipment

- [Connect your GPS](#)
- "Home Planning" Mode
- [Connection Wizard](#)

### Connecting NavNet 3D system

 This function is included in MaxSea depending on your own software version which must belong to Pack Explorer Range.

**Before using it, the hardware installation has to be done as following:**

1. Setting up your NavNet 3D
2. Power on NavNet 3D
3. Connecting MaxSea to NavNet 3D network

NavNet 3D system acts as a DHCP server and automatically performs the network configuration via DHCP protocol. The DHCP protocol assigns dynamically IP address to MaxSea which is connected to the Ethernet network while avoiding conflicts of addresses.

**MaxSea - NavNet 3D allows :**

1. A dedicated Radar Workspace
2. Displaying Radar Image Overlay on chart
3. Sharing charts between MaxSea and NavNet 3D
4. Sharing Routes and Waypoints synchronized with NavNet 3D
5. [Displaying Targets on chart](#)

## Connection Wizard

### Connection Wizard

We suppose that you have physically connected a GPS compatible NMEA 183 to the computer and that you wish to acquire information received from serial ports or NavNet (NN1, versions vx2 or NavNet 3D): date / hour, position, COG, SOG, strength and direction of Wind , etc.....

To bring up the **Connection Wizard** dialog, choose



**[Connection wizard]** under MaxSea Button

Configurations Menu:



**Choose a type of connection between the following options:**

1. [Automatic Port Configuration](#) to have MaxSea search automatically for your connections
2. [Navnet Network](#) : to manually add a NavNet network Connection
3. [Serial connection](#) to manually add and configure your serial Port
4. [Auto-pilot](#) to manually add an auto-pilot connection
5. **Man Over Board (MOB)** to add a Man over board connection
6. [Reset Connection](#)
7. [Verify Connection](#)

**Note** : connection wizard is not available if MaxSea belongs to Explorer range and automatically connected to NavNet system .

## Automatic Port Configuration

Rather choose this option to launch an automatic search for serial ports and data received.

Choose **Automatic Port Configuration** option to have MaxSea search automatically for your GPS and click Next.

A new window is displayed asking you to check following to prepare your GPS before starting the "AUTODETECTION":

- All *NMEA* devices (GPS, Etc..) are powered on.
- All cables are securely connected (Serial cable and/or Network cable if connected to NavNet)
- NMEA sentences are enabled on your GPS.
- When everything seems to be OK, click "**Next**" to start Autodetection.

At the end all data are listed :

Check each data getting on port com3, next screen will display reporting data table

- If data were detected, click "**Next**" to display a connections report. Report gives detail on current connections (data list and its actual status).
- If MaxSea could not find any GPS sending data, nor NavNet network, click "back" or "Cancel", and verify everything is correctly connected and configured as indicated in the previous Step.

**Note** : for USB to serial adapter, verify that drivers are up to date and recognized by the operating system.

## NavNet Network Connection

All MaxSea Time Zero versions can automatically received NMEA data from NavNet network (NavNet vx1, NavNet vx2 or NavNet 3D).

Before starting check following : **NavNet 3D equipment is powered on / NavNat3D Network cables are securely connected / NMEA sentences are enabled on your NavNet3D.**

The computer on which MaxSea is installed has an IP to communicate with the NavNet system. The NavNet system uses a TCP/IP computer protocol through an Ethernet. This protocol is an open architecture that allows for multiple ways of connecting the NavNet system.

Instruments (GPS, etc..) connected to the NavNet network also communicate between them via Ethernet TCP/IP. So It is necessary to supply an IP address and host's name for every instrument to identify them separately.

To quickly control TCP/IP parameters, double click on the "**Network status**" icon located on the Windows Taskbar as it is shown in following picture.



**Network Status Dialog is displayed and follow each step:**

1. Click on Properties
2. Select Internet Protocol TCP/IP line and click on the Properties button.
3. Click on Alternate Configuration Tab
4. IP addresses must be assigned as following :
5. IP Address : 172.031.xxx.xxx
6. Subnet mask : 255.255.000.000

**When everything seems to be OK**

- Choose **NavNet Network Connection** option to automatically configure your NavNet connection.
- Click **Next** to start.
- When MaxSea has detected NavNet Network Connection a message warns you that check Data are completed.
- Click **Next** to display report of Data results (Data list and its status)
- Click **Finish** to validate NavNet Network Connection.

## Manual Serial Port Configuration

**This option allows you to:**

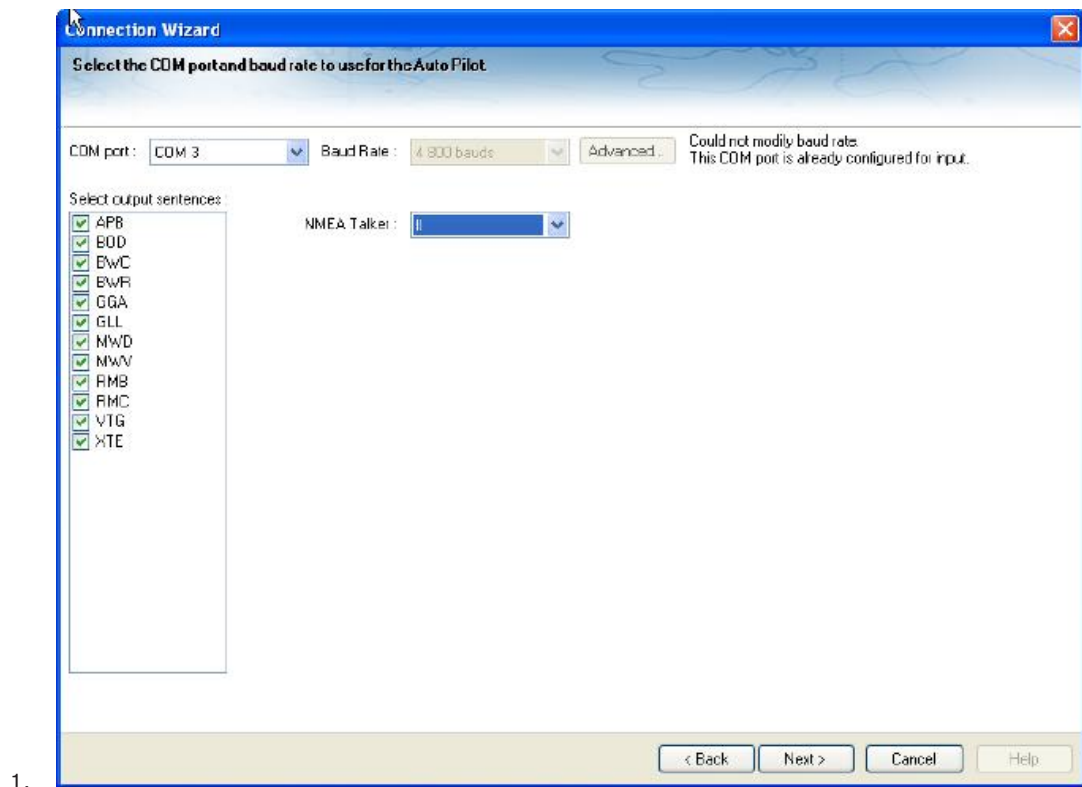
- Choose **Manual Serial port configuration** option to manually configure your communication ports and click "**Next**"
- Select from the pop-up menu, the COM port which is used to connect equipment.
- Select a **Baud Rate** value (refer to the instrument configuration),
- Click **Next** to get Data report.
- Click **Next** to display the connections report that gives you detail on each data and its status.
- Click **Finish** to validate connections settings.

**Note:** the "pop-up" menu lists all available COM ports identified by your system.

## Auto pilot Connection

**If your computer is connected to an autopilot, you can control this from the software. If you want the software to control the Autopilot :**

- Check the **Auto-Pilot** option to manually add an auto-pilot connection and click "**Next**"
- Select from **COM port** Pop-Up menu, the COM Port which is used to connect the auto-pilot,
- **Three ways :**
  1. **The COM Port is used from the Data come in** , the Baud Rate is automatically selected and a message warns you that the baud rate cannot be changed. (as it is shown in following picture)
  2. **The COM Port selected is different from the Port used for data come in**, Choose a **Baud Rate** value and click Next, to get connection report. Click Finnish to validate and close the wizard.
  3. **The COM Port is busy**, a message warns you that access is denied.



## Connection Man Over Board (MOB)

This option allows to add a MOB connection for receiving and transmitting the MOB information to **NMEA** equipment compatible and also to **NKE** equipment connected to a serial COM Port.

Choose the COM Port in the list and the corresponding baud rate value.

If the COM Port is used to receive another data information else than MOB, you will not be allowed to choose a baud rate value. This value depends to the present connection configuration.

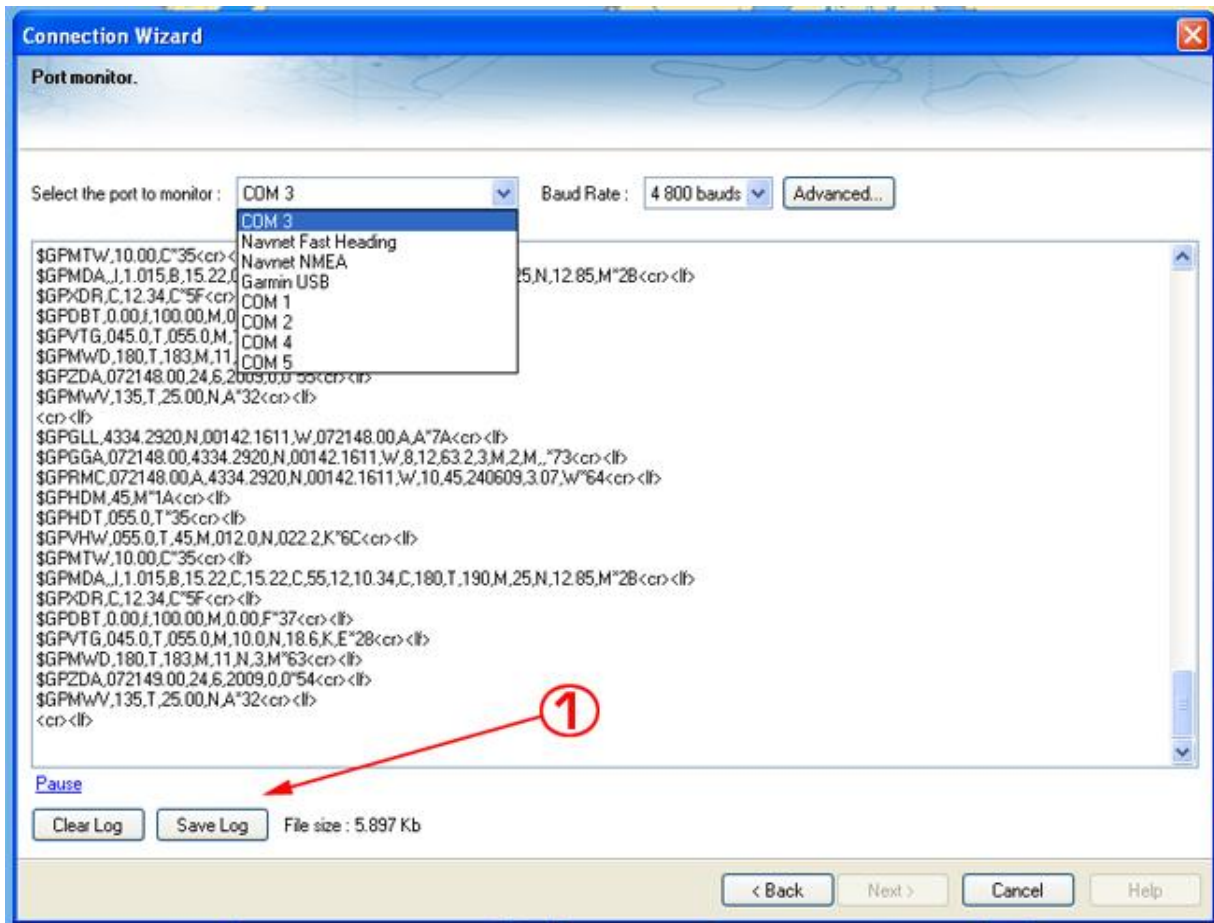
**Note** : it is impossible to have MOB and autopilot connected to the same COM Port.

## Verify Connection

**Note** : this option will appear in grey when connection is not detected.

The Port Monitor option allows you to view and troubleshoot NMEA sentence.

- Check Data to verify data sentence received by each port connected as well as the physical connection the electronic equipment and the computer.
- Choose either **Serial connection** or **Autopilot, click next.**
- Select from the Pop-up the port for which you want to verify data received.
- when connection is established, transmitting NMEA sentences will be displayed in the dialog.
- **(1 in following picture)** - "**Clear Log**" used for initializing sentences displayed in the dialog and "**Save Log**" is helpful for support if wrong data are received in MaxSea, just save and send the file text to our technical support.



## Check Data Source

**Note :** this option will appear in grey when connection is not detected.

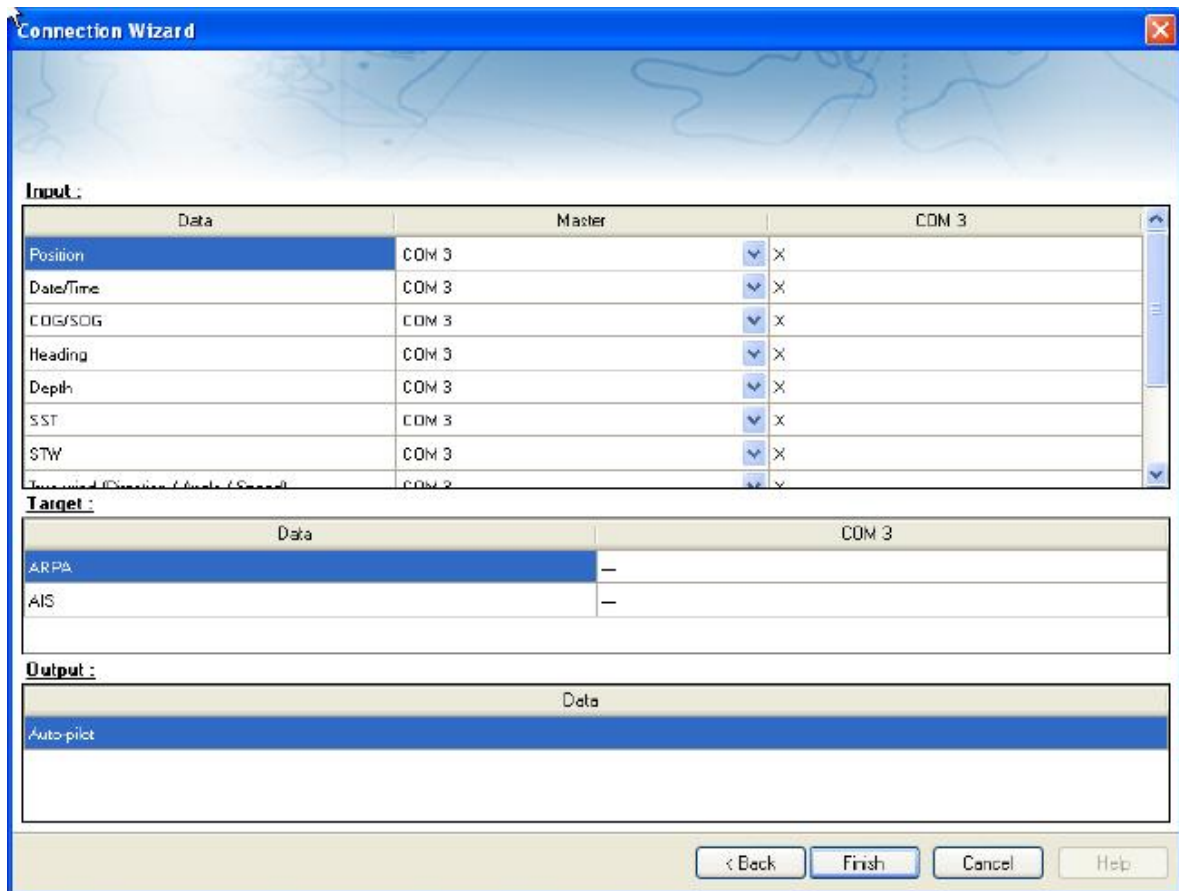
This option allows you to view and choose the Data Source being used by each COM Port configured .

When a connection is configured, all Data Source are listed as checked or unchecked boxes.

Select corresponding case information that you wish to acquire and Click Next.

### Choose Master Selection:

1. If the same information is provide by several instruments, you need to select one as your master source.
2. Pull down the Port COM list in the Master column and choose the Port COM that you will want to be the master for selected Data source.



## Reset Connection

The "**Clear all to remove all existing connections**" option allows you to restore factory settings and erase all previous configuration to restart connection configuration.



## Getting More Help

### Products Assistance

More Resources Provides easy access to the extensive resources on [www.maxsea.com](http://www.maxsea.com), including support pages, tips and tutorials, online download and a privileged area for all MaxSea Users which is called My MaxSea.

- [My MaxSea Area](#)
- [Technical Support](#)

### My MaxSea Area

MaxSea has created a club for all users of MaxSea Time Zero. This privileged area called "**My MaxSea**".

To join the club, all you have to do is register on the web site.

Just visit [www.maxsea.com](http://www.maxsea.com) and click on the Register section. you will need your software serial number.

This information can be found in MaxSea info screen (go to **MaxSea** menu and choose "**About MaxSea**") or on your "MyMaxSea" privileged card that came with your original software package.

The Privileged Area My MaxSea allows you to gain access to numerous services (weather, support, online training, Newsletter, etc.) and to an online download service for upgrading your software.

### Upgrading your Software

1. If you are already running a version of MaxSea, you can upgrade on line your software in your dedicated "**MyMaxSea**" space.
2. You will find latest upgrade you have requested, please read carefully all instructions step by step to ensure your software upgrade.

### Technical Support

**Once those resources are exhausted, our technical support team is ready to assist you Monday-Friday 8 a.m. - 5 p.m. Pacific time.**

- HOTLINE International Phone **09 010 280 028**
- By Email, [support@maxsea.fr](mailto:support@maxsea.fr)
- On Our WEB Site [www.maxsea.com](http://www.maxsea.com)



## References

### User Interface

- Running MaxSea
- [Software environment](#)
- [MaxSea's Options](#)
- [MaxSea Time Zero Workspaces](#)
- [MaxSea Time Zero Ribbons](#)
- [MaxSea Time Zero Tool Bar](#)
- [MaxSea Time Zero NavData](#)
- [MaxSea Time Zero Access and Shortcuts](#)

### MaxSea's Options

Click on MaxSea logo  
Options :



to call up all MaxSea Menu

MaxSea menu organizes a number of items which call up setting dialog to configure and manage MaxSea Data, setups and presentation.

1. **Menu Options** lists General options to set up :(click on following link to read more)

[Ship & Track parameters](#)

[Logbook](#)

[Waypoints & Routes parameters](#)

[Plotter Display](#)

#### Options that allow you to define general display characteristics such as:

-

- **Satellite Photo Transparency on Water** (25% by default), click on and move cursor on slide to change value.
- **Tidal Currents Transparency** (25% by default), click on and move cursor on slide to change value.
- **Weather Transparency** (25% by default), click on and move cursor on slide to change value.
- **3D Exaggeration** : change the 3D exaggeration, by selecting an item in the pop-up (Low / Medium / High)

- **Bathymetry** : box unchecked by default. Check it to display 3D data Bathymetry.

**Vector chart**

- **S-52 Vector Chart Display Mode** : You can customize the appearance of charts by turning on and off layers of information. You can modify the display level in pop-up menu which gives you the choice between various display configurations: **Default** (pre-configured level) / **Base** / **Standard** / **Other** / **fishing** / **Custom**.
- Check each box to display on chart **Names** of Buoy / Light Description / Light sectors / Text (important) / Text (other)
- Choose a value in each corresponding list attributed to Shallow Contour / Safety Contour / Deep Contour
- Check the box to display Obstruction Depth Below Safety
- Choose a chart color palette from Standard or S52

**S-52 Custom** :

"**S-52 Vector Chart Display Mode**" must be selected on Custom to display following S-52 Custom mode: check each box for which you want to display information on chart. All Boxes are unchecked by default.

**Weather Forecast (options to adjust the weather forecast)**

**Routing**

**Radar** (available only if MaxSea belongs to Explorer range product)

**Targets**

**General** : it is where you can adjust user interface display

**Alarms** : management of all alarms in MaxSea (XTE, CPA/TCPA, AIS )

**Units** : list of available Units allows you to choose in which unit you will display measurements.

**Note:** Every Menu options can be reset, select each of them and then click on "Reset Default Settings".

2. **Open Weather File**
3. **Save UI as** : this option allows you to save your own user interface. All setting up parameters can be saved to easily recover them later next time running MaxSea. You can save as many user interface as you want, user's interface file is saved by default in **My MaxSea from My documents folder**. You can also save them directly on desktop to quickly find it again. Double



MyConfig.MaxSea  
Settings


click on this file to run MaxSea with "MyConfig.MaxSea Settings" user interface. (next time running MaxSea the last one is re opened by default )

4. **Import /Export**
5. **NavNet 3D synchronization** (available only if MaxSea belongs to Explorer range product)

6. [Chart Catalogue](#)
7. **Activate Modules / Data** : When new updates are detected next time running MaxSea this dialog is automatically displayed. Any time you wish you can activate this function to get new updates and to enter serial numbers to valid your data.
8. [Connection Wizard](#) (available only if MaxSea belongs to Navigator range product)
9. [User Guide](#)
10. [About MaxSea](#)
11. **Exit**: click to quit MaxSea

## Status Bar

### MaxSea Time Zero Status bar allows :

1. Minimizing MaxSea by Clicking on the Minus button located in the upper right corner of the status bar.
2. To quickly obtain information on alarms. The status bar is colored in grey by default for Standard Navigation Mode, in yellow when MaxSea is running in "Home Planning" mode, and in red to indicate the alarms of " Lost Position or No Position..." Alarms remain shown as long as they are active.
3. To Undo / Redo  last previous actions in MaxSea. Redo function control processing means for redoing an operation that was canceled by execution of the last undo function when a redo function is executed. The Undo/Redo function can be applied on a GO TO function, plotting, deleting, moving or modifying waypoints, routes, points of route and or Logbook events, ...

- |   |
|---|
| 1. The Status bar is remaining shown as long as alarms remain active and disappears dices that all this information disappears. |
|---|



## Ribbons

Each Workspace's ribbon includes all the tools which allow to reach software functions and dependent on the selected workspace. The availability of certain tools in the ribbon depends on the MaxSea Software configuration. Following presentation introduces all usual Tools of the Navigation Workspace.



### 2D Display Mode and Chart Orientation Mode

Navigation	Planning	Dual NAV	Radar	Update
------------	----------	----------	-------	--------

 <p><b>2D North Up</b></p> <p>Click to switch from one to the other and Right Click to display menu.</p>	X	X	X	X	N/A
 <p><b>2D Head UP</b></p> <p>Click to switch from one to the other</p> <p>Heading either transmitted from connected equipment (such as Compass) or COG if no heading received.</p>	X	X	X	X	N/A

### 3D display and Chart Orientation






	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>3D North UP</b></p> <p>Click to switch from one to the other and Right Click to display menu.</p>	X	X	X	X	N/A
 <p><b>3D Head Up</b></p> <p>Click to switch from one to the other</p> <p>Heading either transmitted from connected equipment (such as Compass) or COG if no heading received.</p>	X	X	X	X	N/A
 <p><b>Free 3D Display</b></p> <p>Move the chart in Free 3D Display, press down and maintain the shift key  while moving the mouse on the chart.</p>	X	X	X	X	N/A






Chart orientation is shown on the compass (right bottom of the screen)

## Heading Line


	Navigation	Planning	Dual NAV	Radar	Update
 <p>Heading Line</p> <p>Click to Show/Hide heading line on chart.</p> <p>Heading Line tool is grayed when heading is not transmitted from connected equipment (Compass equipment)</p>	X	N/A	X	X	N/A

## Choosing chart to display


	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>Vector</b> Charts</p> <p>Click to display Vector Charts</p>	X	X	X	N/A	X
 <p><b>Raster</b> Charts</p> <p>Click to display Raster Charts</p>	X	X	X	N/A	X
 <p><b>Fishing</b> Charts</p> <p>Click to display Fishing Charts</p>	X	X	X	N/A	X

**1 Pink boundaries** outlines are displayed on the chart to help you to find quickly presence of chart areas. Vector, Raster and Fishing charts can be installed both together for the same software but cannot be displayed in the same window chart (**exclusive mode**).



### Choosing data to display

	Navigation	Planning	Dual NAV	Radar	Update
 <b>Sat Photo</b> Click to display Satellite pictures installed with melting effect on the chart.	X	X	X	N/A	X


**1 Green boundaries** outlines are displayed on the chart to help you to find quickly presence of Satellite Photo areas.

 <b>Depth Shading</b> Click to display color depth shading on chart.	X	X	X	N/A	X
--	---	---	---	-----	---

### Waypoints and Routes


	Navigation	Planning	Dual NAV	Radar	Update
 <b>Routes</b> Click to display or hide routes.	X	X	X	X	N/A
 <b>Waypoints</b> Click to display or hide Waypoints.	X	X	X	X	N/A

### Targets


	Navigation	Planning	Dual NAV	Radar	Update
 <b>Targets (*)</b>	X	X	X	X	N/A

Click to display all types of targets (AIS and/or ARPA) on chart.					
---	--	--	--	--	--


### Track

	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>Track</b></p> <p>Click to display or hide ship's track and right-click to select track's historic.</p>	X	X	X	N/A	N/A

### Logbook

	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>Logbook</b></p> <p>Click to display or hide the logbook on chart.</p>	X	X	X	N/A	N/A



### Routing

	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>Routing (*)</b></p> <p>Click to display or hide the Ru on chart.</p>	N/A	X	N/A	N/A	N/A

**i** Weather Routing Functions are available only if the Routing Module has been purchased. Routing button is grayed out if weather routing conditions are not fulfilled. Read More in related Weather Routing Chapter








### Tides and Tidal Current Data



	Navigation	Planning	Dual NAV	Radar	Update
--	------------	----------	----------	-------	--------

	<b>Tides</b>	X	X	X	N/A	N/A
Click to display or hide tidal gauges.						
	<b>Currents</b>	X	X	X	N/A	N/A
Click to display or hide Tidal Currents arrows.						

**Yellow boundaries outlines** are displayed on the chart to help you to find quickly presence of Tides and Currents Data areas. When Tide and Current (and not Weather forecast and not Routing) are displayed on chart. You can move on the time scrolling bar in the right bottom of the Planning Workspace to play Tides and Currents Data during a period of 24 hours. You can do it as often as you wish to get a feel for the rhythm of the tidal currents moving.


### Weather Data

			Navigation	Planning	Dual NAV	Radar	Update
	Wind	Click to display or hide <b>Wind Feather</b> information on chart.	X	X	X	N/A	X
<b>SURFACING MODE</b>							
	Wind in color	<ul style="list-style-type: none"> <li>○ Right Click to roll down the menu and choose the type of forecast data you want in color. Simply click on the corresponding icon.</li> <li>○ Click to display or hide selected forecast data.</li> <li>○ Data are displayed in surfacing mode.</li> <li>○ Scale is displayed on left bottom corner.</li> </ul>	X	X	X	N/A	X
	Pressure in color		X	X	X	N/A	X
	500mB in color		X	X	X	N/A	X
	Wave in color		X	X	X	N/A	X
	Current in color		X	X	X	N/A	X
	Sea Surface Temperature in color		X	X	X	N/A	X




	Sea Height Anomalies in color			X	X	X	N/A	X
	Sea color			X	X	X	N/A	X




**i** In navigation space, you can only display a forecast file if it is corresponding to the actual time. To display a past or future file, you have to use the planning space to display animation. In the Planning Workspace the scrolling bar on the right bottom side allows you to play the weather forecast data directly on the chart.

## Lists

	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>Lists</b></p> <p>Click to display or hide lists of : Waypoints, Routes, Route Details, Logbook, etc...</p>	N/A	X	N/A	N/A	N/A


## Time / Date / Play Movie

	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>Actual Time</b></p> <p>Click to return to Actual Time</p>	N/A	X	N/A	N/A	N/A
 <p><b>Calendar</b></p> <p>Click and choose a date from the calendar to view weather forecast forward and back. The Actual Time becomes simultaneously un-selected.</p>	N/A	X	N/A	N/A	X
 <p><b>Play / Pause</b></p>	N/A	X	N/A	N/A	N/A

<p>By clicking on the "play" button, animation is launched from the chart time displayed.</p> <p>The start time can be the actual time, or the time the user has selected thanks to "start file", "next step" or "previous step" buttons.</p> <p>If there is no forecast files, animation will be launch on 24Hours for tides and tidal currents.</p>					
<b>Player Functions</b>					
 <p><b>File start</b></p> <p>Click to come back to the beginning of the file.</p>	N/A	X	N/A	N/A	N/A
 <p><b>Step Back</b></p>	N/A	X	N/A	N/A	N/A
 <p><b>Step Forward</b></p> <p>Click to move forward or move back in the time, depending of the <i>scale</i> of your forecast data. Next and previous step can be managed manually.</p>	N/A	X	N/A	N/A	N/A

**i** In Planning Workspace, actual date and time and also a progress time bar are permanently displayed on the right bottom corner of the chart. The Time progress bar allows user to quickly move back and forward to play animation on the chart.


### Update functions


	Navigation	Planning	Dual NAV	Radar	Update
 <p><b>Weather</b></p> <p>Click to display or hide routes.</p>	N/A	N/A	N/A	N/A	X

**i** In the Update Workspace is where you can requesting your weather forecast file by choosing a zone and a type of data you wish. Read more in the "[Requesting a Weather File](#)" related topic.

### RADAR

Navigation	Planning	Dual NAV	Radar	Update
------------	----------	----------	-------	--------

 <p>Radar Overlaying (*)</p> <p>Click to Show/Hide Radar Overlay Echo on chart.</p>	X	N/A	X	X	N/A
--	---	-----	---	---	-----

 If Radar Function included in MaxSea the Radar Overlaying Tool is added in the Navigation Ribbon and Radar Workspace is added. Read More in RADAR Workspace topic.

**(\*) presence of this button depends on your software configuration. The omission of a button means that the corresponding module is not available in the software.**

## Setting up Alarms

This option allows you to adjust each audio and notification safety alarms in MaxSea to prevent about danger. These warnings are necessary for avoiding any types of collisions.



Click MaxSea, choose Options, then Alarms in General Options dialog.

Several functions are proposed :

**XTE Alarm** : check the box to activate XTE notification in the status bar and Audio Alarm when the GPS position moves off-course. The "Out of limits" function can be adjusted in following option.

**XTE alarm value:** (100 meters is the default value) the Security XTE area is delimited with two dotted lines, green and red, on each side of the active route. Enter a distance value depending on navigation location.

**Depth Alarm:** check the box to activate Depth notification in the status bar and Audio Alarm.

**Depth alarm Value:** enter a depth limit value for when alarm is activated (10 meters by default).

**CPA Alarm:** check the box to activate Closest Point of Approach notification in the status bar and Audio Alarm.

**TCPA alarm Value:** enter a limit time value of CPA when the boat and the target are the closest to one another. (10'00s predicted time by default).

**Proximity AIS Target Alarm** : check the box to activate Closest Point of Approach notification in the status bar and Audio Alarm.

**Proximity AIS Target Alarm value:** enter a distance limit value when and the AIS target are closest to one another (100 m by default)

**Ignore AIS Alarms Slower than:** 10 kt defined by default or you can change this value by entering a predicted chosen value.

**Choose to every alarm of notification a type of sound in particular** (five types of alarm and five different sounds, as for example the Alarm1 is associated to Notification1 for XTE)

**Alarm and Notification** : (unchecked by default) check the box to always activate alarms.

**Sound Alarm Until Acknowledged:** (checked by default) If this option is unchecked, the sound is activated only one time and else it is activated every 10 seconds.

## Tools bar

MaxSea uses tools and buttons to make operation simple and easy. The "Tools Bar" displayed on the left side of the screen will be used most often.



The toolbar is displayed vertically on the left-hand side of the screen.

It includes both tools and buttons and allows working on an electronic chart as you would do on a paper chart with a pencil and navigational protractor.

Select any tool or activate any button on the palette by simply clicking on it.



Simple click on this tool to display Tools Configuration dialog. By default toolbar from each workspace is preconfigured with a number and order of tools depending on the selected workspace.

**This function allows you to add or remove or move any available button in toolbar :**

1. To add a button in the tool bar, select it in the available buttons list and click on **Add**.
2. To change its position in the tool bar, select it in the current buttons list and click on arrow either "**Down**" or "**Up**" to move it.
3. To remove button in the tool bar, select it in the Current Buttons list and click on Remove. The button will appear next to, in the available buttons list.
4. To go back to the initial configuration click on **Default**.

## Activation Buttons



Center On Ship











Auto Center activation button toggles on/off chart auto-centering, placing the vessel in the center of the chart screen.



**MOB**

Single click on Man Over Board button to activate the "Man Over Board" function.

## Navigation Tools

	Pan	Click the Hand tool to pan charts and access chart data. Single click and press the left mouse button to grab the chart and to pull it to expose a new area.
	Zoom In	Make a simple left click on the chart to zoom in, centered on cursor position
	Zoom Out	Make a simple right click on the chart to zoom out, centered on cursor position
	Divider	To measure distances and true headings to and from any point to another on the chart in 2D.  Click a chosen position to start measure and drag to the end position.
	<i>Waypoint</i>	To create Waypoints, which are stored in data base and displayed on charts
	<i>Route</i>	This tool provides a simple method to draw a route consisting on series of connected route points.
	<b>GO TO</b>	This tool provides a simple method to simultaneously place a Quick Waypoint at the cursor position and activate the route to go to this Quick Waypoint.
	Pacman	To remove unwanted objects. Select the tool, and then click on the object you want to delete.
	Calculate Routing *	To create and display a Weather Routing on chart.
	Range Plus & Range Minus *	The Range Plus function shrinks the chart range;The Range Minus function expands it.

When the Range function is operated in MaxSea, the Range key is simultaneously applied in NavNet.

(\*) presence of this buttons depends on your software configuration. The omission of a button means that the corresponding module is not available in the software.

## NavData



The **NavData Side bar** allows viewing different types of NavData. There are four different types of NavData :

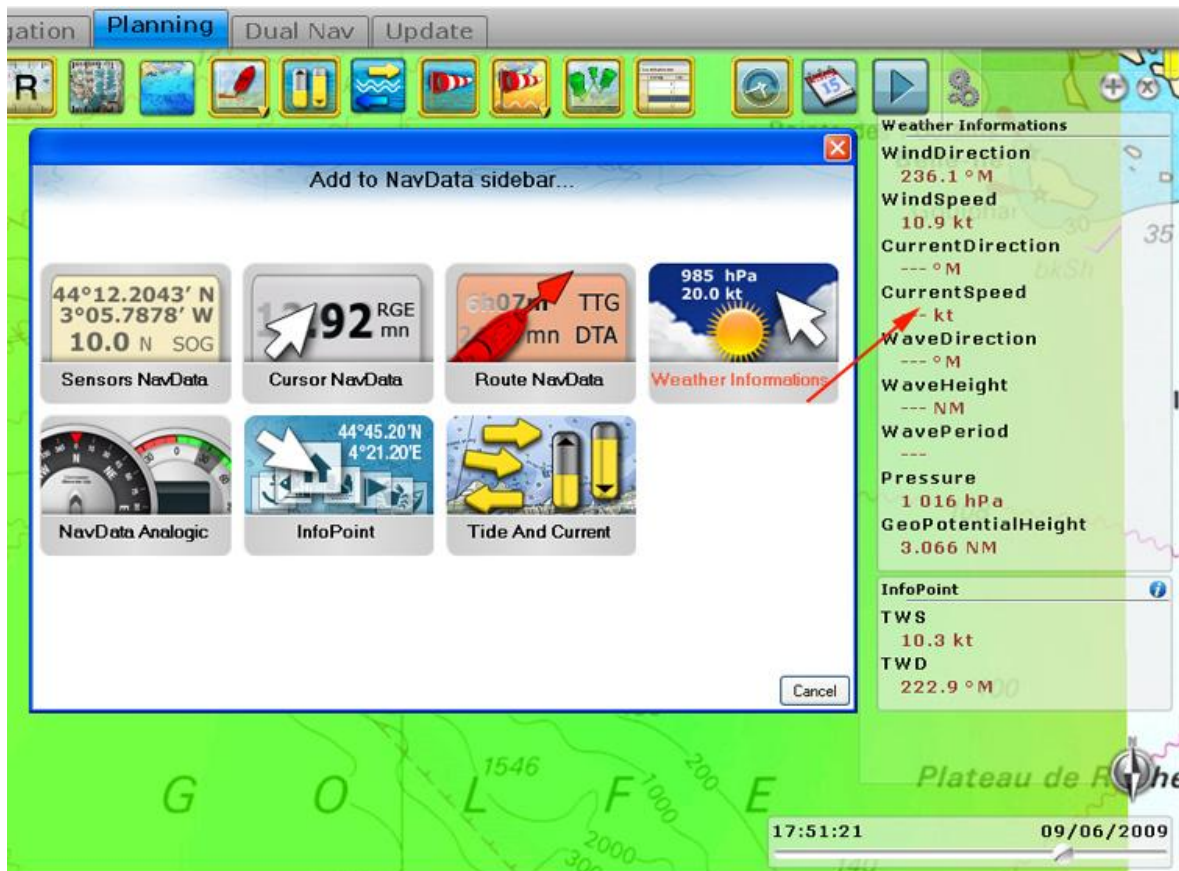
1. **Cursor NavData** shown in grey background color displays real-time information as the cursor moves over the screen. By default, data information is latitude and longitude.
2. **Sensor NavData** shown in yellow light background color displays data relative to information being received from electronic equipment (GPS, central navigation equipment and else) connected to your computer.
3. **Route NavData** shown in orange background color continuously displays updates information necessary to follow a Route (Waypoint name, distance,...).
4. **NavData Analogic**, information are shown in a graphical displays. Each NavData Analogic's representation depends on selected data.
5. **Info Point NavData**, displays values and comments relative to selected object on chart (info concerning waypoints, route points etc...)
6. **Tides and Currents NavData**, gives values of currents and tides nearest the ship's position. Only one Tides and Currents NavData can be opened at same time.
7. **Weather Informations**, displays values which are contained in the current weather forecast file ( weather and oceanic data). Information is simultaneously updated each time moving the cursor.

### NavData Side Bar Display

1. Click on the **Cross** in the upper right hand corner will close the **NavData Side Bar**.

2. You can reopen the closed **NavData Side Bar**: either click on the NavData Button on right side or go to **[MaxSea]** menu and select **[Show/hide Nav data]** or press **F2 keyboard**.





### Setting the NavData Side :

You can easily choose how many NavData you want to display in the NavData Side Bar by clicking on the **Plus** in the upper right hand corner.

A dialog for adding **NavData** allows you to choose a category between the following.

1. **Sensors NavData** gives for example information sent by the GPS:
  - Date/Time
  - Boat Position (information given from GPS)
  - Course Over Ground ( *COG* )
  - Speed Over Ground ( *SOG* )
2. **Route NavData** can show:
  - Time To Go ( *TTG* ) at the present ship speed.
  - Distance to the Waypoint
  - Estimated Time Arrival ( *ETA* )
  - Distance To Arrival

### 3. **Cursor NavData** :

- **Cursor Position** shows real-time information as the cursor moves over the screen (Latitude /Longitude)
- **Bearing to Cursor** : distance between the cursor and the ship,
- **Range to Cursor** course between the cursor and the ship,
- **Time To Go ( *TTG* ) to Cursor**

### 4. **NavData Analogic** :

- **Date/Time** shows clock animation (display by default)
- **Compass display** : Bearing to cursor / Course Over Ground / Heading
- **Analogic Counter Display:** Speed Over Ground, graduation from 0 to 30 / True Wind Speed, graduation from 0 to 30 / Apparent Wind Speed 0 to 5 x10
- **Range to Cursor** course between the cursor and the ship,
- **Time To Go ( *TTG* ) to Cursor**

### 5. **Info Point NavData** :

- **Date/Time** shows clock animation (display by default)
- **Compass display** : Bearing to cursor / Course Over Ground / Heading
- **Analogic Counter Display:** Speed Over Ground, graduation from 0 to 30 / True Wind Speed, graduation from 0 to 30 / Apparent Wind Speed 0 to 5 x10
- **Range to Cursor** course between the cursor and the ship,
- **Time To Go ( *TTG* ) to Cursor**

**Note** : you can display as many NavData same type as you need for your navigation information.

## Setting Each NavData Display

Right-clicking on each NavData calls up the contextual menu and allows :

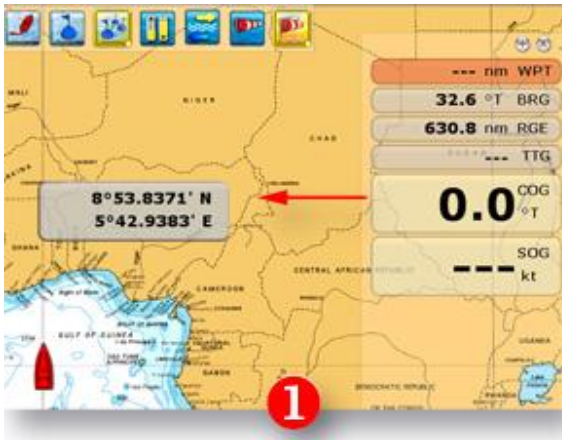
1. Choosing one or several data to display. If several Data are selected in the same time, each data will be displayed in alternate frequency.
2. Switching between small or big font size.
3. Closing the NavData from the NavData Side Bar.

## Moving Each NavData Inside and Outside the NavData Side Bar

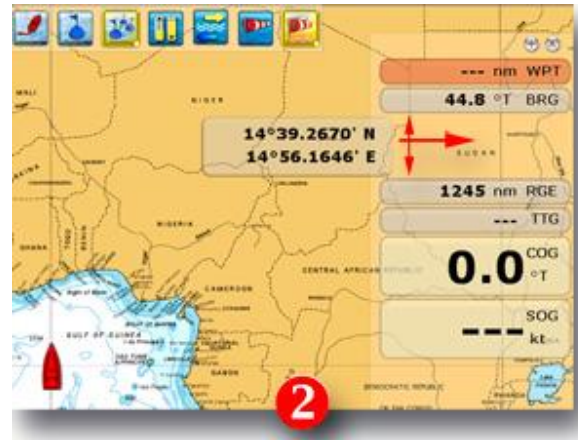
Simple click and Drag a NavData to move it:

1. Outside the NavData Side Bar anywhere on the Chart. It will be permanently shown on screen even if the NavData Side Bar is closed.

2. In the top or bottom of the NavData Side Bar at a desired place.



Moving a NavData outside the NavData Side Bar



Moving a NavData in the NavData Side Bar

## MaxSea General Options

- **Use Speed Optimization** : checked by default. If power of your computer is enough, you can uncheck this box to improve refreshing the chart display.
- **Power consumption Optimization** : several options depending on your choice Normal (selected by default) / Performance / Medium and Battery Life.
- **Day /Night Mode: automatic mode is selected by default. Choose a mode for lighting controls of the display. Three modes are available (Day / Dusk /Night)if you should need a less bright or darken to not be dazzled in a dark cabin.**
- **Bearing display** : **True** is selected by default. True (or geographic) bearings use the geographic North pole as the reference point and refer to the North maritime Chart. On steering compass headings are indicated Magnetic headings. **Magnetic** bearings reference the magnetic North pole (this value is constantly moving very slowly) so you have to apply a correction factor to compensate for this offset.(see the following MaxSea World magnetic chart reference). Most GPS gives the option of outputting geographic or magnetic. As same in MaxSea you can choose Magnetic if your GPS output displays Magnetic information.
- **Great Circle Navigation** : checked by default. The great-circle distance (orthodromic distance) is the shortest distance between any two points on the surface of a sphere measured along a path on the surface of the sphere. The distance between two points in Euclidean space is the length of a straight line from one point to the other. On the sphere, however, there are no straight lines. That is why on the chart in projection Mercator when you plot a long route, it is represented by a curved line with several intermediate points. When this option is checked it is applied on all measurement tools (bearing tool, divider and also the plotting route tool...)

**Note:** Once after plotting a route, all the measures which will be done such as the calculation between two points (route leg distance or XTE) or moving route points will be done in straight line mode.

- **Maximum Distance between Route Points** : enter a value to define the maximum distance that will be taken between two Route points (more you are closer to the latitude zero and more this distance is equal to the maximum value).
- **Tidal Step for Animation** : by default the step "10m00s" is selected in the predefined list. Depending on zone study you can change the step value by choosing a value from 5m00s to 12h00m.

- **Duration of Animation** :20 seconds is the animation duration selected by default. (from
- **NavData Transparency** : to adjust NavData boxes transparency (40% selected by default)
- Click on **Loran C Station & GRI** to display the dialog that allows to adjust GPS Lat/Long to Loran TD's according to the nearest station. MaxSea also allows you to enter a "correction value" to compensate the slight inaccuracies. Because Loran is not a linear function, this correction value is not a fixed value and thus changes as the boat moves. In MaxSea, you can enter your correction table once and never have to update it again only if needed. Then thus as the boat moves, MaxSea automatically references the closest correction from the table and uses that value as the correction.
- **NavData Multi Data Dwell Time**: Defines the sold time enter the display of two data NavData (3 seconds by default)
- **Hide undocked NavData** : Unchecked by default and check the box to always display NavData.
- NavData Size : to adjust all palettes such tools bar , ribbons or NavData to your screen.
- **Full screen : checked by default.**
- **Delay of Full screen Mode** : enter a delay
- **Display Tooltip over object** : three ways to configure how to display content in selected tooltip : Medium (by default) / off /slow and fast.
- **Boat length** : modify the length of the boat value by default is selected to 12m.
- **Icon boat** : depending to a boat type choice between Sailboat (by default) / Sport fishing / Cruiser or commercial.
- **Size of static Icon**: modifying size of boat symbol, normal (by default) and small all tools in MaxSea will appear smaller at screen.
- **Center On when zooming with Hand** unchecked by default
- **Enable Auto Hand tool selection** : if this option is checked the Hand tool will be automatically selected after each action in MaxSea. Option unchecked by default.
- **Allow unselected object to be moved.** checked by default

## Quick Access and Shortcuts

**Use the Right Click on selected object on the chart to access to contextual menus.**

**Use the Time Progress bar on the Right Bottom side of the Planning Workspace to play back and forward:**

1. Weather Routing
2. Weather Forecast data if there is no weather routing selected
3. Tide and current data during 24 hours, this can be done if there is no Routing and weather forecast data displayed on chart

**Use the wheel of the mouse or the Track Pad of your Laptop to scroll on chart, on slide button,...**



If you move your finger towards the top right and drag down the track Pad will act as if you used the scroll wheel on the 3-button mouse.

**Note:** Refer to the Laptop user's guide to adjust the track pad.

#### Accessibility MaxSea Usual functions keyboard Shortcuts:

Press on the keyboard :	To :
<b>Ctrl + Z</b>	Undo the last command or action
<b>Ctrl + Y</b>	Repeat the last command or action
<b>Page Up</b>	Zoom in
<b>Page Down</b>	Zoom out
<b>CTRL + Page Up</b>	Activate next step of the animation
<b>CTRL + Page Down</b>	Activate previous step of the animation
<b>CTRL + F2</b>	Display actual hour

Press on the keyboard :	To :
<b>F1</b>	Call up Help with index and table of contents
<b>F2</b>	Center on boat
<b>F3</b>	Show/Hide list action only available in the Planning Workspace
<b>F4</b>	Show / Hide NavData
<b>F10</b>	Radar Range Plus
<b>F11</b>	Radar Range Minus

## Waypoint & Routes Settings

As seen in the previous chapter, some parameters of Routes & Waypoints can be redefined from the menu **MaxSea/Options/Waypoints & Routes**.

### available options List

Name	Type	Function
Display <i>Waypoint</i> Names	Check box	Check it to display waypoint names on the chart
Waypoint Symbol	Drop-down menu	To choose the waypoints icon plotted on the chart
Waypoint Color	Drop-down menu	To attribute a color of waypoints plotted on the chart
Routes Color	Drop-down menu	To attribute a color to all routes plotted on the chart
Ask to enter Route Name	Check box	Uncheck it to hide the asking to enter a route name dialog at the end of plotting route.
<i>Route</i> AutoZoom	Check box	Check it to activate the Autozoom on the active route <i>leg</i> to follow (During GoTo entering or during the next waypoint to reach)
Waypoint Switching Mode	Drop-down menu	Choose the following mode to reach the next waypoint: <ol style="list-style-type: none"> <li>1. Circle and perpendicular (selected by Défaut)</li> <li>2. Circle</li> <li>3. Perpendicular.</li> </ol>
Switching Circle Radius	Distance	Radius of the switching circle.
Waypoint Notification	Check box	Check it to activate alarm when approaching the waypoint
End Route Notification	Check box	Check it to activate alarm at end of route
Waypoint Auto Center	Check box	Check it to automatically centering the chart on plotting waypoint.
Display <i>XTE</i> Alarm Lines	Check box	Check it to display XTE alarm lines.
Delete All Routes and waypoints	Button	Click to delete all routes and waypoints together from the database.

Click on the **[Reset Default Settings]** button down in the windows to come back to default values.

## Setting up Ship & Track parameters

- **"Own Ship COG/SOG Predictor"** : check the box to display the Ground Speed Vector on chart.
- **"COG/SOG Predictor Time"** : choose fixed time "xxmxxs" .
- **"Track Thickness"** : choose between "Thin / Medium / Thick"
- **"Track Color"** : select the color of your track by choosing one in the pop-up.
- **"Track length"** : Always the track is automatically recording and user can choose a time length of the track to display on the chart (from 30 minutes minimal to 2 days maximal)
- **"Historic Track Start"** : past time from track start recording, -6 hours selected by default (values can be chosen from -0hour to -18 hours)
- **"History Track End"** : time after from track stop recording, 6 hours selected by default (values can be chosen from +0hour to +18 hours)

## Charts Catalogue



Click on **MaxSea** and choose **Charts Catalog** to access to the list of installed charts and Data.

For each zone, you get following information:

- Name
- Status (OK or corrupted)
- Type ( *Raster* / *Vector* /S57Vector/3D Data/Sat.Photos)
- Version
- Action to **DELETE** selected Chart from the Database

## Route properties

To obtain general information on a selected route, right-click a leg Route on the chart and choose "Route Properties" to display dialog which allows to:

1. Rename the route
2. Get information on the total Route distance
3. Change the color of a selected route
4. Get number of route point contained in selected route
5. Enter Hyper Text Markup Language comments (add link and media)



## Misc.

MaxSea Time Zero can be used in two modes. Upon starting the software choose "Home Planning" or "Navigation" mode.

## Home Planning

Choose the "Home Planning" mode when planning on shore.

In "Home Planning" mode, the vessel icon is not displayed on the chart, the alarms are disabled and routes cannot be activated. All the other functions such as creating waypoints, planning routes, or ordering and viewing weather files are available.

The Status Bar (Title Bar) appears in yellow when the "Home Planning" mode is used.

## Navigation

Choose the "Navigation" mode when the computer is physically connected to sensors and instruments. (GPS, AIS, NavNet...)

In this mode, the sensor and instrument data is displayed, alarms are enabled, and a route can be activated.

Note: The "Home Planning" and "Navigation" start-up mode are independent from the WorkSpaces (which can be used to plan a route while in the navigation mode)

## About Your MaxSea Configuration



To show information about your software, Choose **About** under the **MaxSea Button** menu.

### You will obtain information about the software configuration :

1. Software serial number (always beginning from "**TØ** ---- ---- ---- --")
2. Type of licence, unlimited or Limited version for demo version.
3. Product category (Navigator or Explorer)
4. Software version.
5. List of activated modules.
6. Three Buttons to Display "**User Guide Software**", to "**Print User Guide**" from a document in PDF format (Acrobat Reader is required) and **OK** to cancel.

## Help

### Help

- [Help Viewer](#)
- [Using Help](#)

## User Guide

MaxSea Time zero documentation is available in different formats

### help software

The Help Viewer provides an integrated table of contents, an index, and a full-text search feature so information can easily be found. Book icons open to reveal topic entries and sub-books. The Help Viewer has the added benefit of showing the Table of Contents, Index, or search results at the same time a Help topic is being viewed. This maintains focus on the Help system and allows seeing all of the other applicable Help topics at a glance. Press **F1** shortcut key.



From **Options** Menu, click on **MaxSea** and choose **User Guide**.

This Help is the complete User guide and you will find all useful links to our rolling demo online in our WEB Site at following address [www.maxsea.com](http://www.maxsea.com)

### Help in PDF format

To print all the Help manual references, you require Acrobat Reader. You will find a manual named Manual.pdf.

## Using Help

### To Find a Help topic

In the Help Viewer, click one of the following tabs:

- Contents tab

To browse through the Table of Contents, click the Contents tab. Double-click the book icons to reveal topic entries and sub-books.

Click a table of contents entry to display the corresponding topic.

- Search tab

To locate every occurrence of a word or phrase, click the Search tab, type a word or phrase for which you want to search, and then click List Topics. See Find it fast for more information about refining and narrowing the search.

Double-click a search results entry to display the corresponding topic.

There are three options for searching: Search previous results, Match similar words (checked by default) and Search titles only.

- Favorites tab

To bookmark a topic, use the Contents, Index, or Search tabs to locate and then display a topic. Click the Favorites tab, and then click Add to save the topic title to the Topics list.

Double-click a bookmark in the Topics list to quickly display the topic.

### Print Help Software:

- To print a help topic, on the Contents tab select it and click Print on the Help Tool Bar.
- All topics within a book, on the Contents tab, select the book. On the Help Tool Bar, click Print, and check Print the selected heading and all subtopics and click OK.
- To print all the Help manual references, you require Acrobat Reader. "Manual.pdf" file is automatically installed on Windows Desktop.

## Version History

### MaxSea Time Zero V1.7 Features

#### MaxSea introduces new concepts on navigation such as :

1. Implementation of "[Save User Interface as](#)" option to easily find a specific interface or to return on that defined by default.
2. Implementation of setting up [LORAN C & GRI hyperbolic Networks](#)
3. Implementation of the [Man Over Board function](#) with bidirectional exchanges between MaxSea and equipment.
4. Implementation of new cartographic data : [Fishing Charts](#)
5. Improving the mode for calculation and plotting functions : [great-circle distance](#) (orthodromic distance) or **rhumb line** (loxodrome) navigation mode.
6. **Improving User Interface as:**
  - Setting up the boat track by choosing a color,
  - Managing each alarm in MaxSea ([General option menu](#)),
  - Displaying Info point on each selected object on chart and Weather forecast information data when moving the cursor in the weather forecast delimited area on chart,
  - Displaying forecast data automatically (weather, tidal currents,...) when clicking a route point,
  - Exporting and saving as a file text each list : Routes, Waypoints, Targets and Logbook,
  - Exporting report of NMEA sentences received in MaxSea (helpful to technical support).

### MaxSea Time Zero V1.7 Features

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## MaxSea Time Zero V1.6 New Features

### MaxSea introduces new concepts on navigation such as :

1. Implementation of the Minimize option and depth shading display mode
2. Logbook and historic of the ship track functions added
3. Improving lists for Waypoints, logbook, Planning Route, Active Route, Routing, AIS and ARPA targets
4. Implementation of new NavData ( Info Point NavData / Currents and Tides NavData)
5. Implementation of Race module that allows you adjusting your weather forecast and getting variability calculation.
6. Improving Connection Wizard.
7. Improving User Interface for [downloading Weather data](#) with possibility to subscribe.
8. Improving Radar and MaxSea Chart Range synchronisation

## MaxSea Time Zero V1.5 Features

Running the cutting-edge of applied information technology, MaxSea Time Zero software is a powerful navigation software for all boaters who have been looking for a user friendly interface and a more comprehensive navigation tool.

### MaxSea introduces new concepts on navigation such as :

1. Implementation of "**Undo / Redo**" feature upon main functions. This can be used when recording, erasing or modifying waypoints and routes and when activating or deactivating one route.
2. Compatible with most **NMEA** serial or NavNet (NavNet 1, vx2 or NN3D) data types: positioning device, wind, depth, SST...
3. Native compatibility with NN3D (Explorer) : sharing Charts, sharing active waypoint, sharing Radar Echo, synchronizing waypoints and routes database between MaxSea and NavNet 3D.
4. Fully [configurable NavData and implementation of graphic NavData](#).
5. Fully configurable Tools and Ribbon Tool Bars (number and size of tools).

6. Improving lists for Planning Route, Active Route, Routing, AIS and ARPA targets
7. Adding waves in routing calculation; a standard wave polar curve is added.
8. Adding **SailSet** to routing; a standard SailSet is added; routing is displayed on chart by isochrons and color sectors; one color correspond to a specific **SailSet** which allows user to detect sails change along optimum routes.
9. Adding option for multi waypoints routing to strictly pass a waypoint or leaving it port or starboard (useful for passing a cape or a racing buoy for example)
10. Adding a NEW orientation mode : Free 3D display mode in 3D view
11. [Improving Connection Wizard to connect equipment](#)
12. Improving User Interface for [downloading Weather data](#).
13. [Adding AIS and ARPA targets systems](#)

**Note that** Information on this Help User guide is copyright of MaxSea and its respective authors. We have tried to keep information as accurate as possible, but cannot guarantee accurateness of all MaxSea software information on this help. Presence of each module depends to your software configuration. To obtain more information on MaxSea Products Comparison, [click here](#) to consult online MaxSea Time Zero features list.

## MaxSea Time Zero V1.4 Features

Running the cutting-edge of applied information technology, MaxSea Time Zero software is a powerful navigation software for all boaters who have been looking for a user friendly interface and a more comprehensive navigation tool.

### MaxSea introduces new concepts on navigation such as :

1. Implementation of "**Undo / Redo**" feature upon main functions. This can be used when recording, erasing or modifying waypoints and routes and when activating or deactivating one route.
2. Compatible with most **NMEA** serial or NavNet (NavNet 1, vx2 or NN3D) data types: positioning device, wind, depth, SST...
3. Native compatibility with NN3D (Explorer) : sharing Charts, sharing active waypoint, sharing Radar Echo, synchronizing waypoints and routes database between MaxSea and NavNet 3D.
4. Fully configurable NavData and implementation of graphic NavData.
5. Fully configurable Tools and Ribbon Tool Bars (number and size of tools).
6. Improving lists for Planning Route, Active Route and Routing
7. Adding waves in routing calculation; a standard wave polar curve is added.
8. Adding **SailSet** to routing; a standard SailSet is added; routing is displayed on chart by isochrons and color sectors; one color correspond to a specific **SailSet** which allows user to detect sails change along optimum routes.
9. Adding option for multi waypoints routing to strictly pass a waypoint or leaving it port or starboard (useful for passing a cape or a racing buoy for example)

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information on this help. Presence of each module depends to your software configuration. To obtain more information on MaxSea Products Comparison, [click here](#) to consult online MaxSea Time Zero features list.

## MaxSea Time Zero V1.3 Features

### Time Zero the latest technology offers :

- A full 3D environment with unparalleled seamlessness and speed of zooming.
- New MapMedia .mm3d chart format with Nautical charts, 3D data, and aerial photos are combined to provide you with the best maritime information and a realism that has never before been achieved.
- A totally innovative user interface with highly functional individualized Work Spaces and an automatic full screen display.
- The combination of ergonomics and performance features in a ease of use.
- MaxSea Time Zero provides ease of software installation. Plug and Play: the product is packaged so that the software, charts, 3D data, and aerial photos can be installed very simply. No loss of time.