Bulletin TZ Maps – TimeZero PRO v5

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TZ Maps Introduction

After several years of intense work, we are delighted to announce the official launch of our new charts: TZ Maps.

TZ Maps is a revolutionary development in the world of maritime cartography, combining multiple types of charts, overlays, and features unlike anything seen before! TZ Maps includes Vector Charts, Raster charts (on selected areas), and the new BathyVision (high resolution depth contour lines). A fantastic way to compare data and make sure you get the best information available.

We have put considerable effort into developing new color palettes for the vector charts, providing users with a very pleasant display that is both user-friendly and easy to interpret. In addition, our maps now offer more detailed land information, providing better insight into the coastline and surrounding infrastructure.

TZ Maps includes all these innovative features with a single subscription:

- Vector and Raster charts (raster charts only available on selected areas)
- BathyVision: High Resolution Depth Contour Lines dynamically generated from bathymetric data.
- Community Maps: Chart improvements made and shared by TimeZero users.
- Smart Zone: Automatic notification based on vector chart data.
- Dynamic Lights: Context sensitive light display
- Dynamic Mooring: Mooring recommendation based on coastline and weather forecasts.
- Smart Search: Unified search across multiple sources of data
- Vector display configuration: Streamlined Vector chart display customization

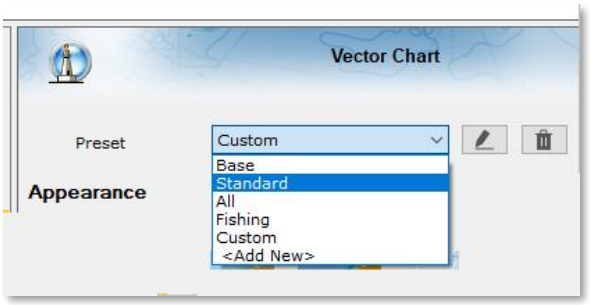
Adjusting Vector Chart display

Unlike Raster charts, Vector charts provide control over the level of information displayed and how it is rendered on screen. Vector charts are made up of individual objects and data layers such as navigational aids, spot soundings, and land features that can be displayed, hidden and represented in various ways.

TimeZero includes a vector chart rendering engine that has been tuned to mimic the traditional paper chart display while keeping all of the great features of vector data. Because different users have different needs and preferences, TimeZero includes lots of adjustments that can be made from the Vector Chart settings.

Preset

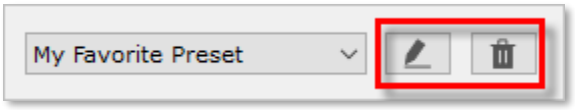
This menu allows fine tuning of the vector chart objects that are displayed on the screen.



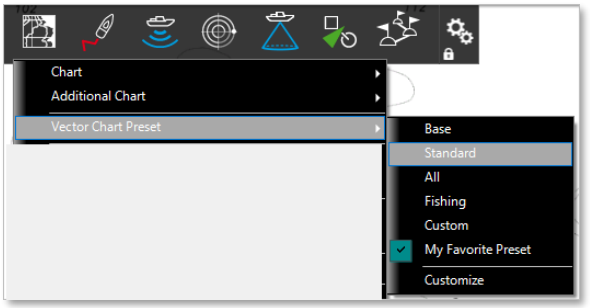
The Vector Chart Display Mode provides quick access to different levels of detail for vector charts:

- "Base" shows the minimum set of objects necessary for planning.
- "Standard" adds other objects (such as restricted areas or channels) that are necessary for safe navigation.
- "All" display all the objects available.
- "Fishing" adds objects that are useful for fishing.
- "Custom" uses the settings defined Custom menu (checked boxes)
- <Add New> allows you to add your own vector chart display settings.

Customizable presets can be renamed or deleted using the corresponding tool on the right of the drop-down menu.



Note: The modes are directly available by clicking on the Chart Button in the Ribbon

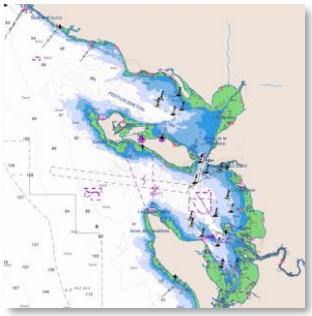
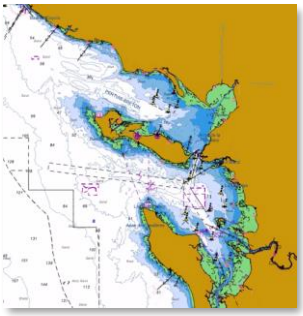
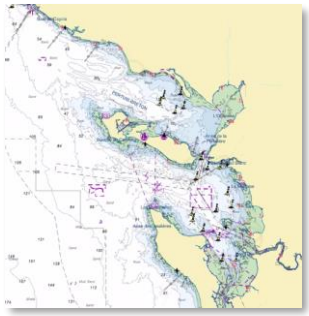
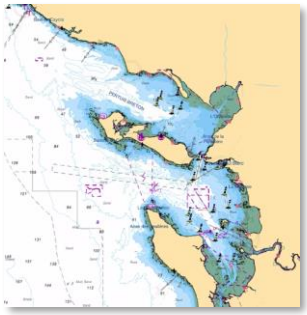
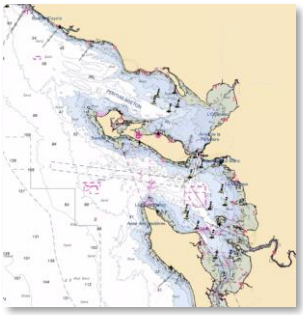
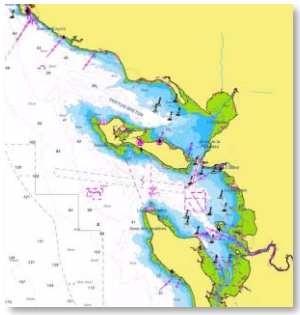


Appearance

Color Theme

Selects the color palette that will be applied to the Vector charts (and the land areas of the BathyVision charts).

TimeZero offers various color themes that match the color palettes of the main Hydrographic Offices around the world. All color palettes use a white background to signify deep water and blue to signify shallow water, except for the "Explorer" palette which adopts a reverse shading. Make sure to try all these color themes to pick the one that is best suited to your taste:

Standard	Official s52	Sunlight	SHOM
			
CHS	**NOAA**	**Explorer**	**Cruise**
			

Style

Selects how the navaids will be displayed. You can choose between a "simplified" presentation (traditional vector chart presentation) or a "Paper Chart" which mimics the symbols used on paper chart.

Simplified	Paper Chart
	

Land features

Selects which source is used to display objects on land.

Land features can be turned OFF all together or can be sourced from either the official vector data ("Official S-52") or from Open Street Map ("OSM"). Open Street Map offers the greatest number of details on land (especially for roads and buildings), but you may decide to use "Official S-52" if you prefer land areas to be less dense on screen:

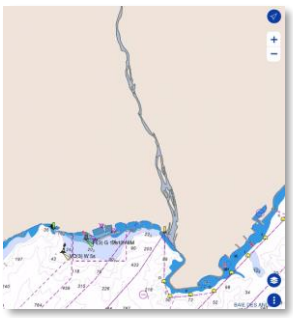
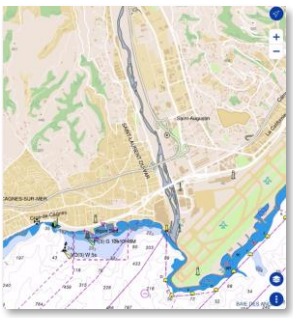
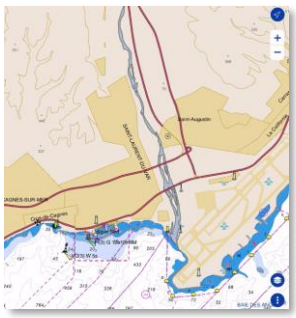
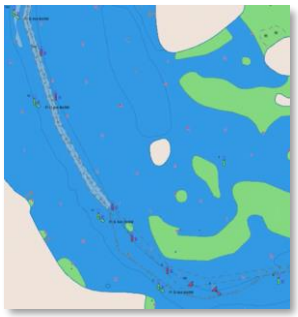
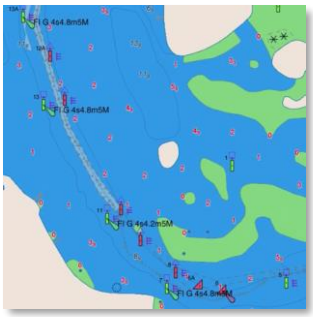
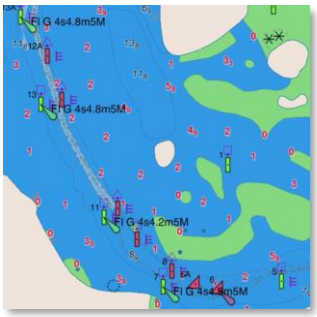
Off	OSM	Official S52
		

Chart Object size

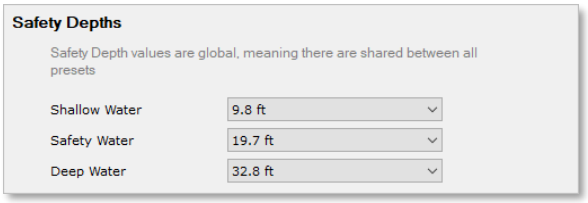
Adjusts the size of the vector chart object icons (buoys, wrecks…) and text displayed on the screen.

50% (Min)	100% (Default)	150% (Max)
		

Safety Depths

The “Shallow Contour”, “Safety Contour” and “Deep Contour” are used to color the various depth areas on the vector chart. The transition between colors is based upon the depth contour lines of the vector chart. If no contour line (corresponding to the exact value you selected) is available on the vector charts, the color transition will happen at the next (deeper) contour line available.

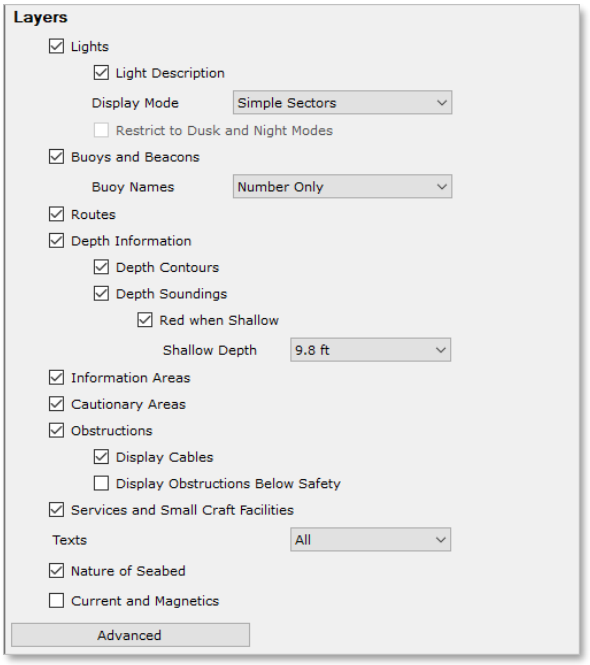
You should spend time adjusting these settings to your liking as they have the greatest impact on "chart contrast".



Layers

Layers: In addition to the screen rendering parameters above, the Vector Chart Menu allows you to turn ON or OFF the display of specific objects (such as Buoy Numbers or Light Description).

To simplify the selection, the objects are grouped into sections (lights, buoys, obstacles…). The Advanced Settings menu allows you to set some additional options.



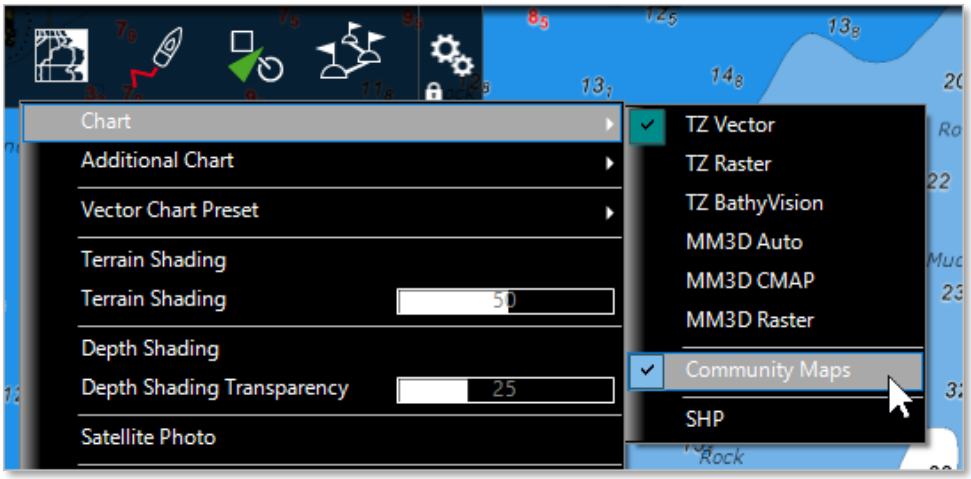
Community Maps

The TIMEZERO community has tens of thousands of users around the world. TZ Maps allows you to edit the various cartographic objects in order to benefit from the most reliable and up to date information. When a TIMEZERO user makes changes to a buoy's information, the modifications will be automatically submitted for other users present in the area to vote on. If the feedback is positive, the update is validated and made available to the entire community. An essential and unique aspect of this function is that this includes photos, comments, and ratings. Users can take photos of objects (lighthouses, buoys, reefs) and document them by adding comments (ex: "dangerous rock at low tide").

Note that the Community Maps layer is kept separate from the Vector chart data, and it can be enabled or disabled, allowing users to contribute safely to the vector chart knowing that they can at any time revert to the official data.

Display Community Maps Objects

Click on the Chart button in the Ribbon to display and select the "Community Maps" options:

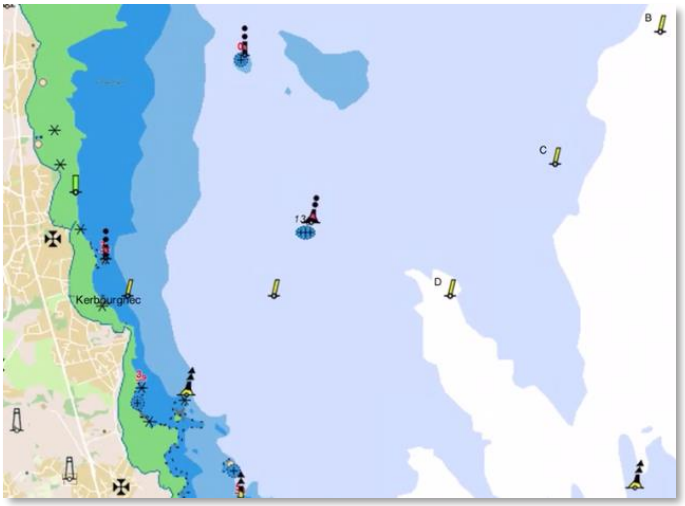


Note: The Community Maps option is only available with TZ Vector and TZ BathyVision charts.

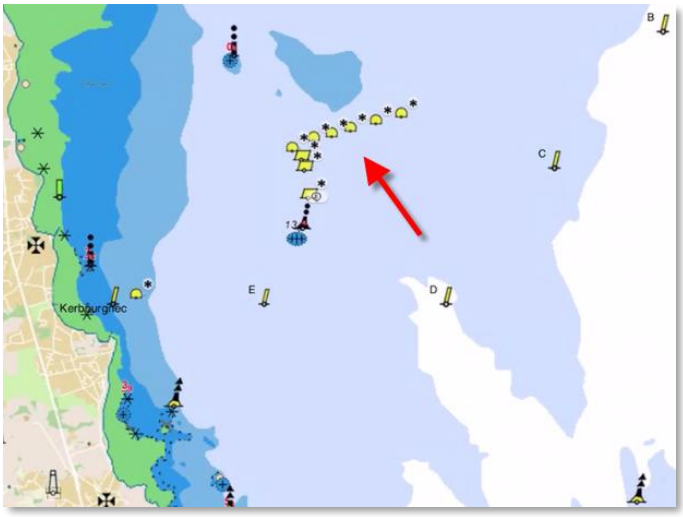
Once the layer is activated, you can view, update and add new community objects to the Vector charts.

Note: The Community Maps data is stored on a separate layer so that the user can always revert back to the official data by deselecting the "Community Maps" overlay.

Official Data

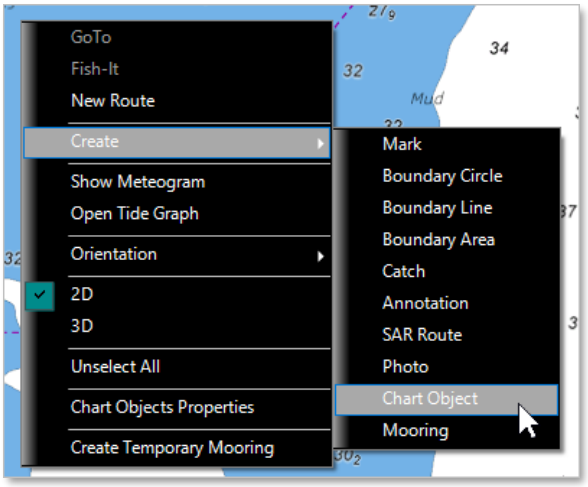


Community Maps overlay

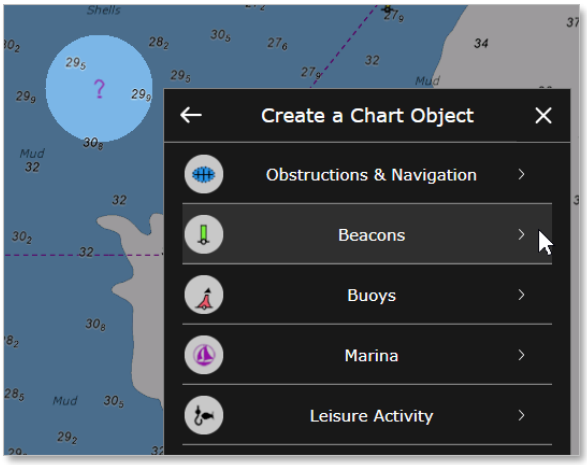


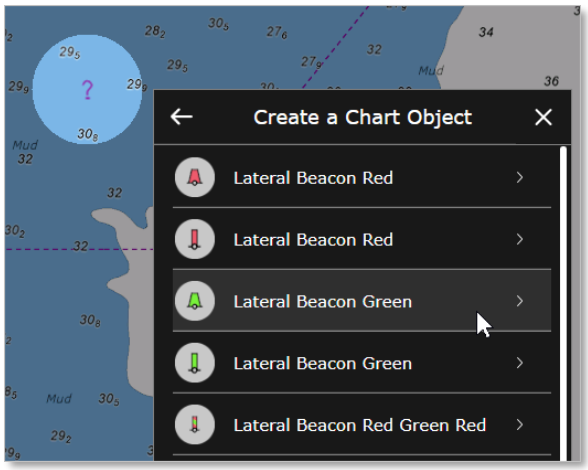
Create a Community Chart Object

Once the layer is enabled, you can add new chart objects by right-clicking on the chart, selecting Create from the drop-down menu and then Chart Object.

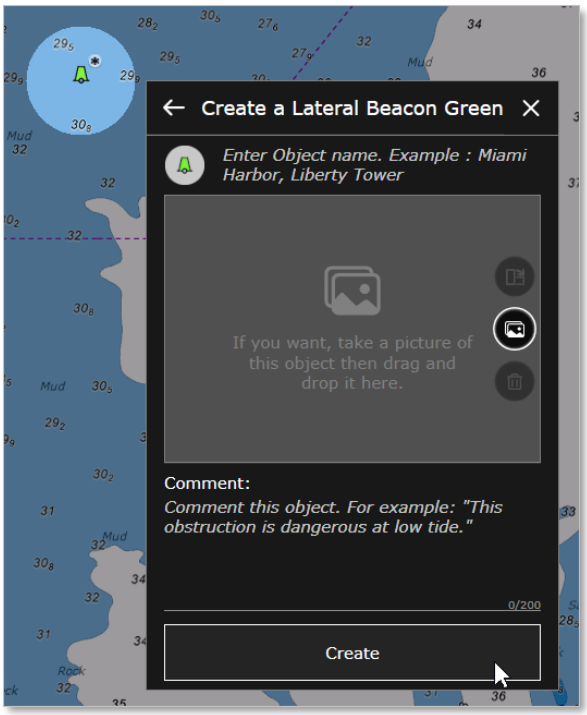


Select the object family among Obstructions & Navigation, Beacons, Buoys, Marina or Leisure Activity. Then, select a sub-category that best matches the characteristics of the object you want to create.





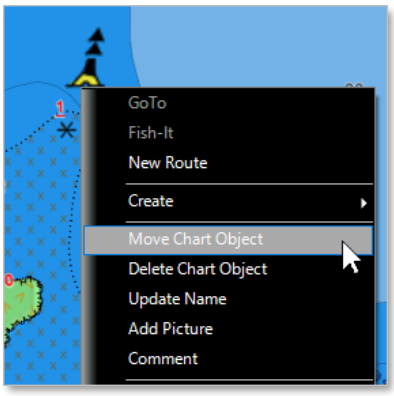
Finally, you can add an optional name, comment, rating, and even a Photo. Click on "Create" to validate your object.

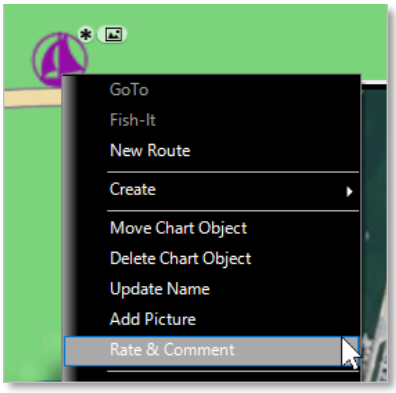


Note: If the category of object you want to create is hidden from the Vector display settings, a message prompting you to change your vector display settings will appear. This will prevent you from creating an object that may already exist on the official vector chart data, but which is currently hidden.

Edit an existing Community Chart Object

You can edit chart objects, (both official and community ones) by right-clicking on them and selecting the modification you want to apply from the pop-up menu (Move Chart Object / Delete Chart Object / Comment). You can also update or add a name by selecting the corresponding option in the Pop-up menu as well.



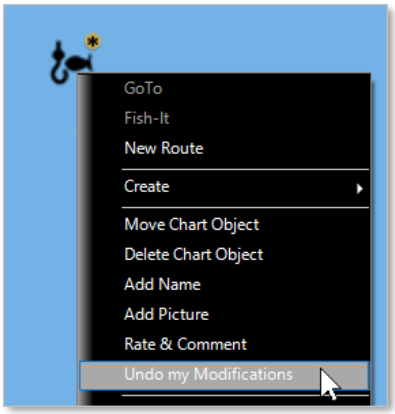


Note: Some object categories such as Marina and Leisure Activities will also allow you to give a rating with the comment.

Undo your Community Charts Object modifications.

If you have added or modified a chart object by mistake, you always have the option to undo your change.

Just right-click on the object and select "Undo my Modifications".



Note: you can only undo/delete modification on objects that you have created/modified yourself.

You can delete/modify an object that another user has created, but it will go through the moderation process.

Community Chart Object moderation process

Chart objects added or modified by a user are subject to review and approval by the TIMEZERO community. This is to ensure the quality and accuracy of the chart data and to prevent spam or inappropriate content.

As soon as an object is added or modified by a user, the object enters a transitional state indicated by a yellow color surrounding its community tag icon:

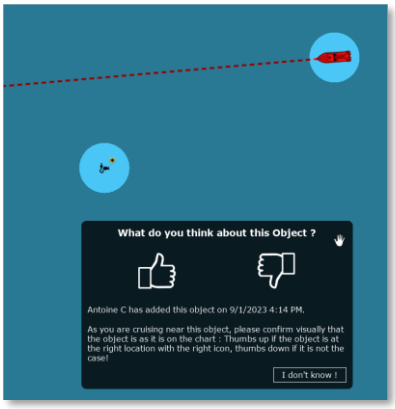
Symbol	Object status
	When Object is in transition state, the symbol is yellow
	When Object is validated, the symbol becomes white

When the object is in the transition state, other users cannot modify it (the object is "locked"), but other users can vote on it (thumbs up or thumbs down).

TIMEZERO has a couple of settings that encourage users to vote by highlighting these objects in two ways:

Proximity Pop-up:

When your boat navigates close to an added or edited community object, a pop-up will appear asking you to rate the object using a thumbs up or a thumbs down. You can also Click on "I don't know!" if you are not in a position to evaluate the object properly:



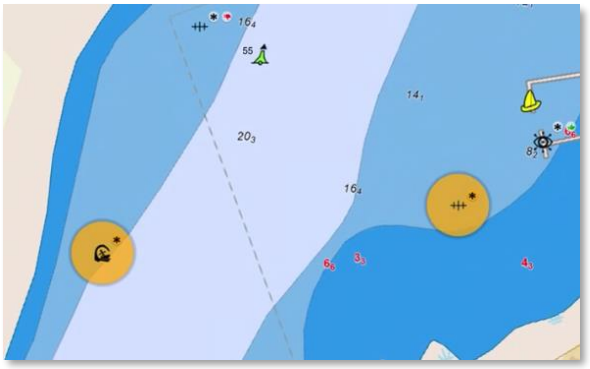
Note: The proximity pop-up is triggered when the boat is less than 270 yards (approximately 250 meters) from the added or modified community object.

When it has been rated, a red or green thumb indicator will show the current evaluation of the object.

Thumb up	Thump down
	

New objects highlight:

If you would like to highlight recent community objects, you can turn on "Highlight new object" from the Plotter settings under Community Maps. This will make all the new or recently modified community objects flash on the chart:



This option is great if you know an area particularly well and want to act as a moderator. In this case, your vessel does not need to be near those objects for you to be able to identify them.

Validation condition

There are two possible conditions for a community object to be validated:

- If the object has received enough positive votes, it will be immediately validated.
- After 14 days, if the object has not been deleted due to too many negative votes, it will be validated.

Note: Each vote has a value that depends on the user and their context. The vote of an active user who has already navigated close to the object and who has already actively participated in the community will carry a lot of weight compared to a new user that is far away from the object.

Once validated, the community marker "*" will turn white and the object will no longer be voted on. At this time, other users may modify the community object (for example delete it, if it is no longer relevant), which would repeat the moderation cycle.

TIP: Adding a photo, comment, rating or changing a name is not subject to validation by the community.

Community Object Tags symbol

A tag is displayed above all Community objects so that they can be easily recognized from official data:

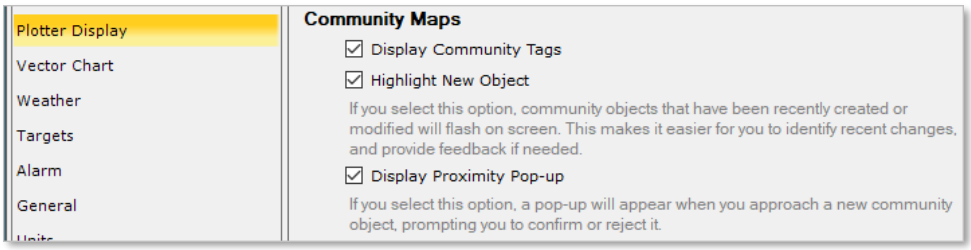
Symbol	Signification
	Community object added
	Community object moved
	Community object with one or multiple attributes modified
	Community object rated (the number indicates average rating)
	Community object with one or multiple pictures
	Community object with one or multiple comments

TIP: if you find these symbols clutter your screen, it is possible to turn them off from the Plotter settings under Community Maps (disable "Display Community Tags").

A community object that has been deleted use a cross over its entire icon rather than using a symbol in order to make the deletion more visible:

Community Maps Display options

Community Tags, proximity pop-up and highlight functions can be deactivated in the Plotter Display settings, under Community Maps:



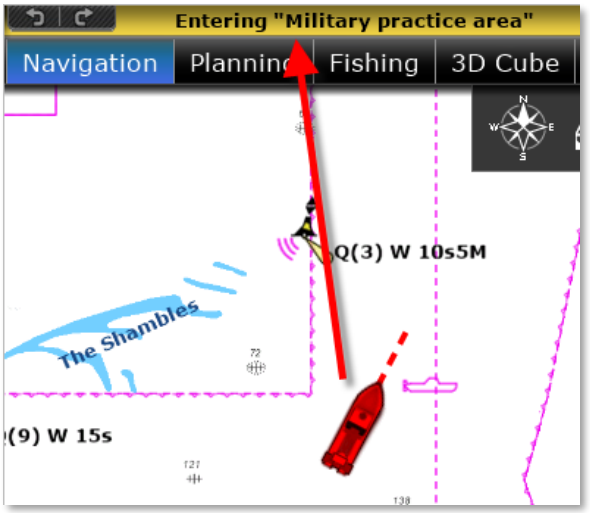
- Display Community Tags: Enables or disables the tag (icons) displayed above TZ Maps community object.
- Highlight new object: When enabled, community object that are newly created or modified will be highlighted on the chart.
- Display Proximity Pop-up: When enabled, and when your vessel comes nearby a community object, a pop-up window will appear asking you to rate this object.

Smart Zone

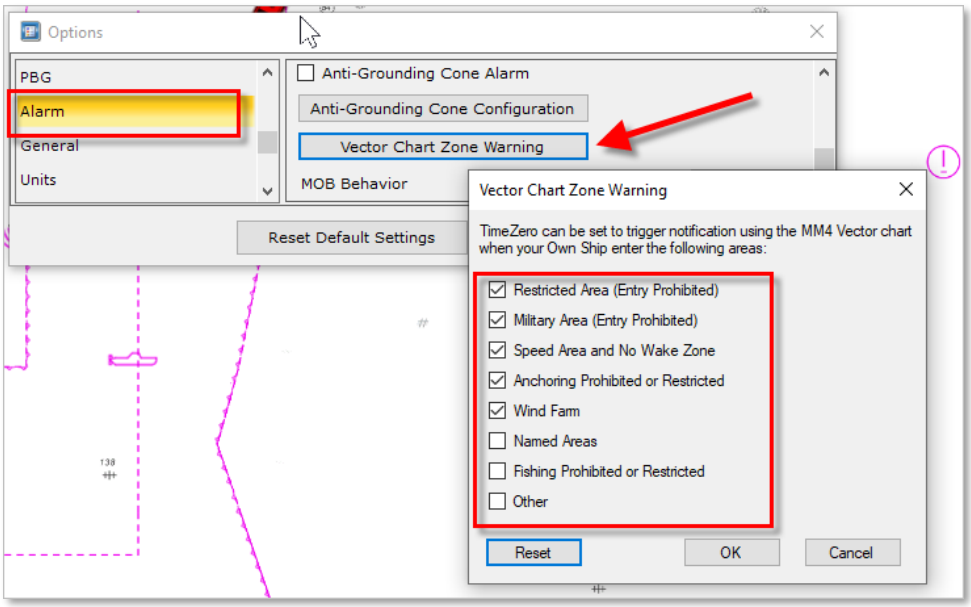
TIMEZERO has the ability to automatically extract zones and area-information from the vector chart and trigger alarms or notifications when your boat enters or leaves a specific area. This feature is called "Smart Zone". The type of alarm and notification that are automatically raised can be configured from the Alarms settings. It is also possible to display a NavData listing all the zones in which the boat is currently located.

Automatic Areas Detection

TIMEZERO can trigger alarms/notifications depending on the chart area you are in. This serves as a welcome message when you arrive at a new location, but more important, TIMEZERO will automatically warn you when entering specific restricted areas:

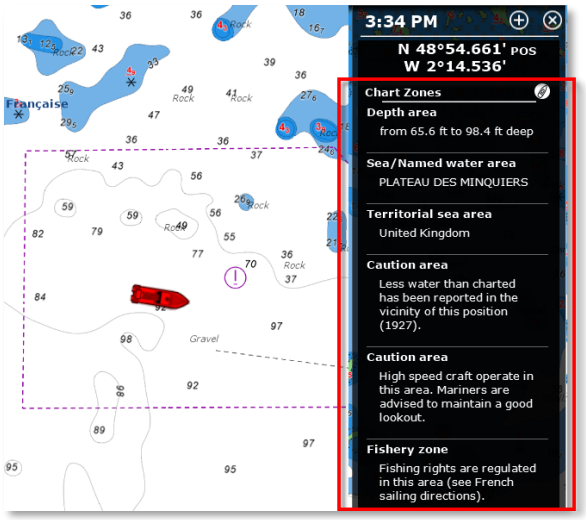


You can configure the type of notification raised by TIMEZERO from the Alarm settings by clicking on "Vector Chart Zone Warning":

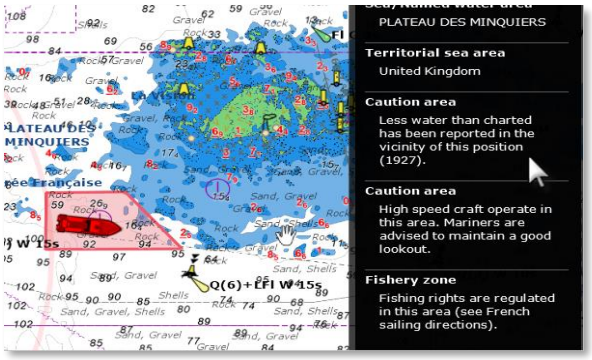


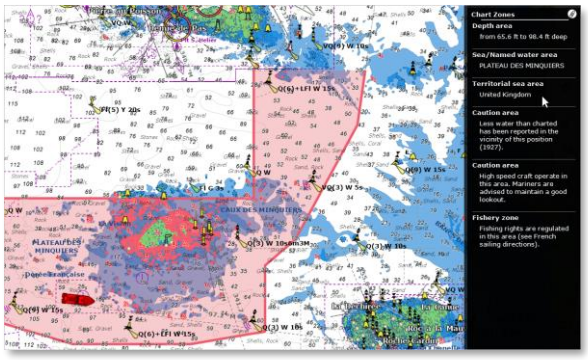
"Chart Zones" NavData

A “Chart Zone” NavData can be configured to the NavData panel. It will display by default, a list of all the areas you are currently in:



Note that you can click on any item of the list to highlight the corresponding area on the chart:

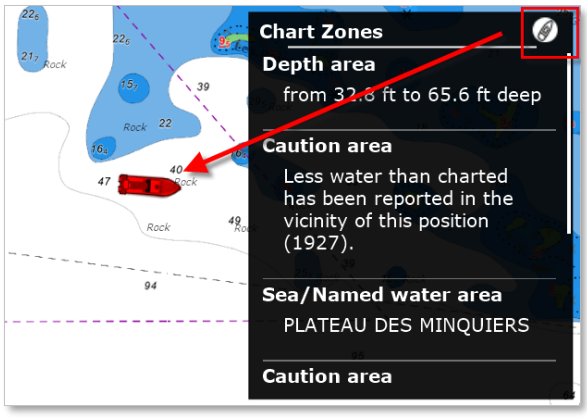


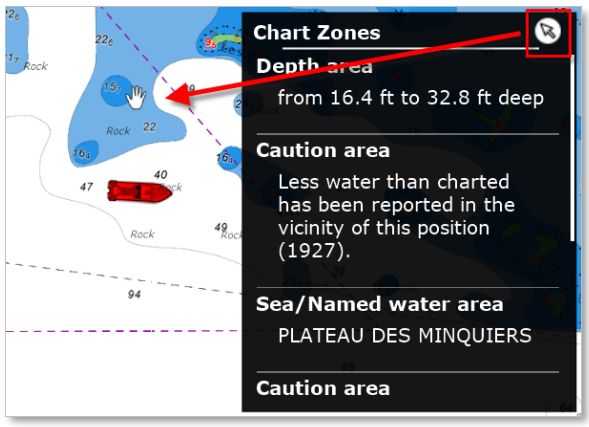


"Cursor" mode

As described in the previous paragraph, the zone information displayed by default in the NavData "Chart Zone" corresponds to the zones located under the boat. By clicking on the boat symbol at the top right of the NavData "Chart Zone" you can switch to Cursor mode.

In Cursor mode the information displayed in the NavData corresponds to the area under the cursor.





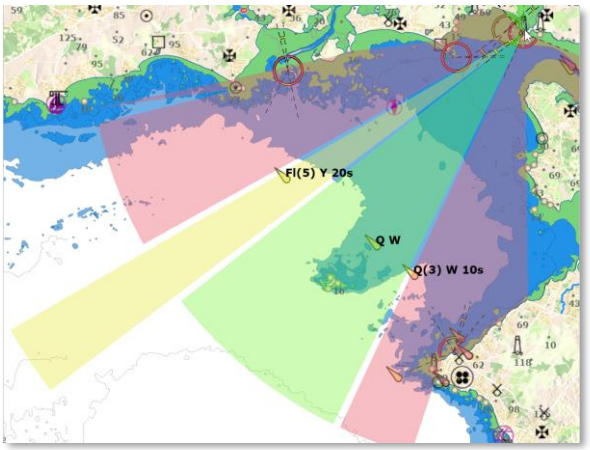
Dynamic Lights

This function intuitively represents lighted aids to navigation (navaid) according to your boat's position and your field of view. TIMEZERO takes into account the land topology, the light sector (if present), and the light range to automatically highlight on the chart the relevant navaid. It is also possible to display a NavData that will display in a list the lights ahead of you. All these features will be very useful for any night navigation.

Dynamic Lights display.

Light Range on the chart

TIMEZERO allows you to quickly visualize on the chart the range of a single lighted navaid. Just click on it:



This will display the various light sector(s) (when applicable) with the corresponding color(s) according to the terrain topology.

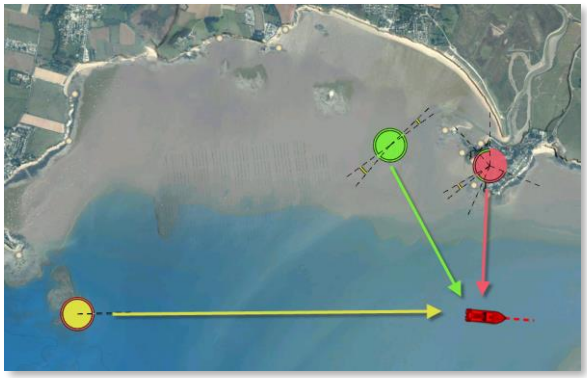
To hide the light range, simply click anywhere. Repeat this process if you would like to display the range of another light.

Light Display modes

TZ Maps introduces two innovative modes to display the lighted navaids on the charts: "Dynamic" and "Dynamic & Flashing". This option can be adjusted from the Vector Chart settings under "Lights".

Dynamic

When "Dynamic" is selected, TIMEZERO will use your GPS position to determine the lights that are within your field of view and will surround their icon with the corresponding color. This feature is especially useful with light sectors allowing you to confirm at a glance in which sector you are currently located in:



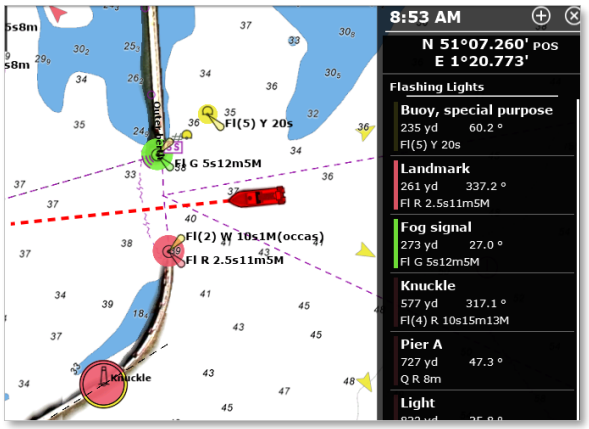
Dynamic and Flashing:

When "Dynamic & Flashing" is selected, TIMEZERO will in addition make the lights flash on the chart according to the pattern encoded in the vector chart data.

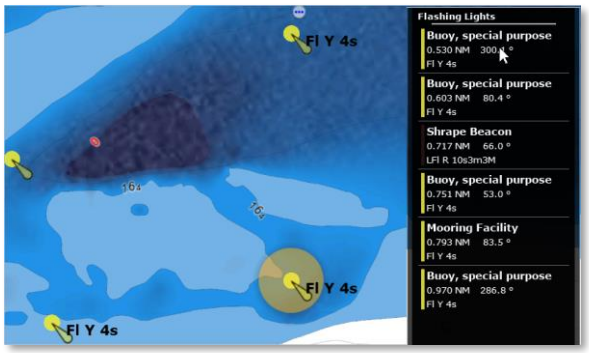
TIP: If you would like the "Dynamic" or "Dynamic & Flashing" modes to only operate when TIMEZERO is in Dusk or Night mode, just enable the "Restrict to Dusk and Night Modes" option available in the Vector Chart settings under "Lights". This will make the lighted navaids appear normally during the day but use the dynamic presentation at Dusk or at Night.

"Flashing Lights" NavData

A "Flashing Lights" NavData can be configured to the NavData panel. The "Flashing Lights" NavData will display a list of the lighted navaids that are ahead within your field of view sorted by distance. Each item of the list will display the light name, distance and bearing. The leading side of the list will also display the color and flash according to the parameters encoded in the vector chart:



Note that you can Click on any item of the list to find the corresponding light on the chart (TIMEZERO will automatically center on the light):

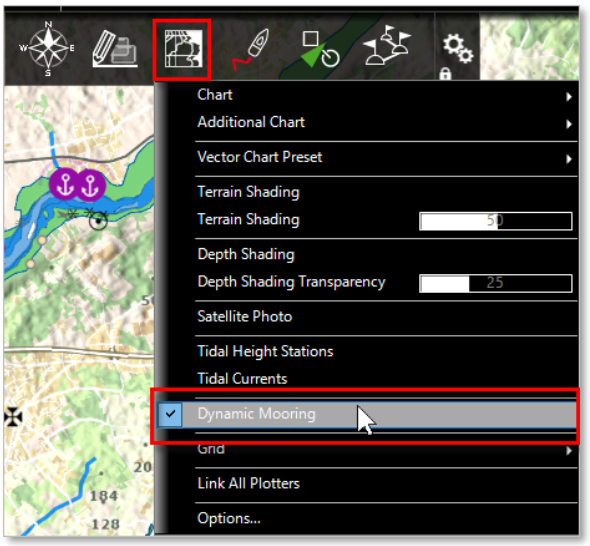


Dynamic Moorings

TZ Maps automatically classifies anchorages based on weather forecasts and topology. Everything is done automatically after selecting a date and once a weather forecast is available. A color code (red, orange, green) informs you dynamically of the wind protection to come for the duration of the mooring. Mooring locations are extracted from the Vector charts but are also created and shared by the TIMEZERO community.

Dynamic Mooring display

To display the Dynamic Mooring layer, click on the "Chart" button located in the Ribbon and select "Dynamic Mooring":



Enabling the "Dynamic Mooring" layer will display on your screen the following information:

- the mooring icons on the chart which are color coded.
- the mooring forecast adjustment box which allows you to select a date and a time span (for when you plan to anchor your vessel)

By default, and if a weather forecast is not available, the Dynamic Mooring icons will be displayed in purple.

As soon as a weather forecast becomes available, the mooring icons will change color:

- Green: protected Mooring
- Orange: relatively calm Mooring
- Red: Mooring to be avoided
- Grey: calculating...

When using Dynamic Mooring, make sure to adjust the proper date and time span (located in the lower left corner of your screen). The weather might evolve and have an impact on the mooring recommendation:

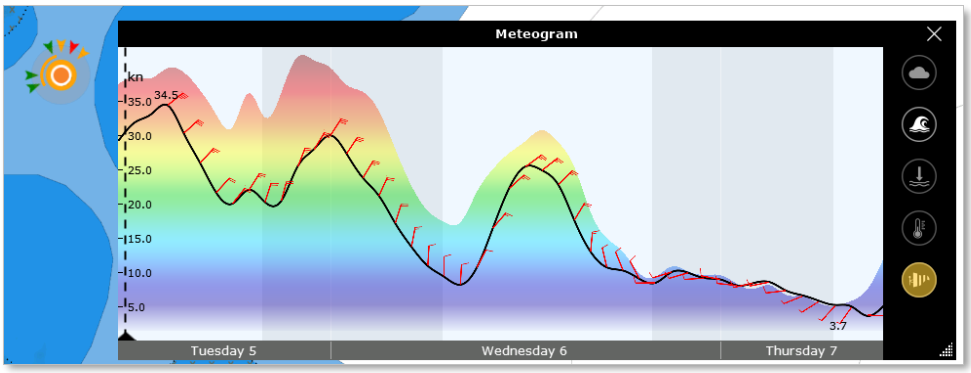
When you are zoomed in enough on the chart, the Dynamic Mooring icon will display a couple of additional information. If the mooring is near the coastline (about 330 yards or 300 meters), a rounded solid line will indicate the sheltered sector. You might also notice some arrows pointing at the anchor symbol. Each arrow represents a different hour. For example, if the wind is coming from the same direction during the mooring duration, you should only see one arrow. This will indicate that the wind will not shift while you are anchored. However, if you see multiple arrows in various directions, it means that the wind will shift during that time:

The color of the arrow takes into account the wind speed but also the topology. For example, a strong wind coming from a protected direction might still be displayed as a green arrow.

TIP: If several arrows are positioned in the same direction, the most "dangerous" color will be displayed (indicating the stronger wind).

For deeper understanding of the wind pattern, it is possible to display a "meteogram" at the mooring location.

Simply right click on the mooring icon and select "Show Meteogram" from the pop-up menu. This will display a graph with the wind speed and direction evolving over time. You can also add additional parameters to the meteogram such as wave direction and wave height:

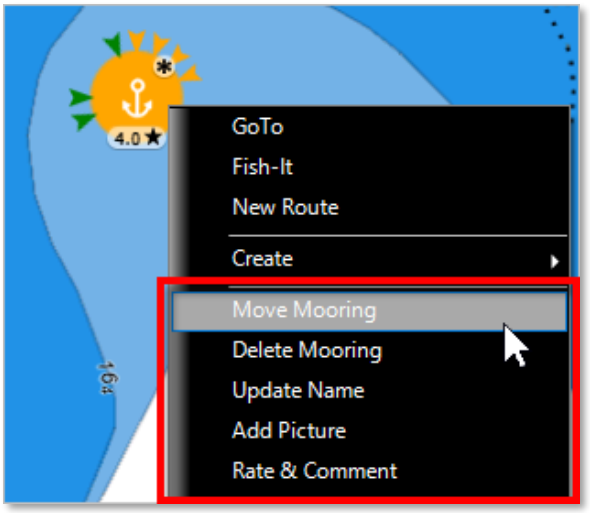


Edit or add your own Dynamic Mooring

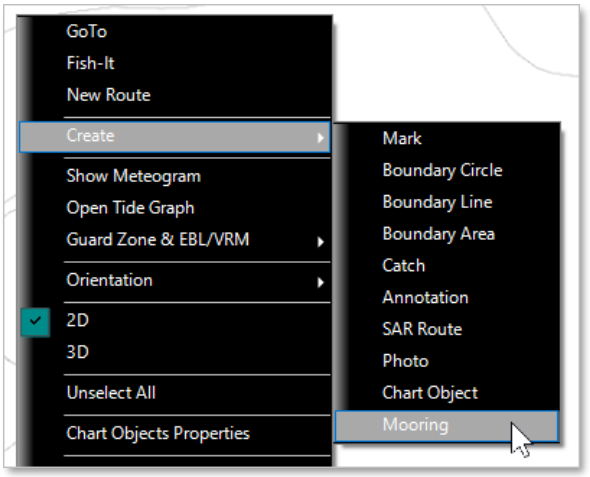
Mooring locations are initially extracted from the Vector chart data, but users can improve this data by either modifying existing moorings (for example, moving a mooring to a more accurate location), or create entirely new moorings. Behind the scenes, Community Maps are used to store all these modifications.

To edit an existing mooring, simply click on it and select among the following options:

- Move Mooring
- Delete Mooring
- Update Name
- Add Picture
- Rate & Comment



If you would like to add a new mooring location, just click the chart at the location you would like to create the mooring select “Create” then “Mooring” from the Pop-up menu.



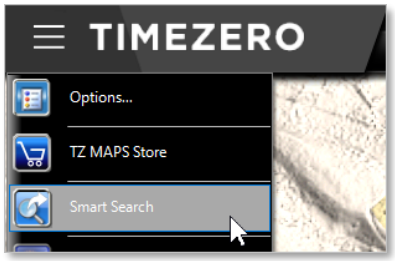
Smart Search

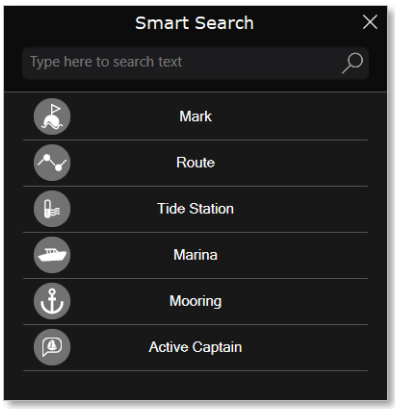
TZ Maps integrates a high-performance search engine allowing you to search for any information across various databases (tide stations, vector charts, user objects, etc.). You can either select a category (in this case the search also operates as a list) or perform a global search. This feature uses advanced algorithms to provide relevant and accurate results that refine as you type (with a minimum of 3 characters).

Category Search

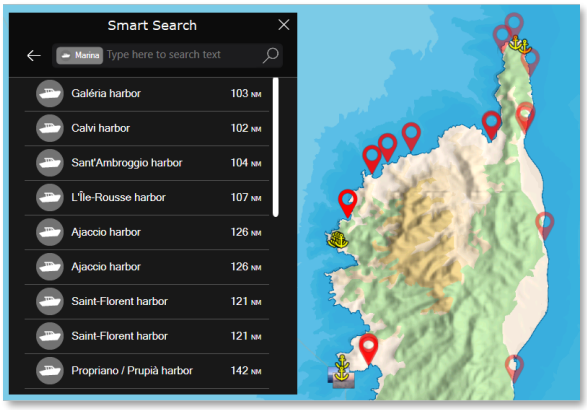
Searching by category can be useful to both display a full list of specific objects (for example a list of all your routes) or focus the search on a specific object within a category (if you know the type of object you are looking for).

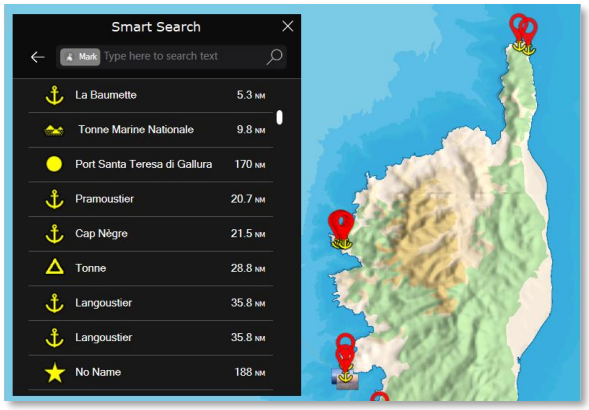
To display the Smart Search window, click on the "TIMEZERO" button located on the top left of your screen and select "Smart Search":





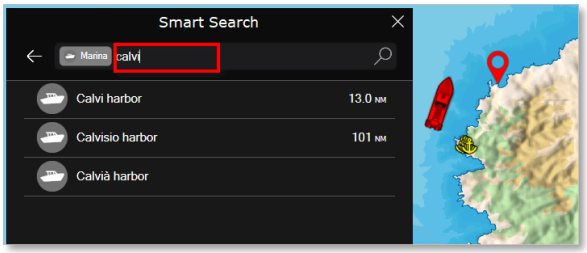
Then, click your category. This will display the full list of corresponding objects and highlight them on the chart with red markers:





To locate a specific item on the chart, click on it from the list: TIMEZERO will move the charts to center the selected object on your screen.

If you want to search for a specific object (usually by name), start typing into the search box. Results will refine as you type.

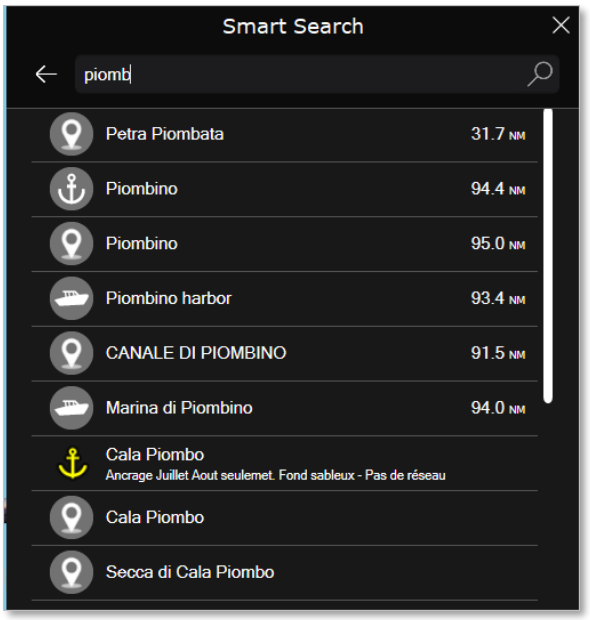


Global Search

To perform a global search, you can type directly into the search bar without selecting a category. The search starts as soon as 3 characters are typed.

The search results will display items that match your text input, sorted by relevance and distance, across all categories.

For each item in the list, an icon will allow you to discern the object category:

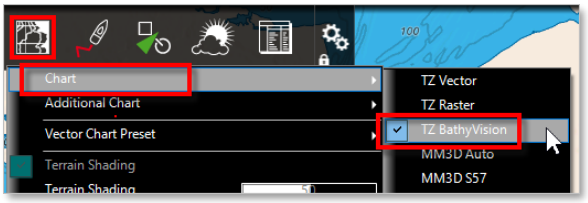


TZ BathyVision

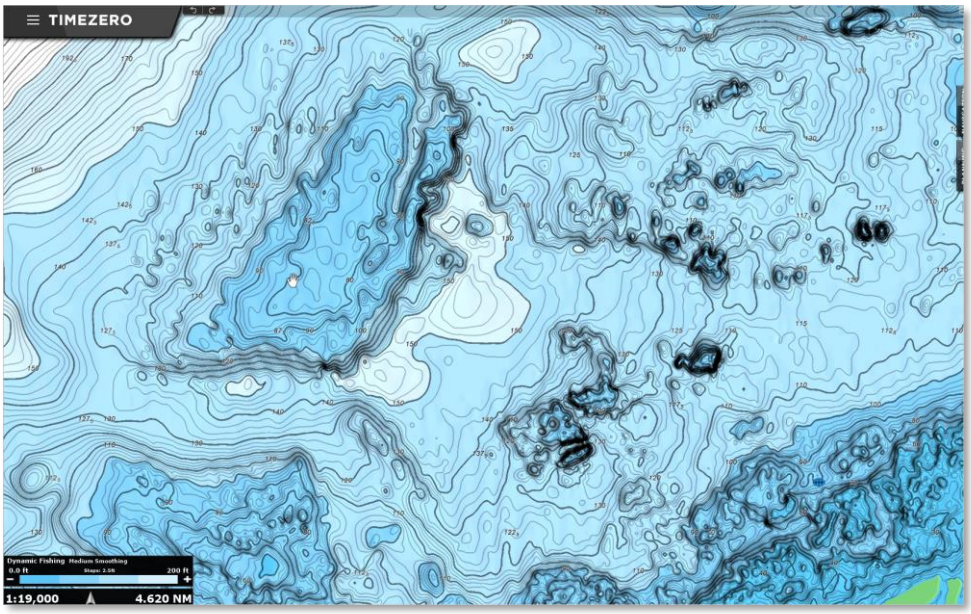
Thanks to the various functions offered by BathyVision, the seabed will no longer hold any secrets for you! TZ Maps offers the best bottom data available and lets you display it dynamically and intuitively in color and/or with contour lines. It is possible to configure the density of contour lines and associated shading to focus very precisely on high-potential fishing areas.

TZ BathyVision Charts Display

To display the BathyVision, click on the Chart button in the Ribbon and select “BathyVision” from the “Chart” Pop-up menu:



This will display on your screen a vector chart where the official contour lines and depth soundings are replaced with depth contour lines that are dynamically generated from a high-resolution bathymetric database:



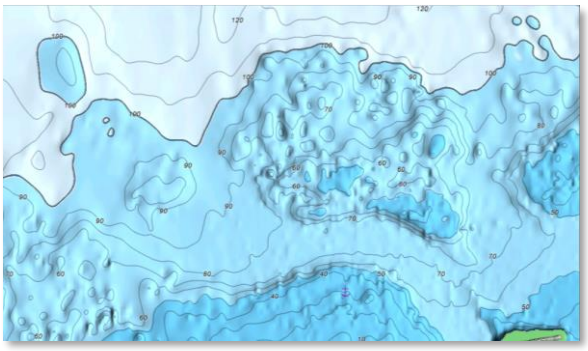
Contour line Density

The contour lines interval is automatically adjusted according to the zoom level. However, it is possible to manually select a density level by clicking (-) and (+) on the BathyVision setting box located at the bottom left corner of the screen:

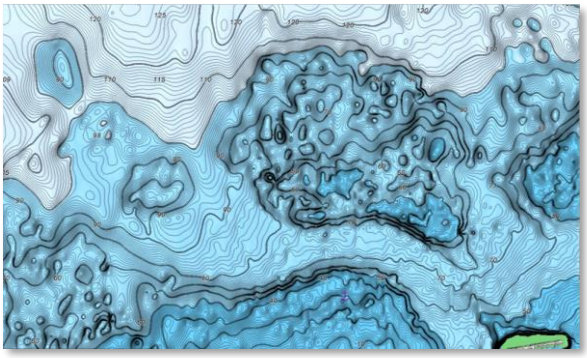
Note: you can switch between 5 different density levels depending on the current scale. The density is displayed at the top center of the adjustment box.

We encourage you to play with the density as some areas with various terrain and slope might benefit from a higher or lower contour line density setting:

Step: 10ft



Step: 1ft



Contour Line Smoothing

When the contour lines are displayed with a very high density, they may appear too sharp, and the display might appear "noisy". A large number of small, isolated areas can interfere with readability. You can reduce this effect by applying an averaging filter to smooth the contour lines.

To do this, set the smoothing value by Clicking the BathyVision setting box like shown below:

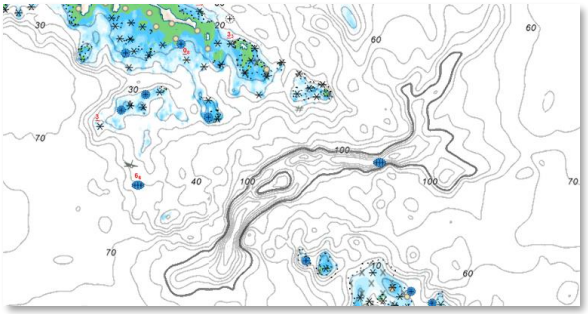
Note: you can switch between No/Light/Medium or Strong Smoothing.

Color Gradient Depth Range

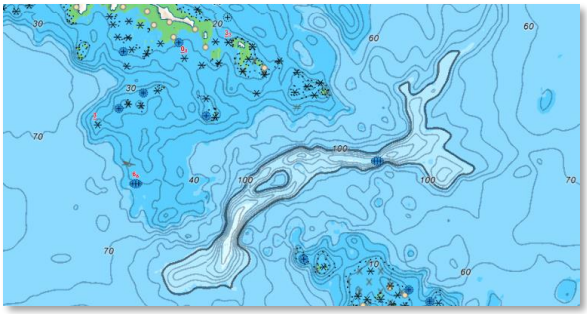
The TZ BathyVision chart background consists of a color gradient that varies from blue (shallow water) to white (deep water). For better contrast in shallow or deep areas, it is possible to adjust the deep-water threshold from 20 to 300 feet by clicking on the depth value as shown below:

You can see on the two screenshots below the effect of that setting:

0 / 20ft



0/200ft

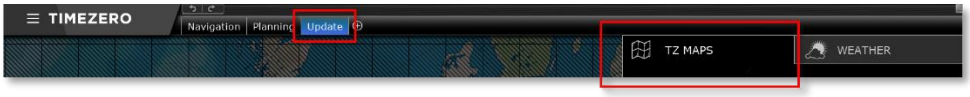


Downloading TZ Maps

After subscribing to a TZ Maps area, you will be able to stream the chart directly to your device over the Internet as you pan and zoom the screen (Internet Connection required). However, before using TIMEZERO on the water, it is highly recommended to store the chart locally on your PC so that you can access them without any Internet connection at sea.

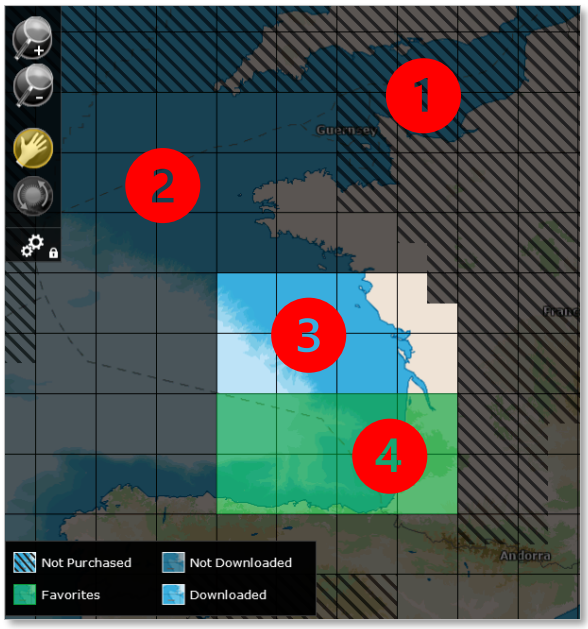
Offline Chart Screen

To store the chart on your PC, click on the “Update” workspace then “TZ MAPS” Tab:



As shown in the legend at the bottom left of the Update TZ MAPS workspace, 4 different statuses are displayed depending on the state of the cell:

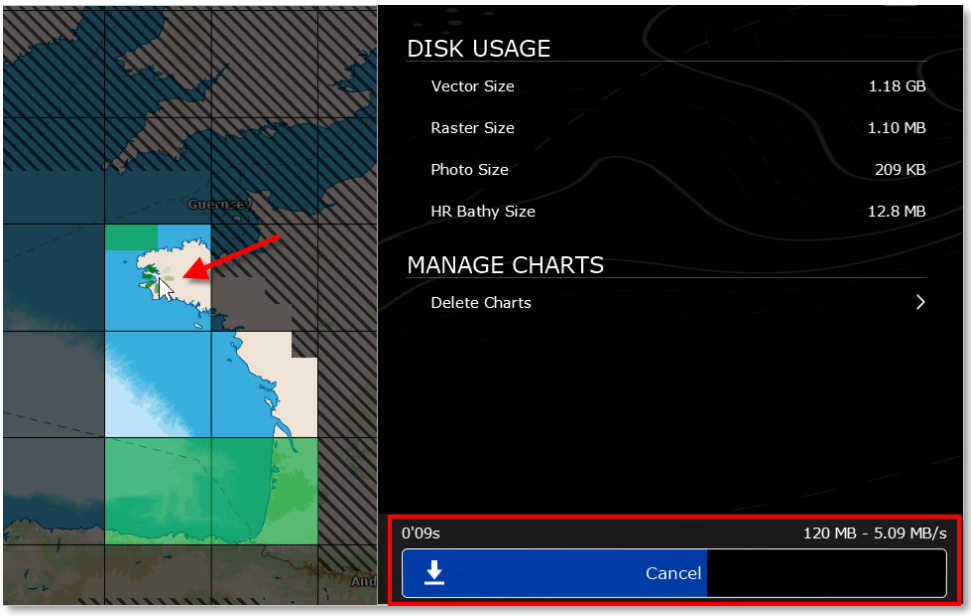
1. Tripped if the cell is not available or has not been purchased.
2. Dark gray if the cell has been purchased but not yet downloaded locally.
3. Bright if the cell has been downloaded but you do not want it to be updated automatically.
4. Green if the cell has been downloaded and will be automatically updated if an update occurs during the active subscription.



Note that the cell coverage will automatically adjust in size as you zoom in or zoom out on the chart to make larger or smaller selection easier.

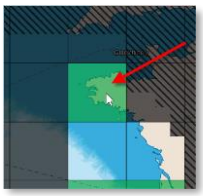
TZ Maps Charts Download

To download chart data, just click once on one or multiple gray cells. As soon as you start clicking on gray cells, a green process indicator is then displayed, and a progress bar will also be displayed at the bottom right with the size and the remaining time:



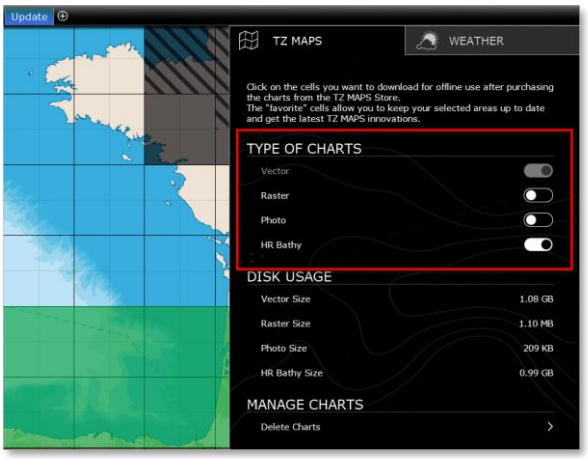
Note: It is recommended to leave TIMEZERO on the download screen while downloading data, however, if you close this screen the download will continue in the background (albeit slower).

After the first click, the cell will appear as a "Favorite", green cells, which means that if an update is available during the subscription, it will be automatically updated:



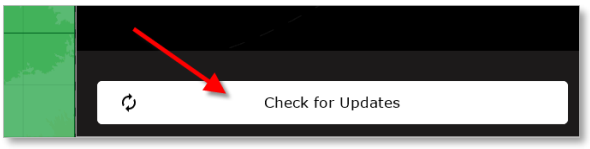
To cancel the automatic update, you must click again on the cell, which will become bright:

Note that by default, for each cell you click, TIMEZERO will download vector data and HR bathymetric data (the HR Bathy is used to create BathyVision charts and Depth Shading overlay). If you would like to download Raster charts (instead or in addition to Vector charts), you can click on the settings button located on the “Update/TZ MAPS” right panel:



TZ Maps Update

The TZ Maps are updated continuously. To check for an update, simply click on the button "Check for Updates" that will appear located at the bottom of the “Update/TZ MAPS” right panel:



If updates to TZ Maps are available on the server, the cells that have been updated will appear with a flashing download icon. Simply click on this icon to start the update process:

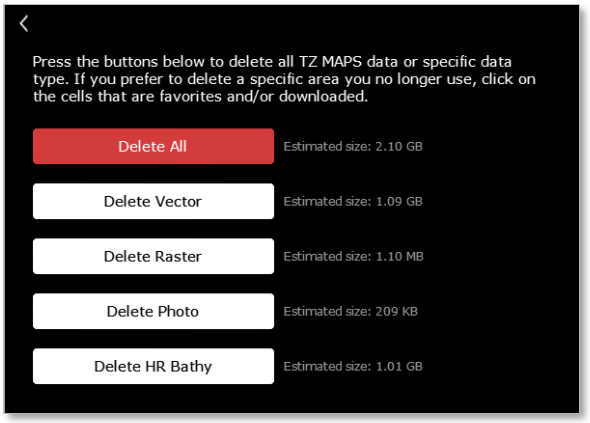
Note: The Download will only be available for favorite cells (green).

Note that you can cancel the current download by clicking Cancel. You can then return to this screen later to resume the download.

Delete TZ Maps Charts

To delete chart data that was previously downloaded and free up space, click on Delete Charts from the “Update/TZ MAPS” right panel:

The next window will prompt you to delete all previously downloaded data **[Delete All]** or to select just one type of data:



To delete only a specific area that you don't want to keep locally, click on cells in the corresponding area, then click again on the flashing red trash bin symbol to confirm.