

TZ iBoat User Guide

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Getting Started

Interface Overview

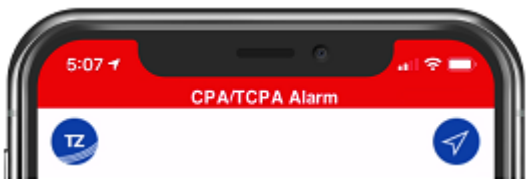


1. **TZ button**: This button opens the main TZ iBoat menu. From there, you can see all your Trips, search items (marks, routes, tide stations...), manage your offline data (charts and weather), access the store (purchase charts and modules), perform quick actions, and access the various advanced settings of TZ iBoat.
2. **GPS button**: Tap this button to center your Own Ship position on the screen. Tap again to change orientation mode (North Up or Head Up mode). Note that by default the Head Up mode is displayed in 3D perspective to show more of what is going on ahead (this can be changed from the [Plotter](#) settings).
3. **Zoom buttons**: Tap these buttons to zoom in or zoom out on the chart. On iPad you can also use a zoom slider (that can be enabled from the [Plotter](#) settings). Note that both iPad and iPhone support “pinch to zoom” gesture.
4. **Layer button**: Tap this button to open a panel where you can select what is displayed on your screen (chart selection, satellite picture overlay, depth shading overlay, weather overlay, tides icon...)
5. **Action button**: Tap this button to perform various actions such as creating an event, activating the Anchor Watch, or showing the divider tool.
6. **Nav button**: Tap this button to start your navigation. When enabled, some information will be displayed at the bottom of the screen (trip distance, trip time and speed) and your Trip will be recorded.
7. **NavData Panel**: The NavData panel can be displayed or hidden by swiping your finger from the left edge of your device. Although the NavData panel can be displayed in either portrait or landscape mode, it is better suited for landscape screen orientation.

When you create or modify any object (marks, routes, boundaries...), Undo and Redo buttons will appear automatically for 5 seconds:

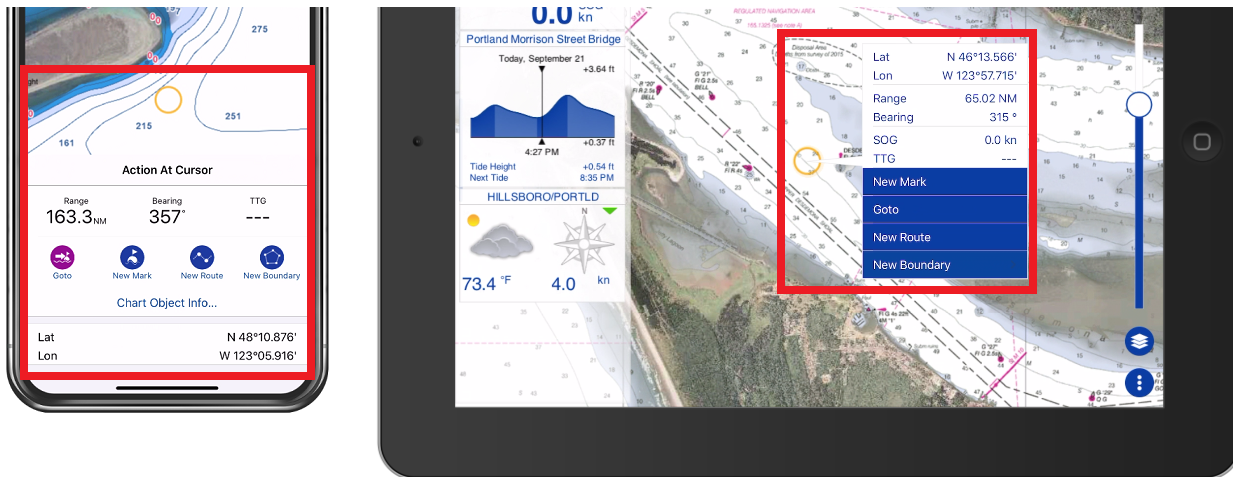


Also located at the top of the screen is the status bar used to display notification and alarms (alarms can be silenced if you tap this area):



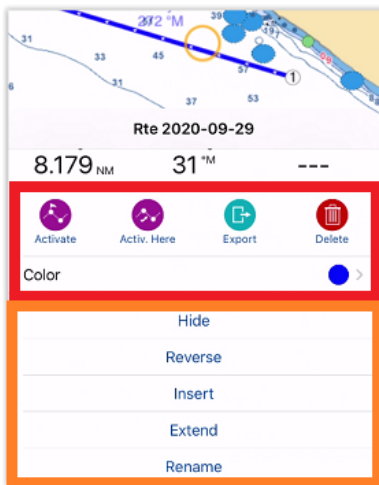
Using the Pop-Up menu

When you tap on the chart or on a specific object, a Pop-Up menu will appear. The Pop-Up menu combines information (such as range and bearing to the object) and buttons that allow you to perform specific actions:



The Pop-Up menu is a core feature of TZ iBoat that makes the App easy to use. For example, when you want to create a new object or perform a quick “Goto”, simply tap on the chart at the desired location, and select the corresponding action from the Pop-Up menu. If you want to modify an object or execute an action on it, tap on the object, and select the corresponding action from the Pop-Up menu.

On iPad, the Pop-Up menu will appear next to the tapped position. On iPhone the Pop-Up menu will appear from the bottom (in portrait mode) or from the left (in landscape mode). Also note that on iPhone, the Pop-Up menu is split in between common actions (that use icons) and advanced actions (that use text label). For example, on iPhone, when you tap on a route, the most common actions will be available at the top of the Pop-Up menu (in red below) and the more advanced actions will be displayed at the bottom (in orange below):



Selecting Charts & Overlays

TZ iBoat is running the powerful TimeZero graphics engine that can display multiple type of charts (vector charts, raster charts, high resolution depth contour charts) and mix them with various overlays (Satellite Photo, Depth Shading, Weather...) in both 2D and 3D.

By default, TZ iBoat uses a free basic land map (Open Street Map data) that gives you the opportunity to evaluate the App for free. However, in order to display detailed nautical charts, a TZ Maps area needs to be purchased. We provide a 7 days free trial on any TZ Maps area if you would like to evaluate the quality of the data (please refer to [Subscriptions](#) for more information).

To select the type of chart you want to use, tap on the “Layer” button located at the bottom right side of your screen:



At the very top of the Layer menu, you will see the chart and overlay selection:



Chart Selection

- **TZ Vector**: Select this option to display Vector charts. Vector charts are computer generated from a series of points and lines (stored in a database) that make up the features of the chart on the screen. Various details on the chart can be turned on and off and objects can be tapped on to display more details. When zooming in and out of a vector chart the text and objects keep the same size and orientation.
- **TZ BathyVision**: Select this option to display Vector charts together with high resolution depth contour lines. The contour lines are dynamically generated from high resolution bathymetric data, which provides a more comprehensive understanding of the bottom. It is possible to configure the density of contour lines and associated shading to focus very precisely on high-potential fishing areas.
- **TZ Raster (only available on selected areas)**: Select this option to display "traditional" Raster Charts. Raster charts are a direct copy (or scan) of existing paper charts, and thus look identical to the paper charts it was produced from. All information contained within the chart is printed directly on it, so you cannot tap on objects (such as buoys) like on a vector chart. When zooming in and out of a raster chart, TZ iBoat selects automatically ("quilts") the best paper charts for the area and scale displayed on screen. Note that in areas with poor chart coverage, everything on the chart grows larger or smaller as you zoom in or out. Also, when rotating a raster chart, everything on the chart rotates with the screen.
- **Basic Land & Coastline**: Select this option to display a free basic land map powered by Open Street Map. Note that you should not use this option for Navigation. This option should only be used when trying out the App, or when you want to look at specific details on land.



Note: the first time you select a chart option other than the free "Basic Land & Coastline", a pop up allowing you to start the free trial and subscribe to the TZ Maps for your current position should appear. If it does not appear or if you have closed it accidentally, you can access the "Store" to start your free trial from the "TZ" button located on the top left side of your screen.

Overlay Selection

- **Photo:** Select this option to display Satellite Photo over the charts. Note that Satellite Photo are fused with the nautical charts by a method called "PhotoFusion". Land areas are completely opaque, so that these areas are displayed as high-resolution satellite photos. As the depth increases, the satellite photo becomes more transparent so that the shallows are displayed along with the chart information. As the deeper water begins, the satellite photo disappears, leaving the raster or vector chart. In shallow water, satellite photos may allow you to identify the seabed classification as sand, rock, coral, or other obstructions.
- **Grid:** Select this option to display a Lat/Lon grid on top of the chart.
- **Community Maps:** Select this option to display charts objects that have been added or modified by the TimeZero community. The Community Maps overlay allows users to contribute to the vector chart by adding their own observations and local knowledge. This layer is designed to promote collaborative charting and boost the accuracy and detail of the vector nautical charts. Note that this overlay is not available with Raster charts.
- **Depth Shading:** Select this option to overlay color that will vary according to depth. The depth shading can be applied to raster or any type of vector charts. This unique feature allows you to view water depths at-a-glance with vibrant colors. The color scale is set automatically (TZ iBoat scans for the deepest and shallowest point on the screen and automatically adjusts the upper and lower boundary) and is displayed on the lower left of your screen when the Depth Shading overlay is enabled:





On The Water

Centering on the boat

Click on the "GPS" button located at the top right corner of your screen to center the charts on your own ship position:



The icon in red represents the boat and indicates its position and heading (or course over ground if heading data is not available):



If the position source is lost the boat icon is displayed in black and stays at the last known position value. A Position Lost alarm is also triggered:



Chart Orientation

The "GPS" button also allows you to cycle in between "Head Up" and "North Up" modes:



North Up



Head Up

***Note:** When the icon is filled, it means that you are centered on your boat. A tap on the button in this state will switch mode. When the icon displays an outline, it means that you are not centered on your boat. Tapping a first time on the button will first center on your boat. Tapping a second time will then change the mode.*

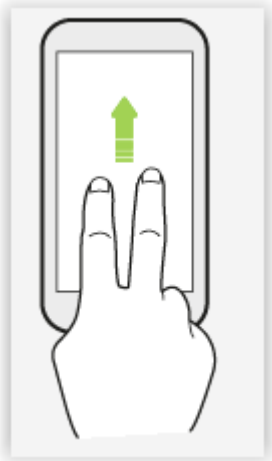
North Up: This mode displays the North at the top of the screen.

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. In Head up mode, pay close attention to the North Indication icon that will appear just below the GPS icon. It provides information about the direction of North:

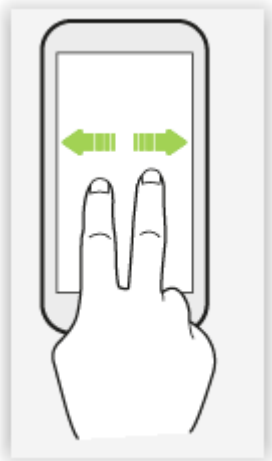


TIP: By default, Head Up mode is presented in 3D perspective allowing you to see further. If you prefer the head up mode to be displayed in 2D, you can uncheck "Head Up in 3D" from the [Plotter](#) settings. Also, when changing mode, TZ iBoat zooms in or out automatically. You can uncheck "Zoom on Center" from the same [Plotter](#) settings if you do not like this behavior.

TZ iBoat operates in a fully rendered 3D environment. The traditional 2D view is just a top-down view of this 3D environment. You can switch from the traditional 2D view to the impressive 3D perspective by swiping two fingers upward:



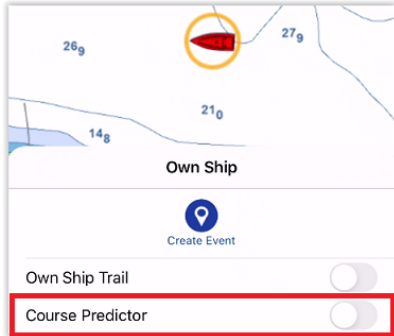
Once in 3D mode, you can also change the orientation of the 3D view by swiping two fingers left and right:



To go back to the traditional 2D mode, simply click on the GPS button.

Course Predictor

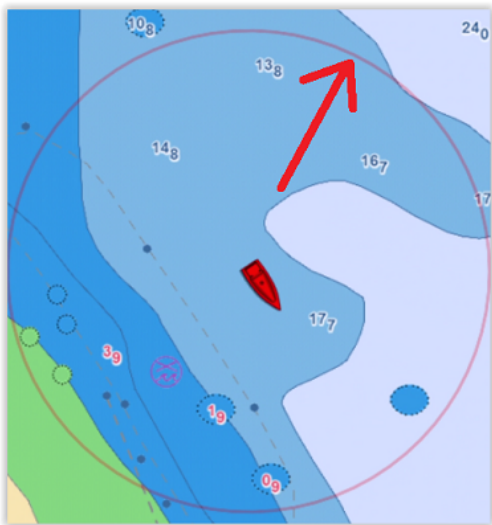
The Course Predictor can be displayed or hidden by tapping on the boat icon:



The Course Predictor is calculated by the GPS. It indicates the direction of movement relative to a ground position. The length of the COG Predictor can be setup by distance or time. When it is set to "Time", the length 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 & Trail](#) settings (under "COG/SOG Predictor").

Motion Mode

When the boat icon is on the screen and when 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 motion mode:



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

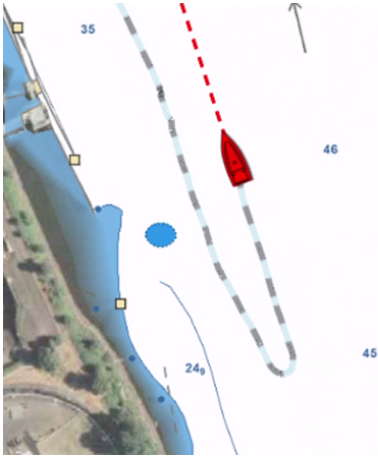
To shift the position of the relative motion mode, scroll the charts with your finger until the boat icon is at the desired location on the screen, making sure to keep the boat icon inside the Relative Motion Circle. Note that shifting manually the position of the boat icon inside the relative motion mode is mostly useful in "North Up" mode. When the chart orientation is set to "Head Up", TZ iBoat automatically offsets the boat icon location toward the bottom of the screen, giving more chart view for what is coming ahead.

Trail

TZ iBoat can keep track of your Own Ship position history using Trail. The trail is always and automatically recorded in the background (you have nothing to enable) and it can be either displayed or hidden on top of the chart.

To display the trail on your chart, click on the boat icon and enable "Own Ship Trail". You can also show or hide the trail using the "Layer" menu (found under the "Other Layers" section).

When enabled, the trail displays behind the boat icon all your contiguous position using animated white and black dots:



The trail duration can be adjusted from the [Ship & Trail](#) settings. Note that the trail display is dynamic and changing its duration will immediately update its length on the chart. By default, TZ iBoat displays a trail duration of 1 day, but you can make it as short as 30 minutes or as long as 20 days.

***Note:** the trail recording frequency is fixed to once per second (for maximum accuracy). However, the accuracy of the trail that is displayed on screen will vary automatically with the trail duration (length). When the trail duration is set to 1 day (or shorter), the display accuracy matches the recording accuracy (once per second). When the trail duration is in between 1 and 2 days, the display accuracy is 3 sec. When the trail duration is in between 2 and 5 days, the display accuracy is 6 sec. When the trail duration is in between 5 and 20 days, the display accuracy is 14 sec. When the trail duration is set to 20 days (maximum value), the display accuracy is 60 sec.*

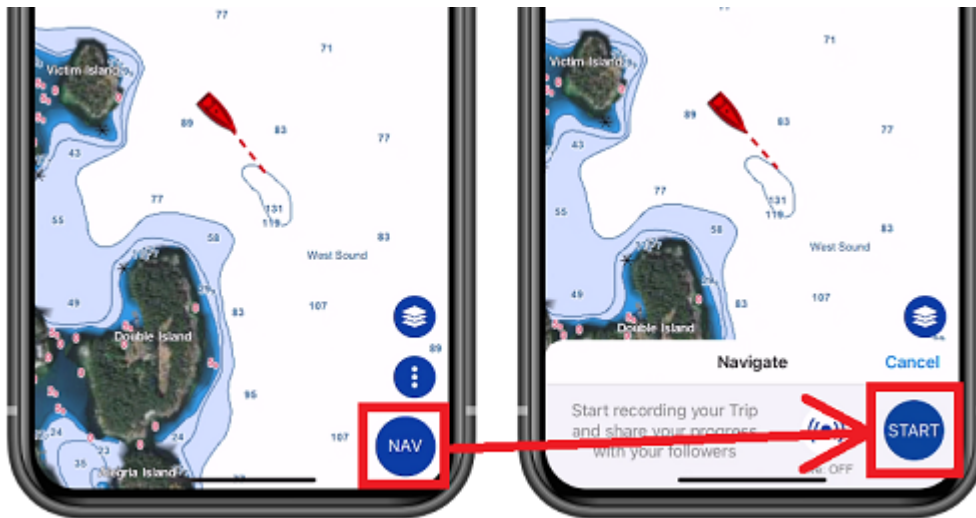
The trail thickness can be adjusted from the [Ship & Trail](#) settings to make it as bold or as thin as you want.

TIP: The trail is extremely useful when you need to know where you have been quickly, and to track back to your original location for short trips. The trail duration can be adjusted to fit your specific navigation style and will prevent to clutter the screen. However, if you want to permanently record specific trips, TZ offers another functionality called "Trips". Make sure to read the [following chapter](#) to learn more about "Trips" in TZ iBoat.

Navigation

Navigation Mode

If you want to navigate on TZ iBoat (without a predefined Course or planned Route), simply tap on the "NAV" button located at the bottom right of the screen and tap on "START":



TZ iBoat will automatically switch in Head mode and display some useful information at the bottom of the screen (Trip duration, Trip Length and current Speed).

TIP: You can change the data displayed at the bottom of the screen from the [General](#) settings under the "Trip Bar" section.

When the navigation mode is enabled, your Trip is automatically recorded. For more information about this feature, please refer to the [Trips](#) chapter.

Note: when enabling the Navigation mode, TZ iBoat will automatically switch to the "Head Up" mode. If you prefer to navigate in "North Up", you can disable "Navigate in Head Up" from the [Plotter](#) settings.

Quick Goto

When you need to navigate to a point (straight line) and want to be able to follow a course with some information (such as Time to Go, Distance,...), you can create a quick "Goto" by tapping anywhere on the chart or on a mark and selecting "Goto" from the Pop-Up menu. TZ iBoat will create a temporary active route to that point and display navigation data in the header located at the top of the screen:

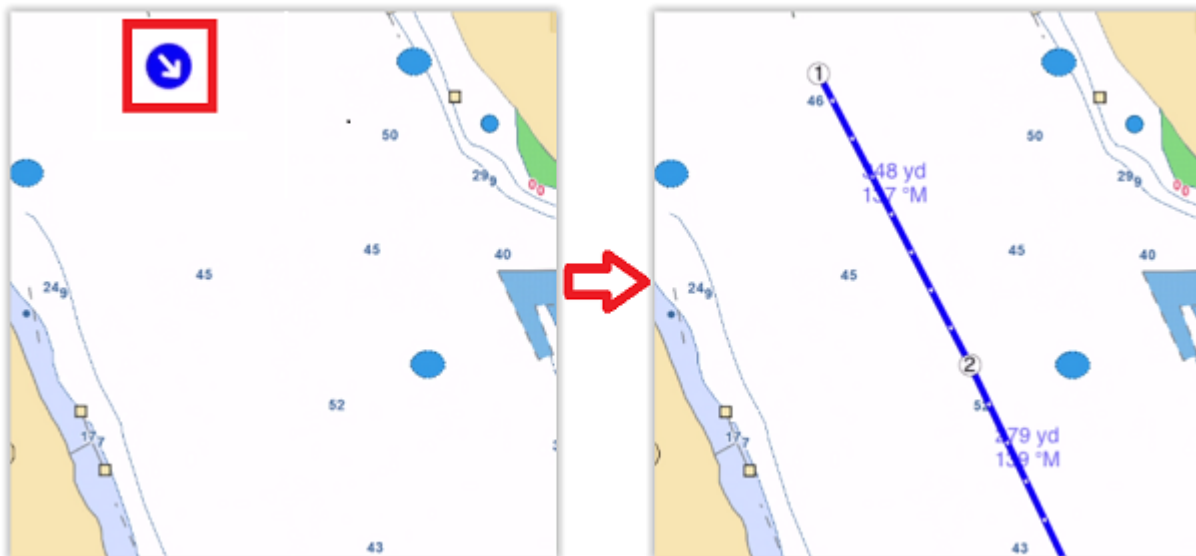


When you arrive at your destination (or if you manually press on the "Stop" button located in the header), the Goto will disappear.

Note: when activating a Goto point, TZ iBoat will automatically switch to the "Head Up" mode. If you prefer to navigate in "North Up", you can disable "Navigate in Head Up" from the [Plotter](#) settings.

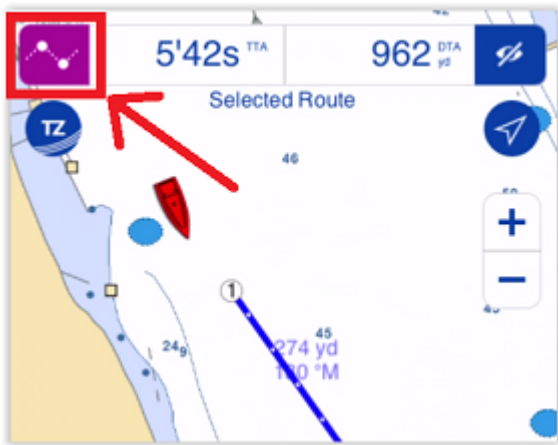
Activating a Route

For navigation that consists of multiple waypoints, you can activate a route. If the route is not already selected, find the collapsed route icon (located by default at the first waypoint) and then tap on it to expand and select the route:



TIP: You can also search for your route from a list by tapping on the "TZ" button and selecting "Search".

To activate the route from the very first waypoint you can tap on the “Activate” button located on the selected route header:



You can also tap on the route itself and select “Activate” to start the navigation from the very first waypoint. Note that you can also activate a route further down if you have already crossed one or multiple waypoints and forgot to activate the route from the start. Just tap on any waypoint or even on any leg and select “Activate Here”.

When activated, the route will be displayed in red, the XTE (Cross Track Error) will be displayed on the active leg, and the route header will be updated with navigation information.

TIP: You can tap on the route header to cycle among various types of information.

Note: when activating a route, TZ iBoat will automatically switch to the “Head Up” mode. If you prefer to navigate in “North Up”, you can disable “Navigate in Head Up” from the [Plotter](#) settings.

Note: It is possible to add other types of information related to the Active Route in the NavData panel. Just open the NavData panel (swipe from the left), tap on “Add” (top left), and then select the navigation data you would like to display. You may repeat this operation multiple times to add multiple pieces of navigation data to the NavData panel. For more information, please refer to the [NavData](#) Chapter.

Restart the Navigation

If the cross-track-error (“XTE”) gets large enough to start causing alerts, select the “Reset XTE” button from the Active Route header located at the top of the screen:



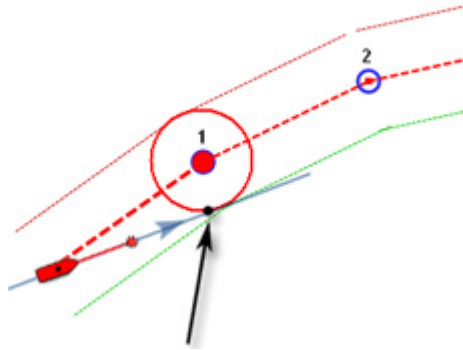
This will realign the intended course and head directly to the active waypoint without reverting to the original course. Restarting a route is a typical action if you have to take an action to avoid another vessel or an object and just want to head directly toward the active waypoint.

Waypoint Switching Mode

Upon arrival at a waypoint, the switching is automatically triggered, and the next waypoint is activated. Waypoint arrival parameters are determined by the "Waypoint Switching Mode" selected in the [Routes](#) settings.

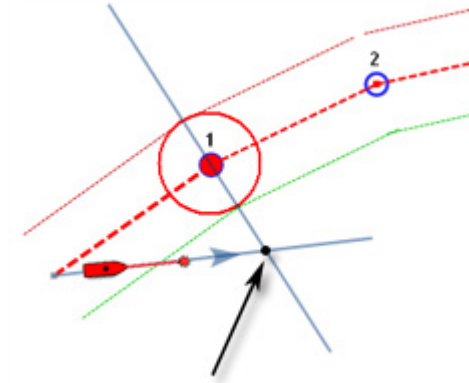
Circle:

In this mode, the next waypoint is automatically switched when your boat icon enters the active waypoint's arrival circle. The value of the arrival circle is set from the Routes Options ("Switching Circle Radius"):



Cross line (also known as "Perpendicular"):

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.

Note: Upon arrival at the last waypoint, the route is automatically cancelled (de-activated).

Switching Waypoint Manually

In some situations, you may want to manually switch to the next waypoint. This action can be done by tapping on the route leg and selecting "Skip Next" from the Pop-Up menu.

Active Route Synchronization

The active route is automatically synchronized on the local network with all the compatible TimeZero devices (TZ Navigator, TZ Professional, TZ iBoat, and Furuno TZT2/TZT3) that are connected on the same local network.

This means that if you have an iPad and an iPhone connected to the same Wi-Fi network, you can activate the route from the iPad and then monitor the progress from your iPhone. Any changes you make on the active route (restart the route, skip waypoint, move a waypoint) are immediately synchronized and updated on all your device that are connected to the same local network.

Measuring Distance

In between two points

To display the bearing and distance in between two points, tap on the “Action” button and select the “Ruler”:



Adjust the position of the two flags that just appeared (representing the start & end position) in between the two objects or the two locations you want to take a measurement from. The bearing and distance will be displayed at the top of the screen:

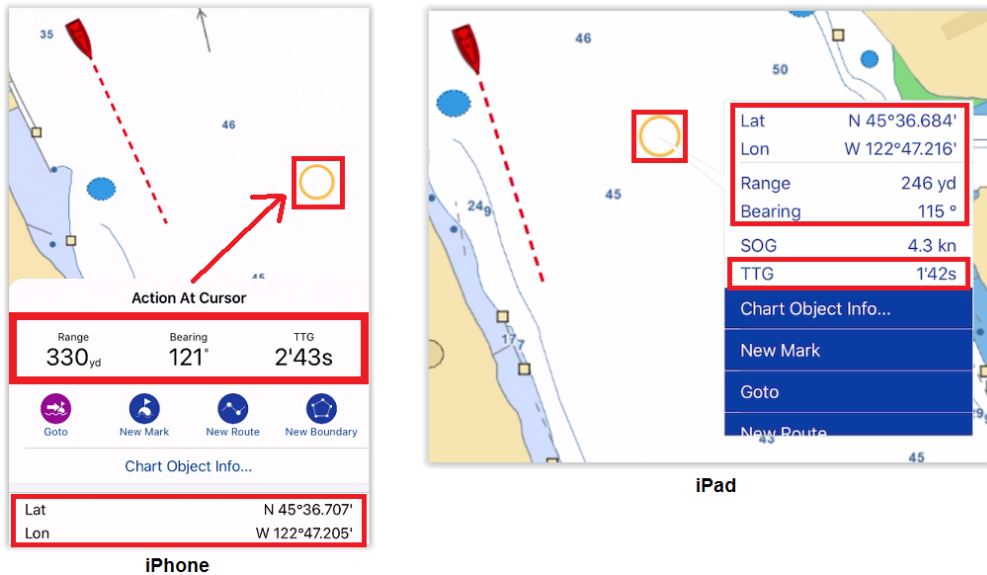


Note: By default, the bearing will be displayed using a magnetic value (considering the local magnetic variation for your area), but you can change it to a true value from the [Units](#) settings.

Once you are done with the measurement, simply tap anywhere on the chart or tap on the ruler icon located on the top right of the screen (next to the bearing and distance measurement) to make the flags disappear.

In between your position and a point

To measure distance and bearing in between your position and a point or an object, you can simply tap on it to display the Pop-Up menu:



The Pop-Up menu will display the range, bearing, position and time to go (“TTG”) to that point according to your current speed.

Saving Events

Sometimes, you may want to save an “event” at your current position. Events can consist of:

- a mark with a specific icon and color to save a point of interest such as a favorite spot (beach, anchoring location...), or to the contrary, a dangerous spot (obstruction, rock, ...)
- a picture to capture a nice beach or marina
- a catch to log your fishing spot and fish information

To save an event in TZ iBoat, you can either:

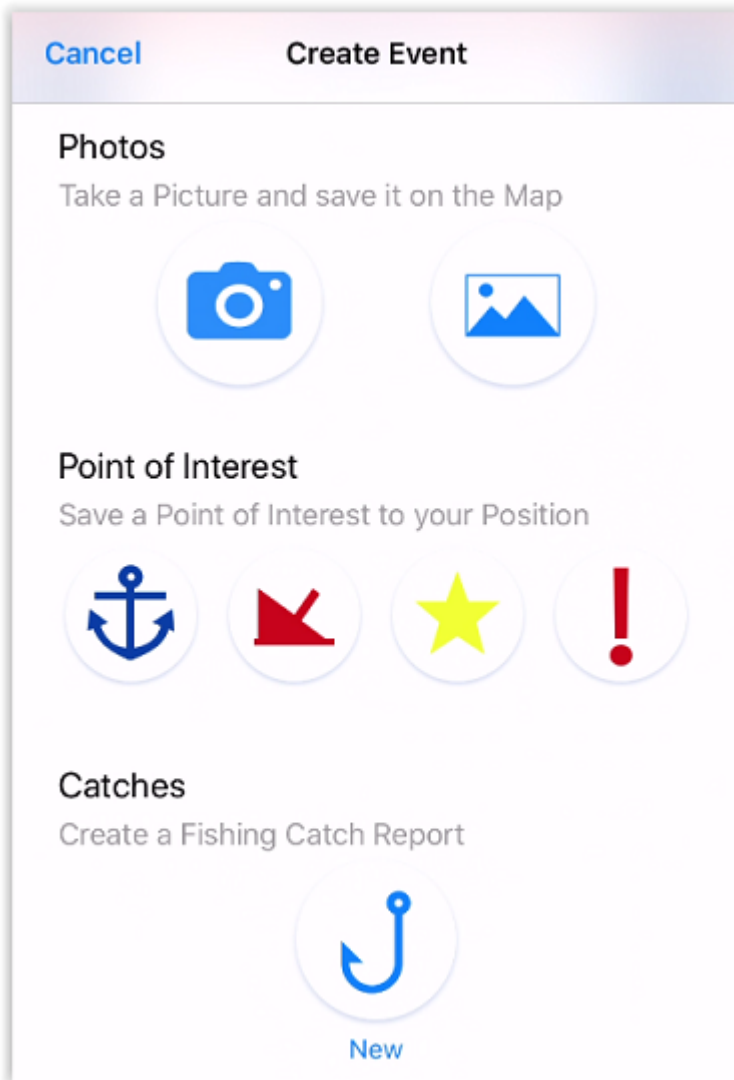
- Tap on the “Action” button located on the lower right and select “Create Event”:



- Or, tap on your boat icon and select “Create Event”
- Or, use the default function gesture by pressing and holding two fingers on the screen for 1 second



The Event window will appear allowing you to select the type of event you want to save at your current position:



Trips

Trips Introduction

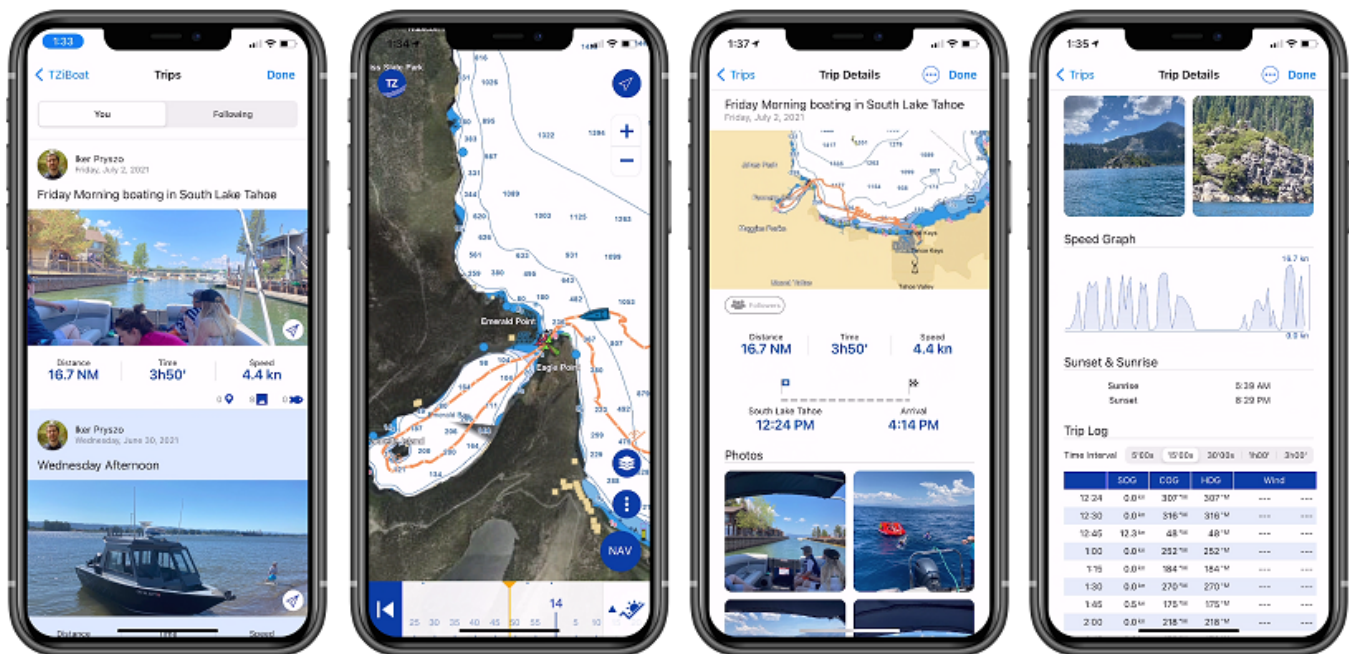
The Trip function records all your data (such as position, speed, depth, wind...) and combines them with any photo, catches, or events you may have created during your navigation.

Note: to record wind and depth data, TZ iBoat needs to be connected to instruments via a NMEA Wi-Fi gateway. If your device only relies on its internal GPS, TZ iBoat will record position, date/time, speed, and course.

Your trips will be displayed directly on the chart (when enabled from the Layer button) and can also be viewed from a list where statistics (duration, distance, average speed, speed graph) will be displayed together with your photos, events, and catches. When a Trip is selected, you can replay it on the chart using the Time Bar located at the bottom of the screen.

Trips are automatically synchronized via Local network (if you have other compatible TimeZero devices on the same network) and automatically backed up to the TZ Cloud.

Once a Trip has been created, you can share a postcard by email or by text message to anybody. If you have friends that are also using TZ iBoat, the entire content of the Trip can be shared within the TimeZero community. You can follow other TZ iBoat users (to see their Trips) or be followed by other TZ iBoat users (to share your Trips).

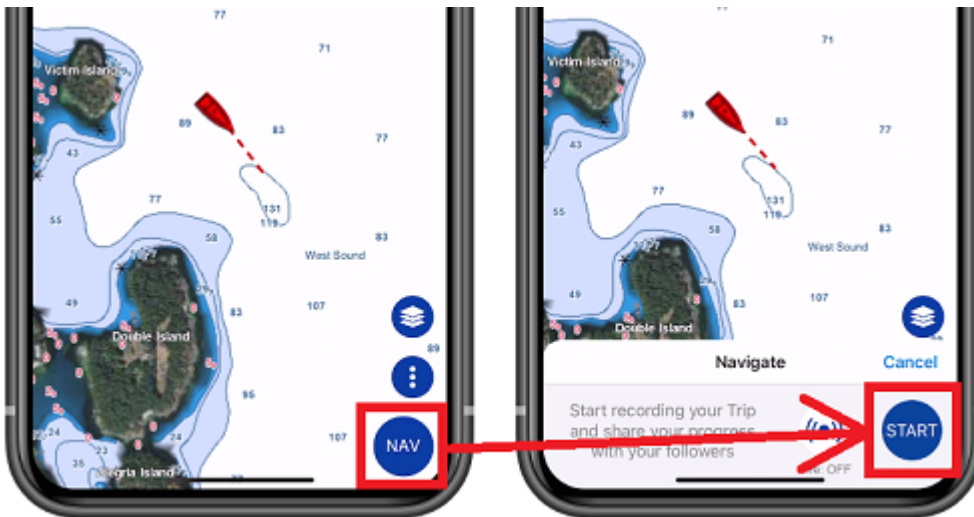


TIPS: The Trip function replaces the old track function that has been deprecated. Tracks that were created with the previous version of TZ iBoat can still be displayed, but new tracks cannot be created. Unlike Tracks, Trips are automatically backed up and synchronized to the TZ Cloud just like any other User Objects (tracks were only saved and available on the device they were created from). Trips are also more powerful as they contain more data (depth and wind information). Note that you can import and convert your

previous navigation data into Trips from the TZ button under "Trips" (scroll down and press the button "Import Trips from navigation data").

Recording a Trip

To start recording a Trip, tap on the "NAV" button located at the bottom right of the screen and tap on "START":



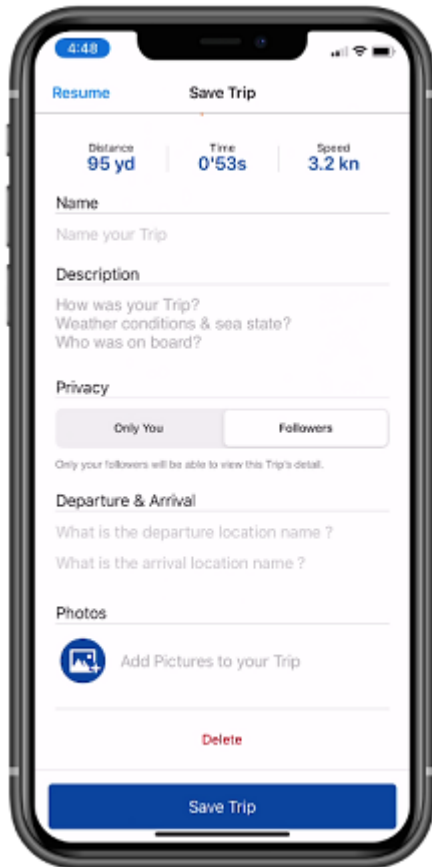
As soon as the navigation is started, TZ iBoat automatically switches to Head Up mode, and starts recording your Trip data:



TIPS: when enabling the Navigation mode, TZ iBoat automatically switches to the "Head Up" mode and tilts the screen slightly (in 3D) to extend the view in front of your boat. If you prefer to navigate in "North Up" and/or would prefer to stay in 2D, you can disable "Navigate in Head Up" and/or "Head Up in 3D" respectively from the [Plotter](#) settings.

When the Navigation mode is enabled, the Trip Bar will appear automatically at the bottom of the screen. The Trip Bar shows the Trip distance, Trip duration, Speed (Speed Over Ground), and allows you to pause or stop the navigation. Note that it is possible to customize the data being displayed inside the Trip Bar from the [General](#) settings under the "Trip Bar" section.

When you press the "STOP" button, you can choose to pause the Trip recording or stop the navigation and finish the Trip. After finishing the Trip, you will be able to enter a name, a description, set its sharing status (please refer to [Sharing Trips](#) for more information), enter the departure and arrival name, as well as adding any pictures you want from your Album:

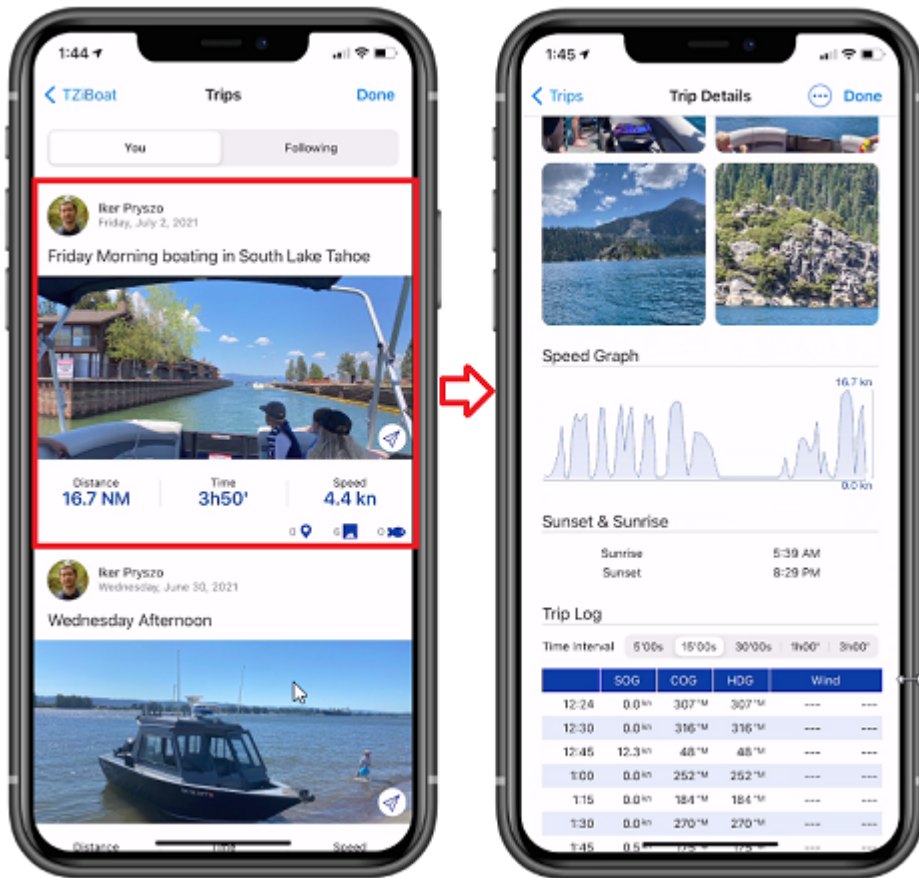


TIPS: If you do not enter all the information after finishing the Trip, TZ iBoat will automatically fill some names based on the location. You will always be able to update any of the fields later by [editing the Trip](#).

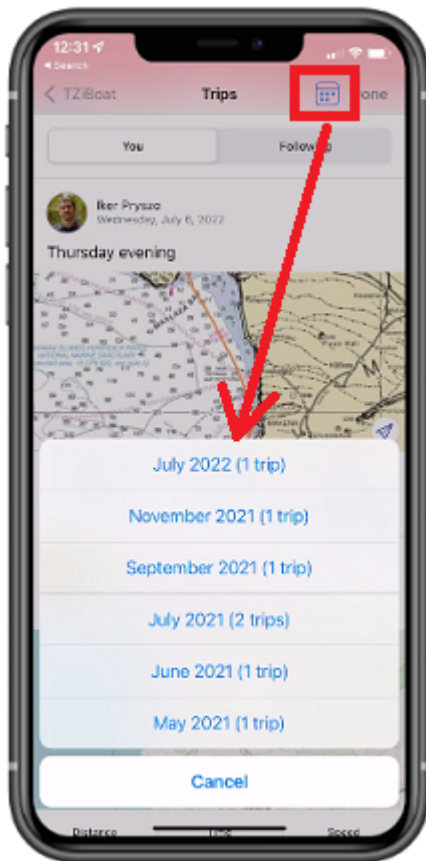
Viewing a Trip

Trip Detail

You can access the list of all your Trips (sorted in chronological order) by tapping on the TZ button located on the top left of your screen and selecting "Trips". Once you located the trip you would like to display, just tap on it to open its detail:



Note that if you have lots of Trips, you can use the calendar icon located at the top right of the screen to quickly access a specific period:



Trip Overview

An overview of the trip will be displayed at the top, just below its name. If you tap on the map overview, the trip data will be loaded and displayed directly on the chart (see next chapter).



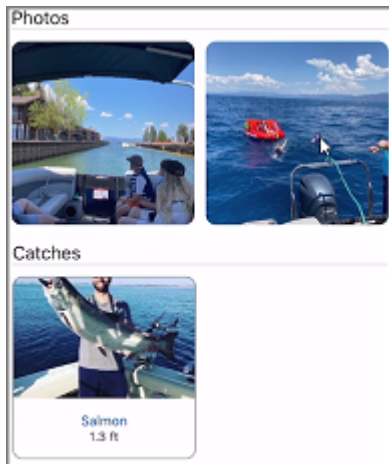
Trip Statistics

The Trip distance, duration and average speed will be displayed, together with time stamped departure and arrival locations. If you have not given a name to the departure and arrival location after creating the Trip, TZ iBoat will automatically name those points according to your location. You can rename the departure and arrival point anytime by [editing the Trip](#).



Trip Photos and Catches

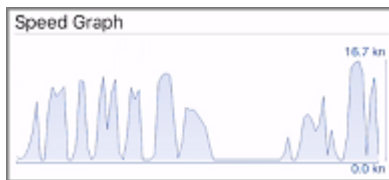
The photos that you took with TZ iBoat or the photos that were added to the Trip from your Album will be displayed together with the catches that have been created during the Trip. You can tap on a photo to display it in full screen. While displayed, you can swipe left or right to access all photos related to the Trip:



Note: It is not possible to add a Catch after finishing a Trip. Catches are linked to a specific Trip based on their creation date.

Trip Speed Graph

TZ iBoat will display a speed graph (using the speed over ground given by the GPS):



Tide & Sunrise/Sunset information

TZ iBoat will display the tide information as well as sunrise / sunset time of that day:

Tides			Vancouver, USA	
	AM	PM		
Low	6:10 (-0.1 ft)	6:00 (0.8 ft)		
High	11:40 (2.4 ft)	10:30 (2.3 ft)		
Sunset & Sunrise				
Sunrise	5:26 AM			
Sunset	9:04 PM			

Note: TZ iBoat displays the tide station that is the closest to the departure location.

Trip Log

A detailed log of your trip in the form of a traditional timetable will be displayed at the end of the Trip detail screen. The time interval can be adjusted at the top of the table. Any events you may have created during the Trip will be automatically inserted in the timeline:

Trip Log					
Time Interval: 5'00s 15'00s 30'00s 1h00 3h00					
	SOG	COG	HOG	Wind	
11:03	4.2 kn	123°M	120°M	P142°	12.5 kn
11:05	2.8 kn	130°M	124°M	P164°	8.5 kn
11:10	3.1 kn	134°M	130°M	P149°	7.0 kn
11:15	2.8 kn	185°M	190°M	S105°	9.3 kn
<div>Obstructions</div> <div>No comments</div>					
11:20	3.3 kn	181°M	184°M	S126°	7.4 kn
11:25	2.7 kn	113°M	105°M	P128°	9.1 kn
11:30	2.8 kn	90°M	85°M	P108°	7.6 kn
11:35	3.2 kn	89°M	88°M	P111°	5.1 kn
11:40	2.1 kn	93°M	88°M	P160°	1.8 kn
11:45	3.1 kn	107°M	106°M	S162°	4.0 kn
11:50	3.4 kn	144°M	146°M	S108°	5.7 kn
11:55	2.8 kn	49°M	54°M	P123°	8.6 kn
12:00	2.2 kn	68°M	68°M	P82°	8.0 kn
<div>Engine Issue</div> <div>No comments</div>					
12:05	2.8 kn	72°M	73°M	P123°	5.7 kn
12:10	2.2 kn	85°M	83°M	P135°	6.6 kn
12:15	4.0 kn	78°M	73°M	P143°	10.0 kn

Note: It is not possible to add an event after finishing a Trip. Events are linked to a specific Trip based on their creation date.

Display Trips on the Chart

If the "Trips" button is selected from the Layer button, all your trips will be visible on the chart displayed using thin orange lines (to avoid cluttering the screen):



TIP: You can adjust the historical trips transparency from the [Plotter](#) settings (under Transparencies).

To select a specific Trip and make it more visible on the chart, just tap on one of the orange lines. When selected, the Trip will be displayed in bold, and an animation will indicate the direction of the Trip. Time markers will also appear along the trip to indicate the duration of specific points:

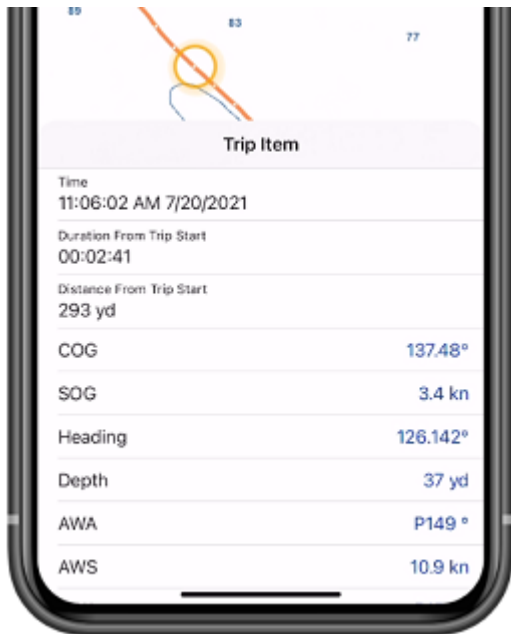


***Note:** when the trips are not selected (displayed with thin lines), they are simplified to limit the number of points loaded in memory. As soon as you select a Trip, all the points of that Trip are loaded to display the maximum accuracy (up to 5,000 points per trip).*

When a Trip is selected, the Time Bar appears at the bottom of the screen. Drag it to see the progression of the replay boat (blue icon) along the Trip:



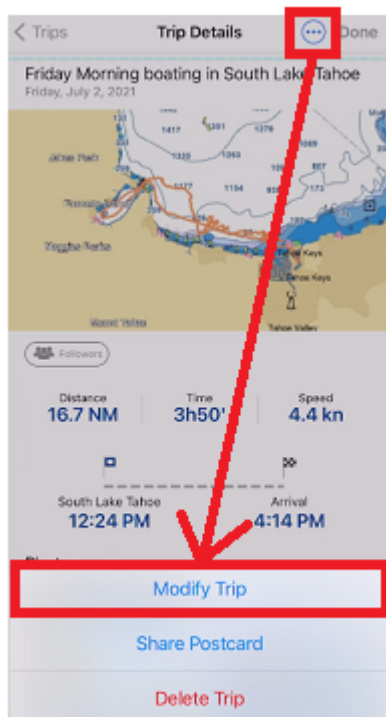
To access data of a specific point along the Trip, tap on it. The pop-up menu will appear displaying all data:



Note: The data that is recorded in the Trip will vary according to the type of instruments that you have connected to TZ iBoat.

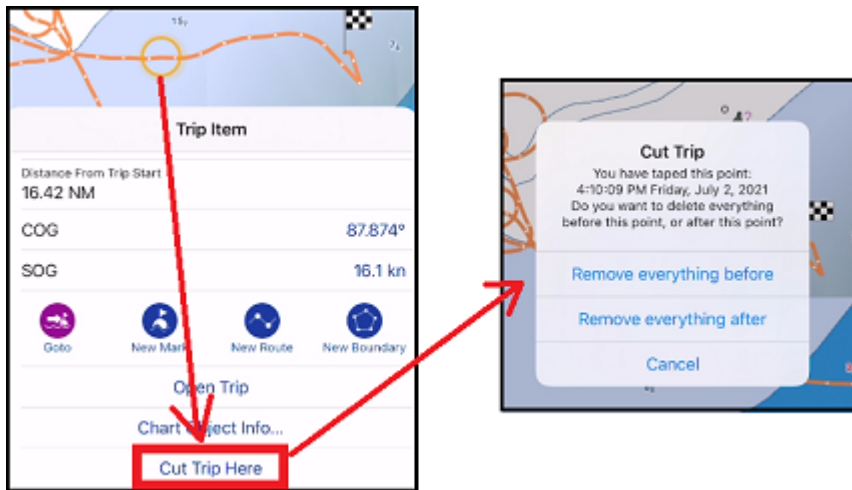
Editing a Trip

To edit a Trip, start by displaying the Trip Details screen. You can access the Trip Detail by tapping on the TZ button located on the top left of your screen and selecting "Trips". Once the Trip Details is displayed, tap on the "..." button located at the top and select "Modify Trip":



You will be able to edit all the fields of the Trip (Name, Description and Departure/Arrival name). You will also be able to delete a photo by tapping on it or add new photos by tapping the "Add Picture" button.

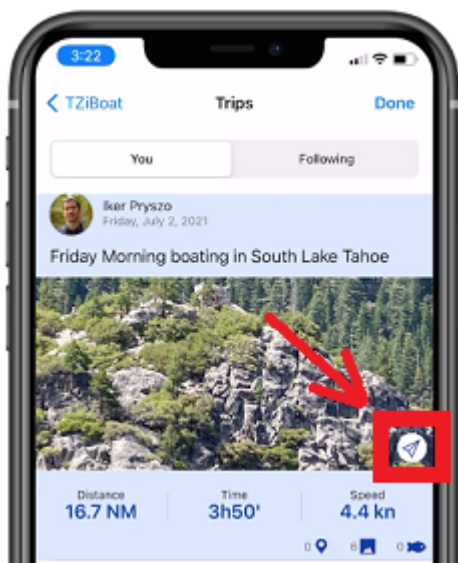
If you need to adjust the Trip departure or arrival point, load the Trip on the chart by tapping on the map overview, then tap on a trip point and select "Cut Trip Here" from the pop-up menu. You will have the choice of removing all the points before or after the cut point:



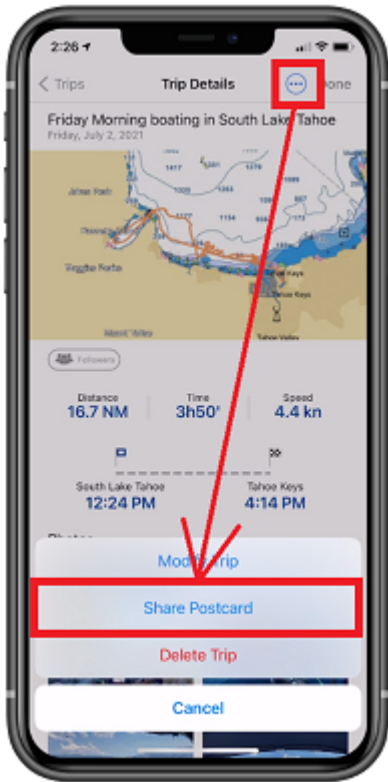
Sharing Trips

Sending a postcard

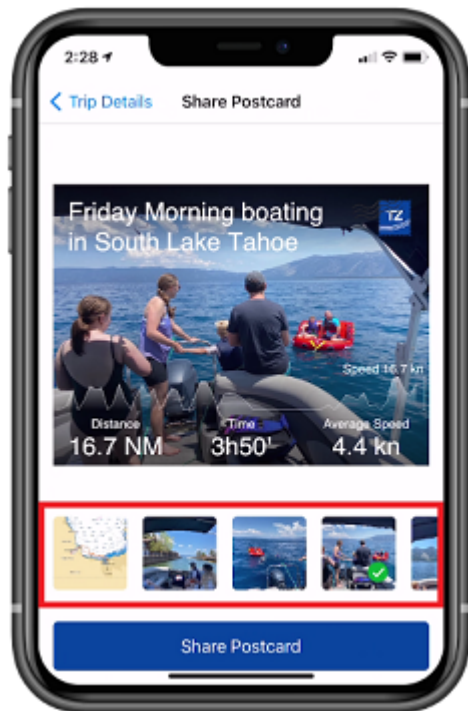
You can share a Trip postcard by email, text message, Facebook or any other platform that supports sharing a picture. Just open the Trip list by tapping on the TZ button located on the top left of your screen and selecting "Trips". Find the Trip you would like to share in the list and tap on the share icon:



You can also share a Trip from its details screen by tapping on the "..." button located at the top and selecting "Share Postcard":



If the Trip contains multiple photos, you will be able to select which one you want to use on the postcard:



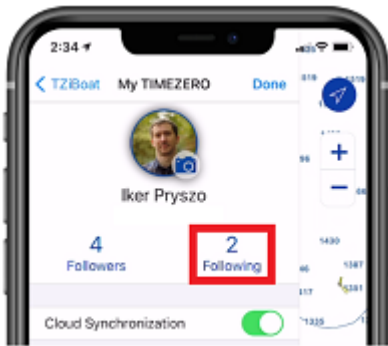
Sharing Trips with other TZ iBoat users

TZ iBoat includes an innovative feature that allows users to share their Trips directly within the app.

Follow other TZ iBoat users

You can follow other TZ iBoat users and see the Trips they have decided to share with the community by adding them to your "Following" list.

Just tap on the TZ button located on the top left of your screen and select your profile at the top. Then, tap on "Following":

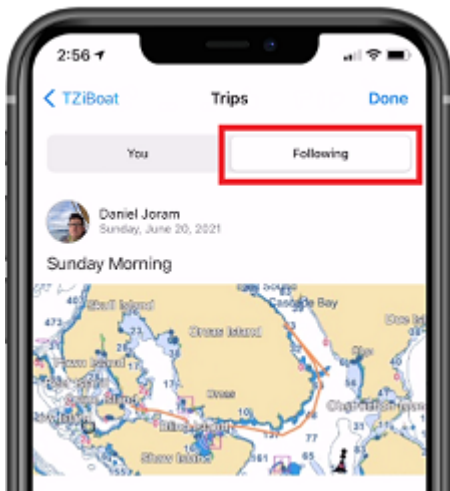


From this screen, you will be able to search TZ iBoat users, either by name, or by entering the email they use for their My TimeZero account:



Note: other TZ iBoat users will need to approve your request before you can start seeing the Trips they decided to share. You will see your pending request status on the same screen.

Once the other user has approved your request, you will be able to see his Trips from the Trips page under "Following":



Note: You cannot modify another user's Trips (they are "read only").

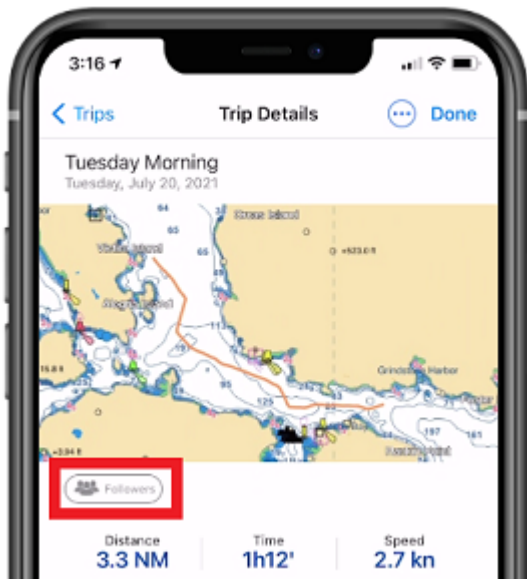
Share with other TZ iBoat users

If you want to share your Trips with other TZ iBoat users, simply give them the email you used to create your My TimeZero account (displayed under your profile) and ask them to follow you (using the process described above).

TIP: User can also search you by name, but in case of multiple users with the same name, it is usually better to search by email.

As soon as a user asks to follow you, you will receive a notification and you will be able to approve (or deny) his request from the "Followers" list.

Once you have some followers, you will be able to decide which of your Trips will be shared with them by setting the sharing status of the Trip from its detail page. If you want to make a modification to the sharing status of a specific Trip, simply tap on the button below (or [edit the trip](#)) to set the permission:



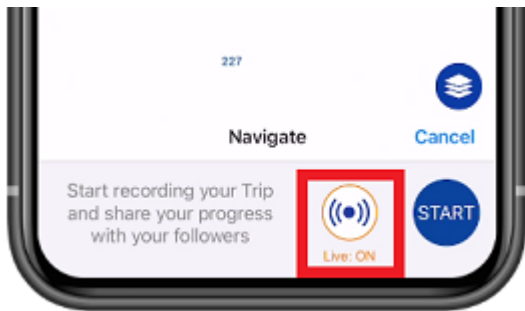
When "Followers" is displayed, the Trip is shared with all your followers. When "Only You" is displayed, the Trip is not shared with anyone.

Live Sharing

When you have an Internet connection (such as a cellular connection on your phone or tablet), you can share and see other users' real-time position. Note that your real-time position is only shared to your "Followers" after enabling the "live" mode, and you can only see the real-time position of users you follow (after their approval). The people you follow and your followers are managed from your profile page (please refer to [Sharing Trips](#) for more information).

Share your real-time position with other TZ iBoat users

If you have an Internet connection, you can broadcast your position live to all your followers. Just tap on the "NAV" button located at the bottom right of the screen and make sure that the "Live" button is set to ON like below:

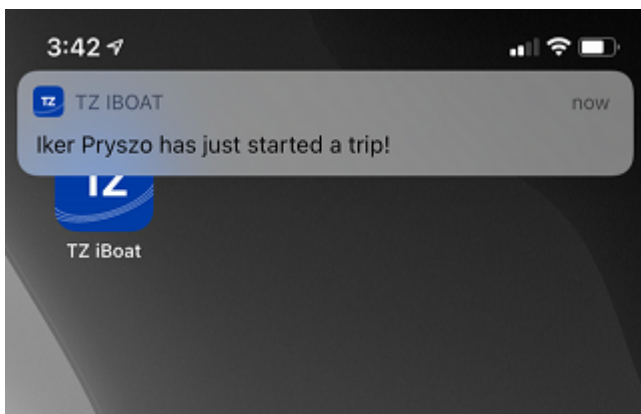


Note: the first time you enable this feature, TZ iBoat will ask you to turn ON the "Position Report" setting.

Once the Live mode is enabled and Trip started, your followers will automatically receive a notification, and they will be able to see your progress on their charts.

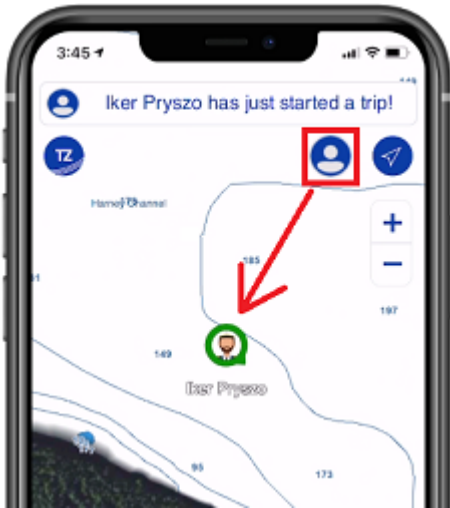
Follow the real-time position of other TZ iBoat users

If are following other TZ iBoat users (after they approve your request), each time they will start a Trip in live mode, you will receive a notification on your device:



Note: make sure to allow the iOS notification permission for TZ iBoat to be notified.

If you tap on the notification, or open TZ iBoat manually, you should see a new icon next to the GPS icon that will allow you to center on the user that is broadcasting his position:



Note: If the user is not broadcasting position anymore when you open TZ iBoat, you will see a warning indicating that this user already ended his Trip.

The color around the icon indicates its status:

- Green: the user you are following is navigating and a position update was received less than 5 seconds ago (live tracking)
- Blue: the user you are following ended his Trip. The blue icon indicates the last position of the Trip.
- Red: you are no longer receiving position update from the user you are following (since at least 30 seconds). This usually means that the connectivity on your side or on the other user side has been interrupted.



Note: You can only follow the live Trip of one user at a time.

If you would like to stop following the live Trip of a user, tap on the icon next to the GPS icon and select "Stop Following":



Note that this will just close the current live Trip and the next time the user will start another Trip you will be notified. If you prefer to stop following this user entirely, you can manage the people you follow from your profile page (please refer to [Sharing Trips](#) for more information).

TZ Maps

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](#): Charts 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

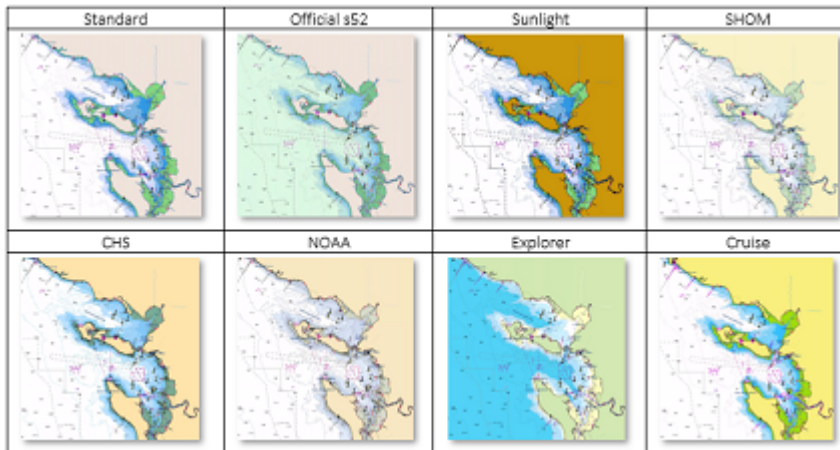
Adjusting Vector Chart display

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.

TZ iBoat 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, TZ iBoat includes lots of adjustments that can be made from the [Vector Chart](#) settings.

Color Theme

TZ iBoat offers various color themes that match the color palettes of the main Hydrographic Office 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:



Land Features

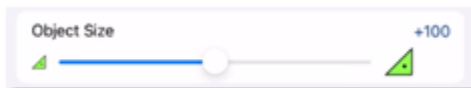
Land features can be turned OFF all together, or can be sourced from either the official vector data ("Official S-52") or from Open Street Map ("OSM").

Open Street Map offers the greatest amount 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:



Object Size

"Chart Object Size" is a slider that allows you to change the size of the depth sounding, text and object icons (buoys, wrecks, obstructions, etc...). Some users may prefer larger icons and text while other would prefer a smaller size to declutter the screen:



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 some times adjusting those settings to your liking as they have the greatest impact on "chart contrast".

Lights

The lights are displayed by default using a traditional "Simple Sectors" representation, but we would encourage you to use the new dynamic modes. If you would like more information about these new modes that are especially useful for night navigation, please refer to the [Dynamic Lights](#) chapter.

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

To select BathyVision, tap on the "Layer" button located at the bottom right of the screen:



At the very top of the Layer menu, tap on "TZ BathyVision":



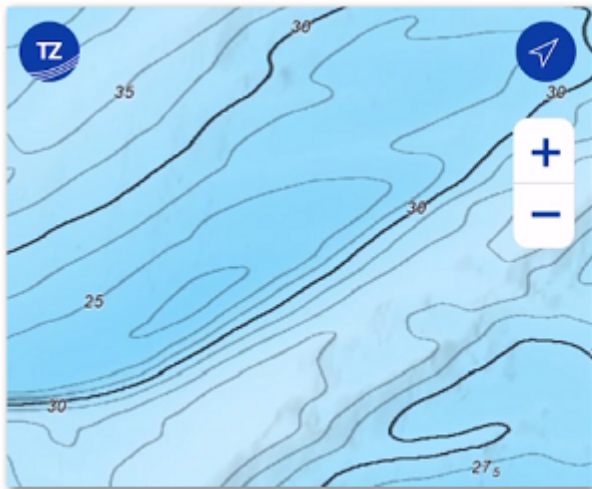
This will display on your screen a vector charts where the official contour lines and depth soundings are replaced with depth contour lines that are dynamically generated from a high resolution bathymetric database.

Contour line Density

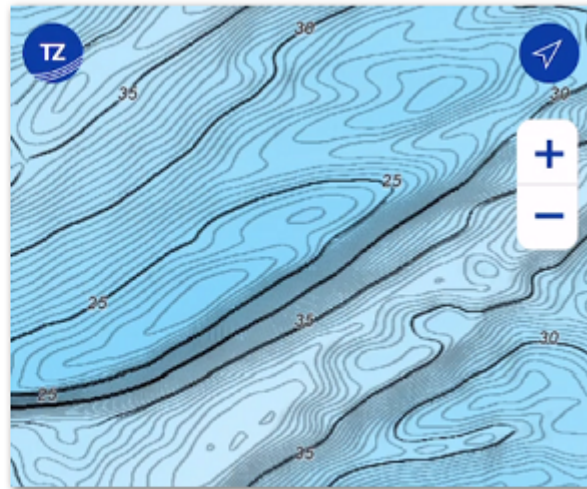
The contour lines interval is automatically adjusted according to the zoom level. However, it is possible to manually select a density level (from 1 to 5) by tapping on the BathyVision setting box located at the bottom left corner of the screen:



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:



Contour Line Density set to "2"



Contour Line Density set to "4"

Note that you can choose whether or not to display the "Master Contours" on the chart. As not displaying them on the chart gives you a better view of the reliefs when using bigger contour line density (this can be done in the [Plotter](#) Settings)

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 tapping the BathyVision setting box like shown below:



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 tapping on the depth value like shown below:



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



Depth Shading

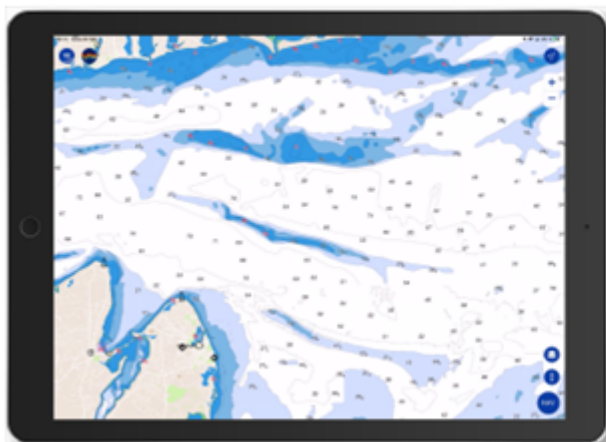
If you would like to visualize bathymetric data using a vibrant color scale, you can enable the Depth Shading overlay. Tap on the "Layer" button and select "Depth Shading" under "Chart Overlay":



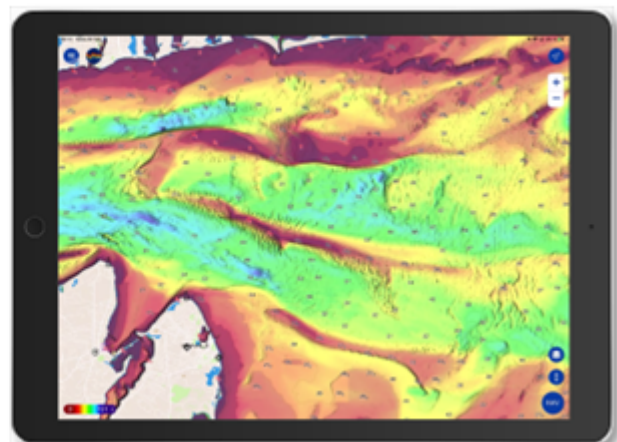
TIP: The Depth Shading overlay can be displayed over any type of chart: Vector, Raster, or BathyVision.

When the Depth Shading overlay is enabled, TZ iBoat will use the high resolution bathymetric database to apply a color scale to the depth data:

Vector Charts



Vector Charts + Depth Shading



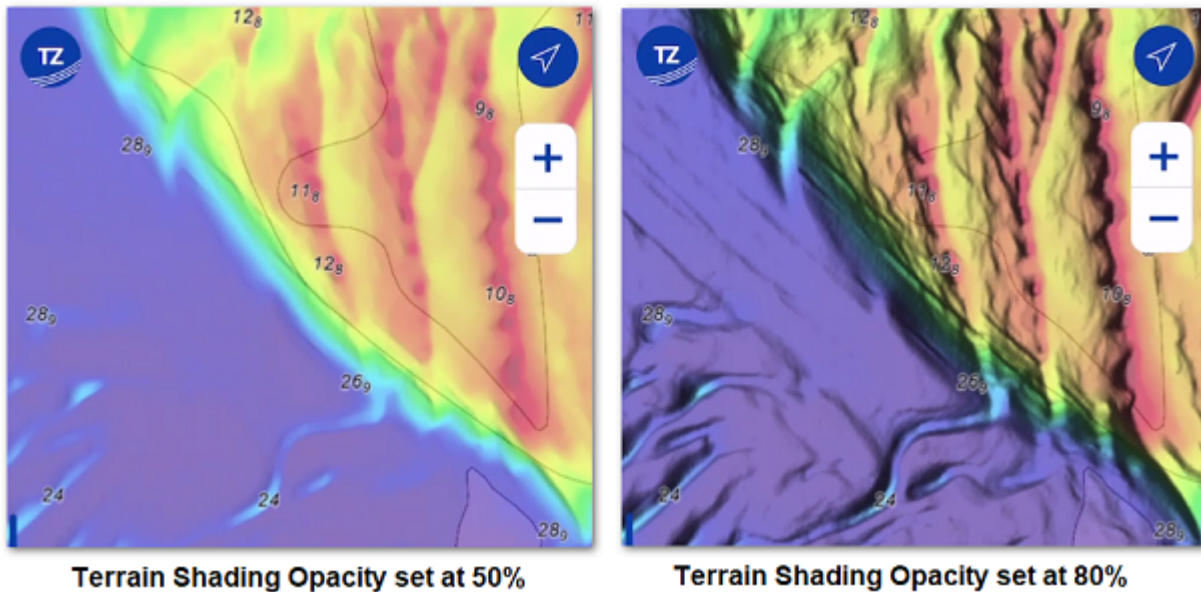
The color scale minimum and maximum values are set automatically: TZ iBoat scans for the deepest and shallowest point on the screen and automatically adjusts the upper and lower boundary. Those values (min and max) are displayed at the bottom left of the screen:



Note that you can change the color palette and the depth shading transparency from the [Plotter](#) Settings.

Terrain Shading opacity

When TZ BathyVision is selected or when the Depth Shading overlay is enabled, a Terrain Shading opacity is automatically applied to the screen. The opacity value of the terrain shading is set to 50% by default but it can be adjusted from the [Plotter](#) Settings using the "Terrain Shading Opacity" located at the bottom of the page. In some areas, increasing the Terrain Shading Opacity might reveal the seabed in a stunning way:



Note that you can also choose to display or not the terrain shading in the [Plotter](#) Settings.

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 TZ iBoat 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) thanks to the iPhone or iPad camera and document them by adding comments (ex: "dangerous rock at low tide").

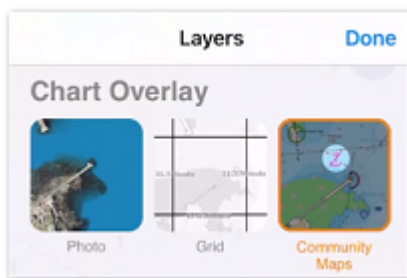
Note that the Community Maps layer is kept separate from the Vector charts data, and it can be enabled or disabled, allowing users to contribute safely to the vector chart knowing that they can at any time revert to the official data.

Display Community Maps Objects

To display the Community Map layer, tap on the "Layer" button located at the bottom right of the screen:



Then, tap on "Community Maps" under "Chart Overlay":



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.*



Create a Community Chart Object

Once the layer is enabled, you can add new chart objects by tapping on the chart and selecting "Create a Chart Object" from the pop-up menu. Select the object family among Obstruction & 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.

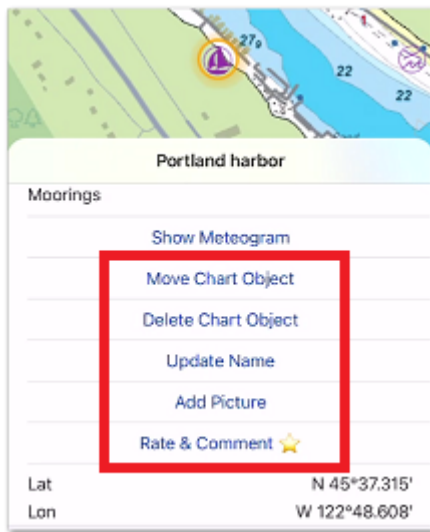
Tap on "Create" to validate your object.

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 charts objects, (both official and community ones) by tapping 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 charts object by mistake, you always have the option to undo your change. Just tap on the object and select "Undo my Modifications". Note that 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 a community object is in a transition state, the tag background is yellow



When the community object is validated, the tag background 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 (thumb up or thumb down).

TZ iBoat has a couple of settings that encourage users to vote by highlighting those 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 thumb up or a thumb down. You can also tap 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.

This feature is enabled by default, but can be turned off from the [Plotter](#) settings under Community Maps (disable "Display Proximity Pop-up").

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 his 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 rated (the number indicates average rating)
	Community object with one or multiple attributes modified
	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:



Dynamic Moorings

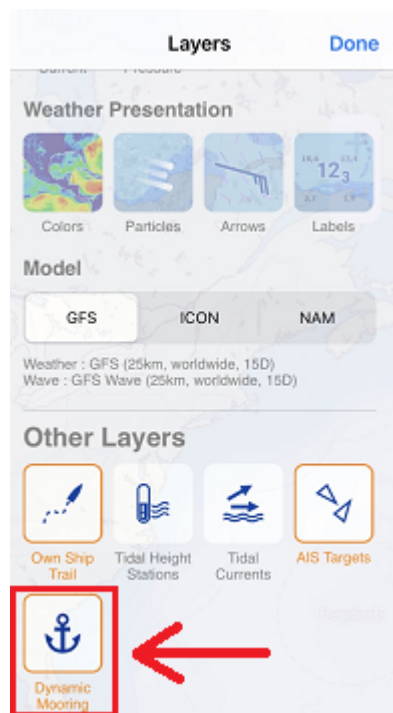
TZ Maps automatically classifies anchorages based on weather forecasts and topology. Everything is done automatically after selecting a date and once a weather forecast is available. A color code (red, orange, green) informs you dynamically of the wind protection to come for the duration of the mooring. 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, tap on the "Layer" button located at the bottom right of the screen:

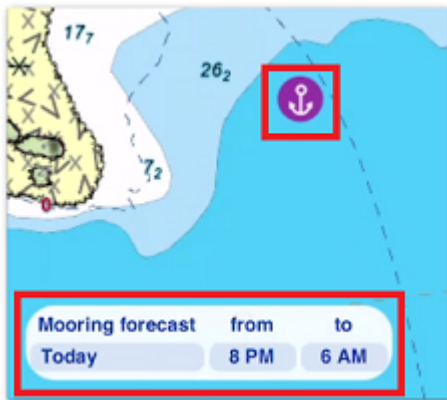


Then, tap on "Dynamic Mooring" located under "Other Layers":



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...

Note: please refer to the [Downloading Weather Forecast](#) chapter for more information about getting weather data in TZ iBoat.

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 tap 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:



Note: For more information about this feature, please refer to [Using the Meteogram](#) chapter.

Edit or add your own Dynamic Mooring

Mooring locations are initially extracted from the Vector charts 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 scene, the [Community Maps](#) are used to store all these modifications.

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

- Move Mooring
- Delete Mooring
- Add/Update Name
- Add picture
- Rate & Comment

If you would like to add a new mooring location, just tap the chart at the location you would like to create the mooring and select

- Create Mooring

Dynamic Lights

This function intuitively represents lighted aids to navigation (navaid) according to your boat's position and your field of view. TZ iBoat 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

TZ iBoat allows you to quickly visualize on the chart the range of a single lighted navaid. Just tap on it and select "Show Light Range" from the pop-up menu:



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 tap anywhere. Repeat this process if you would like to display the range of another light.

Light Display modes

TZ iBoat introduces two innovative modes to display the lighted navais on the charts: "Dynamic" and "Dynamic & Flashing". This option can be adjusted from the [Vector Chart](#) settings under "Lights".

Dynamic

When "Dynamic" is selected, TZ iBoat 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, TZ iBoat 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 TZ iBoat is in Dusk or Night mode, just enable the "Day/Night Mode" option available in the [Vector Chart](#) settings under "Lights". This will make the lighted nav aids 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 (see [Displaying and Configuring NavData](#) for more information). The "Flashing Lights" NavData will display a list of the lighted nav aids 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:



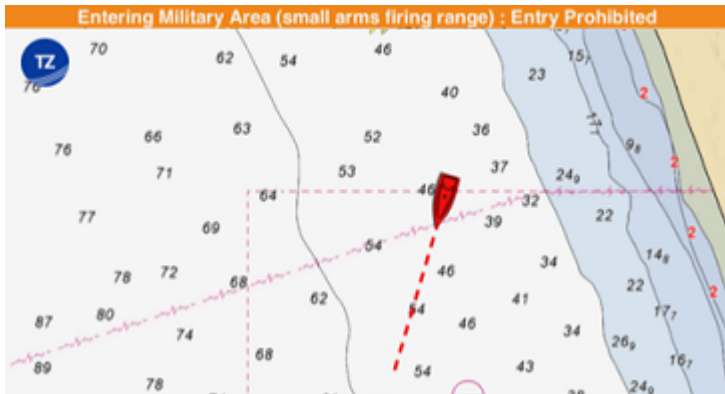
Note that you can tap on any item of the list to find the corresponding light on the chart (TZ iBoat will automatically center on the light).

Smart Zone

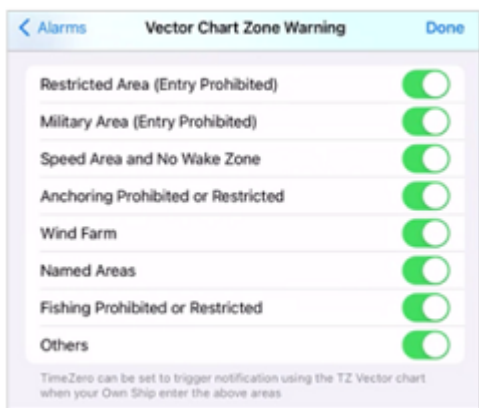
TZ iBoat has the ability to automatically extract zones and areas information from the vector chart and trigger alarms or notifications when your boat enters or leaves a specific area. This feature is called "Smart Zone". The type of alarms and notification that are automatically raised can be configured 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

TZ iBoat 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, TZ iBoat will automatically warn you when entering specific restricted areas:



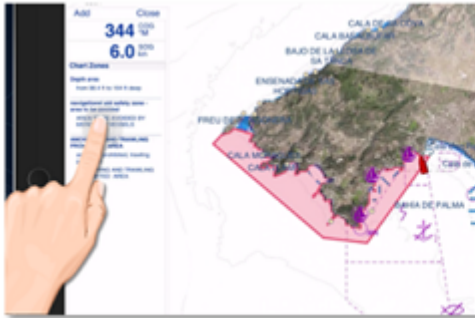
You can configure the type of notification raised by TZ iBoat from the [Alarms](#) settings by tapping on "Vector Chart Zone Warning":



For example, if you would prefer TZ iBoat not to trigger any notification when arriving at a new location ("welcome message"), simply unselect "Named Areas".

"Chart Zones" NavData

A "Chart Zone" NavData can be configured to the NavData panel (see [Displaying and Configuring NavData](#) for more information). It will display a list of all the areas you are currently in. Note that you can tap on any item of the list to highlight the corresponding area on the chart:



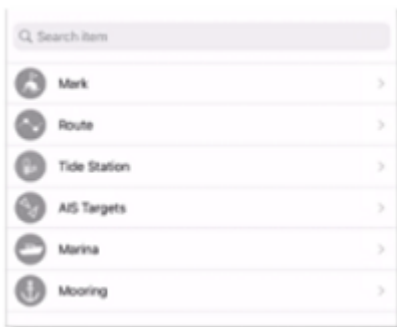
Smart Search

TZ iBoat 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).

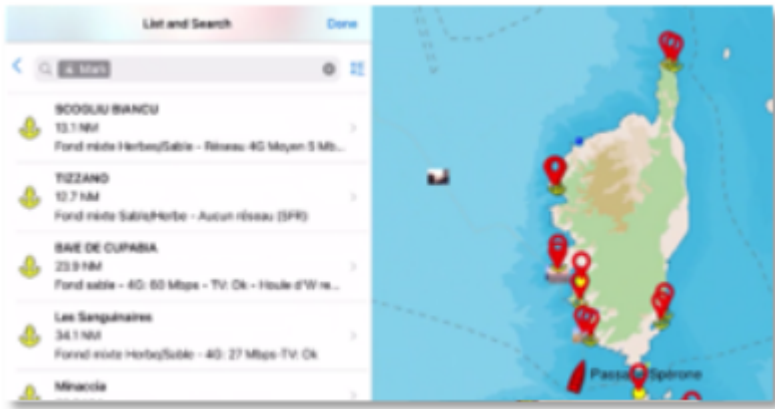
Category Search (Lists)

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, tap on the "TZ" button located on the top left of your screen and select "Smart Search":

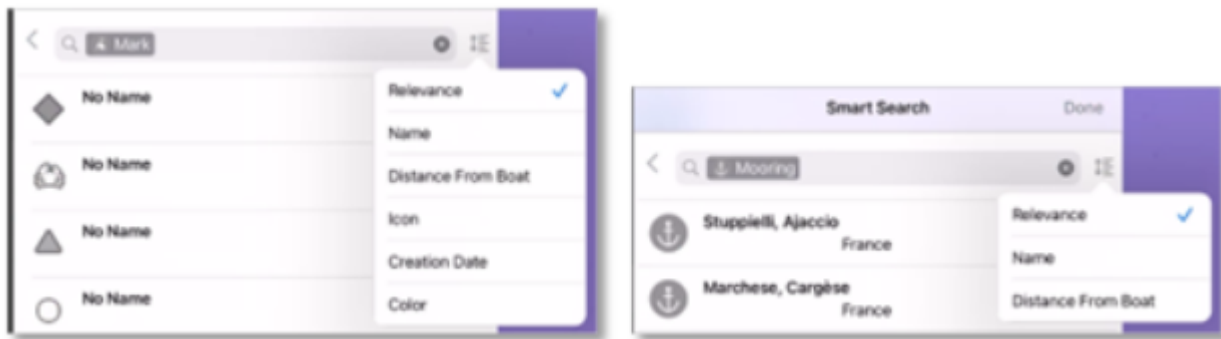


Then, pick your category. This will display the full list of corresponding objects and highlight them on the chart with red markers:



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

Note that you can sort items by various criteria (dynamic according to the category). Simply tap on the sort icon located on the right side of the search box:

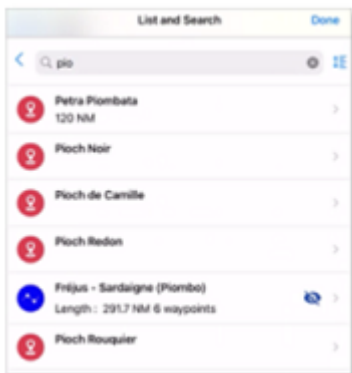


If you want to search for a specific object (usually by name), start typing into the search box. Results will refine as you type.

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:



Note that when moving the charts, the list will automatically update.

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 (Wi-Fi or Cellular Connection required). However, before using TZ iBoat on the water, it is highly recommended to store the chart locally on your device so that you can access them without any Internet connection at sea.

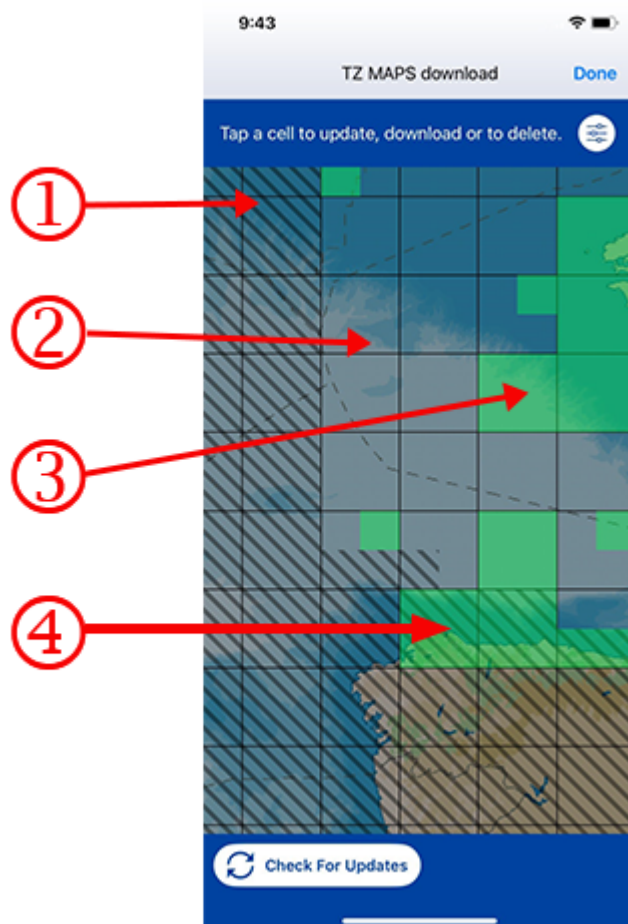
Offline Chart Screen

To store the chart on your device, click on the “TZ” button located on the top left of your screen and select “Offline Charts & Weather”. Tap on "Offline TZ MAPS" to open the screen that will allow you to download TZ Maps.

Important: If you purchased a chart area before June 21st 2023 make sure to select "MM3D Offline Charts". Please refer to [Downloading Charts \(legacy MM3D Charts\)](#) for more information.

Tapping Offline TZ Maps brings up the TZ Maps download window, which shows you the TZ Maps areas available on your device. In the screenshot below:

1. Hatched cells indicate areas that do not currently exist or have not yet subscribed.
2. Gray hatched indicate areas you have subscribed but not yet downloaded to your device.
3. Green cells indicate areas that you have downloaded to your device.
4. Green hatched cells indicate that you have downloaded areas to your device for a previous subscription, but have not yet renewed it. In this case you must renew your subscription to get the latest upgrades.

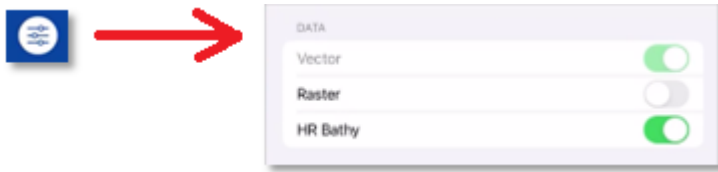


Note that the cell coverage will automatically adjust in size as you zoom in or zoom out on the chart to make larger or smaller selection easier.

To download chart data, just tap once on one or multiple cells. As soon as you start tapping on these cells, a progress bar will be displayed at the bottom with the size and the remaining time. It is recommended to leave TZ iBoat on the download screen while downloading data, however, if you close this screen the download will continue in the background (albeit slower).

Important: You will need at least 1GB of free space on your device to be able to download charts.

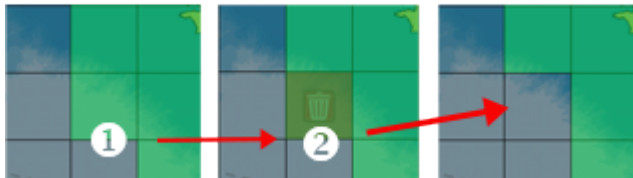
Note that by default, for each cell you tap, TZ iBoat will download vector data and HR bathymetric data (the HR Bathy is used to create BathyVision charts and Depth Shading overlay). If you would like to download Raster charts (in addition to Vector charts), you can tap on the settings button located in the upper right-hand corner:



Note: If you uncheck a data type that you have already downloaded, TZ iBoat will delete this data type to free up space on your device. A confirmation window will be presented on your screen for validation.

Note: It is not possible to download Satellites Photos from this screen. You need to have an Internet connection to stream Satellite Photos. However, Satellite Photos that have been previously streamed will stay on your device and can be displayed offline.

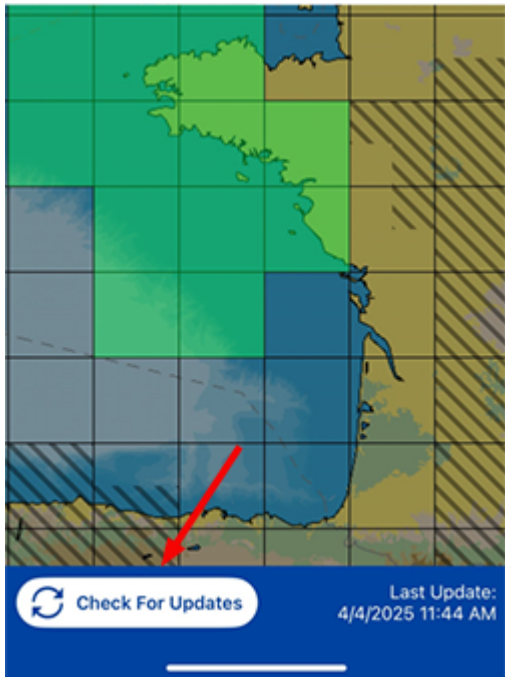
To delete chart data that was previously downloaded and free up space on your device, tap twice (1 & 2) on a green cell:



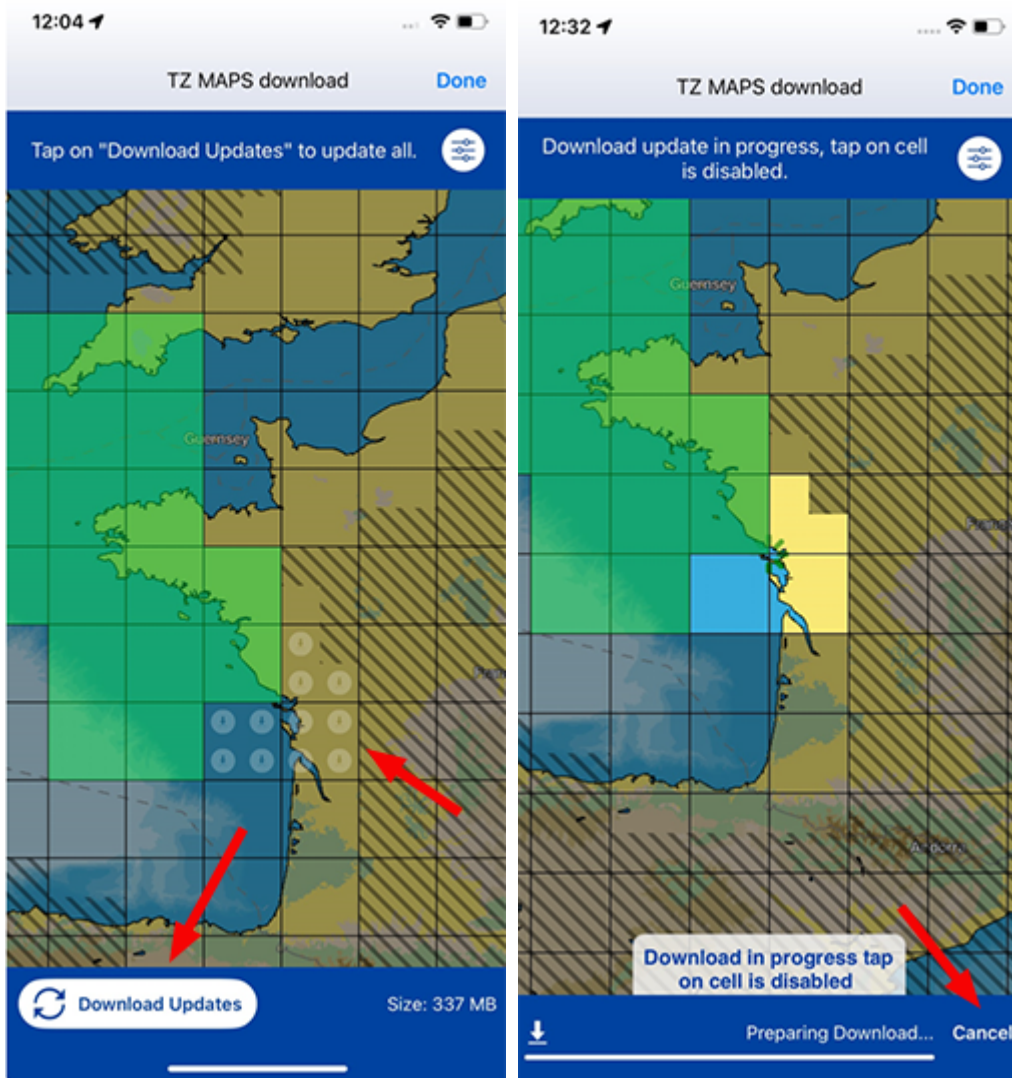
Note: If you want to delete all charts previously downloaded on your device, you can tap on the settings button located in the upper right-hand corner and select "Delete All"

TZ Maps Update

The TZ Maps are updated continuously. To check for update, simply tap on the button "Check for Updates" that will appear at the bottom of the Offline Chart screen (the update button will only appear if cells were previously downloaded):



When TZ Maps updates are available on the server, a download icon will appear above each updated cell, as shown in the following picture. Simply tap "Download Updates" to begin the update process:



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



User Objects

Marks

TZ iBoat allows for the creation of up to 30,000 marks. Marks are used to plot on the chart specific locations such as fishing spots, hazards, harbors, or preferred anchorages.

To save a mark, tap on the chart at the location you want the mark to be created and select “New Mark” from the Pop-Up menu. A mark will be created with the default icon and color set in the “Marks” settings.

TIP: You can also create a mark by entering its coordinate. Tap on the “TZ” button located on the top left of your screen, select “Add by Lat/Lon” from the Quick Actions and then select “Add Mark by Lat/Lon”. This will display a dedicated Lat/Lon keyboard that will allow you to create the mark using its coordinate.

The mark can be edited from its Pop-Up menu: simply tap on the mark and select the corresponding action from the mark’s Pop-Up menu (color, symbol, delete, ...)

To move a mark, simply select “Move” from the Pop-Up menu. A handle will be displayed under the mark allowing you to drag it to a new location:



When you are done, tap anywhere to validate.

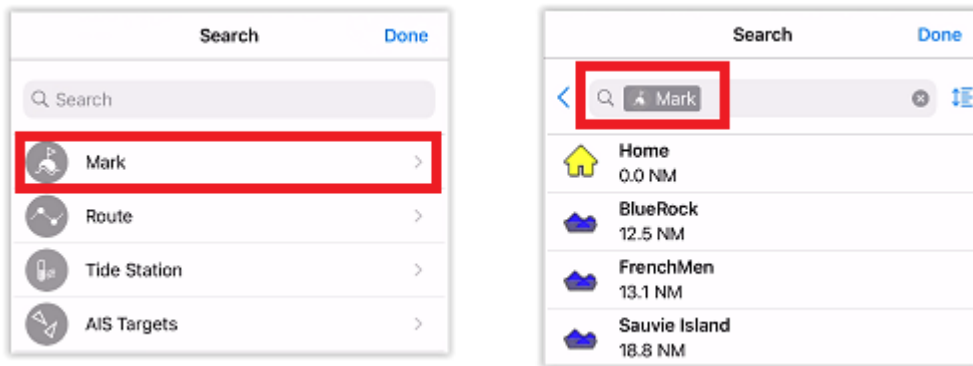
Note that when you edit a mark, the undo/redo icon will appear for a couple of seconds at the top of the screen allowing you to revert to the previous mark state quickly and easily:



All marks can be displayed or hidden on the chart by tapping the “Layer” button located on the bottom right and enabling or disabling the “Marks” button under “User Data”.

TIP: Marks size can be adjusted globally from the [Marks](#) setting.

If you need to search for a specific mark or display a list of all your marks, tap on the “TZ” button located on the top left of your screen, select “Smart Search”, and select “Mark”:



You can search by name and filter the content of the list if you start typing a text. You can also sort the list by name (alphabetical order), range (distance from boat), icon, date (creation date) or color.

Routes

TZ iBoat allows for the creation of up to 200 routes of 500 waypoints each allowing you to plan multiple voyages. TZ iBoat offers various ways of creating your route: using Route Assist, using a Manual mode, or by entering coordinates.

Creating a Route using Route Assist

With Route Assist, you can create a complex route with just two taps on the chart. Set the starting and ending waypoints, and Route Assist will automatically complete the route, ensuring it avoids obstructions and adheres to your safety depth, all at impressive speed.

If you want to go through a specific spot or if you are not satisfied with the proposed route, you can simply add, remove, or move waypoints, and see the route being updated in real time. Route Assist gives you the flexibility to adjust your route on the fly, making it a time saver for route planning.

But before using Route Assist for the first time, you need to adjust some parameters:

Configuring Route Assist:

Route Assist takes in account several parameters that you can find tune from the [Routes](#) Settings under the section “Route Assist”.

- **Safety Depth:** Route Assist will always avoid land, but it also ensures the route adheres to the minimum safety depth you have specified in the “Safety Depth” setting.

TIP: Feel free to increase the safety depth above your usual margin. This will cause the Route Assist algorithm to steer toward deeper waters. Some users might even decide to select the maximum safety depth value, which is 10m. With this large value, Route Assist will still be able to work even in shallow water (for example when entering/exiting marinas) by turning the legs red as a warning; but at the same time, it will continuously try to find the deepest possible routes, until 10m is reached.

- **Strict Depth compliance:** In some circumstances the Route Assist algorithm may create legs that are under the Route Assist Safety Depth setting. This might seem strange at first, but some harbors may be poorly charted or may not contain any depth information which would cause the Route Assist to never find a path to the destination if it was set to strictly comply with the safety depth setting. That is why, by default, the Route Assist may create legs in areas shallower than the safety depth setting. Note that this flexibility also allows Route Assist to create legs in shallow water to avoid a big detour. These legs will be clearly marked in red when that happens so that you can review them carefully. However, if you want Route



Assist to strictly respect the safety depth, you can select "Strict Depth Compliance"; in this case, Route Assist will never create legs that go under the safety depth.

- Use Recommended Routes: If there is a recommended route or a recommended track on the chart, Route Assist will try to follow it. While "vector chart recommended routes" are provided by hydrographic offices and included in the charts, "crowd-sourced recommended routes" come from user-contributed data. These routes are not visible on the charts but are embedded in the underlying data, helping the Route Assist Algorithm in areas where the charts lack specific guidance.

- Boat Width and Boat Height: These two settings are not found under the Route Settings, but rather under the [General](#) Settings. Your boat width is used to avoid narrow passages, while boat height is used to avoid bridges that are lower than your boat air draft.

Creating a Route using the Route Assist mode:

To create a route, tap on the chart at the location you want the route to start and select "New Route" from the Pop-Up menu. The first waypoint will be created (represented with a starting flag). Make sure that the "Assist" mode is selected at the bottom of the screen:



Tap on the chart to create the next waypoint or tap directly on your destination. You don't need to be accurate when creating the waypoints as you are able to move them to fine tune their location using their handles (just drag the "lollipops" displayed just below the waypoints). As soon as you have created 2 waypoints, the Assisted Route is displayed, starting from the first waypoint, and ending on the second one:



If you are satisfied with the result, simply tap on the route validation displayed at the top right of the screen:



However, if you want to make modifications to the route, you can:

- Continue tapping on the screen to extend the route by creating new waypoints along the way
- Tap on a leg to insert a waypoint (either tap and select "Insert Waypoint" or long tap on a leg to directly insert a waypoint)

- Tap on a waypoint handle and select "Delete Waypoint" to remove a waypoint
- Move a waypoint by dragging its handle

As soon as a modification is done, the Route Assist algorithm will recompute automatically any intermediate waypoints (any waypoint that were not created or modified by the user).

Remarks:

- Route Assist can work with both vector and raster charts (as long as the vector charts data has been downloaded).
- Routes created in Assist mode are synchronized with other TimeZero devices. However, if a device does not support the Route Assist feature, the route will be displayed and handled as a standard route.
- A Route has a maximum of 500 waypoints. When the Assisted Route is too complex, it can exceed this number. In that case you will get a "Too Many Points" error. If that happens, you will need to create a shorter route.
- The distance between two successive user waypoints is 500NM maximum. If you exceed this distance while creating the Assisted Route, you will get an error and the route will not be created; The best solution is to add an intermediate waypoint to reduce the distance between the waypoints.

Creating a Route using the manual mode

To create a route in manual mode, tap on the chart at the location you want the route to start and select "New Route" from the Pop-Up menu. The first waypoint will be created (represented with a starting flag). Make sure that the "Manual" mode is selected at the bottom of the screen:



Continue to tap on the chart to drop your waypoints and build your route. If you need to move a waypoint, simply use the handle displayed just under each waypoint. Note that you can pan and zoom the chart during the route building process.

To end a route, tap on the route validation displayed at the top right of the screen:



Creating a Route using coordinates

You can create a route by entering a succession of coordinates. This is useful when you want to create a route that is described in a Cruising Book by a succession of waypoints. Tap on the "TZ" button located on the top left of your screen, select "Add by Lat/Lon" from the Quick Actions and then select "Add Route by Lat/Lon". This will display a dedicated Lat/Lon keyboard that will allow you to create waypoints using manual coordinates. Simply enter the coordinate of the first waypoint, then tap on "Add Point #1". Repeat the process with all waypoints. When you are done, tap on "Done".

Editing a Route

Both Manual and Assisted routes can be modified at any time. TZ iBoat tracks whether a route was created with the Manual or Assist mode. When you move a waypoint, the system maintains the route's characteristics. For routes created with Route Assist, the legs before and after the modified waypoint will be automatically recalculated using the Route Assist algorithm, keeping the "Assisted" characteristic of the route.



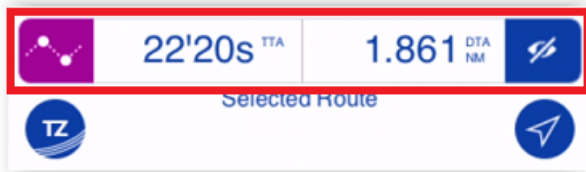
To edit a route first, tap on it to make sure it is selected. When a route is selected, you can perform various operation on the route by tapping on the route itself or on one of its waypoints and select the corresponding action from the Pop-Up menu:

- To adjust a waypoint location, tap on it and select “Move” from the Pop-Up menu. Use the handle that appears just below the waypoint to drag it and then tap anywhere to validate the new position.
- To remove (delete) a waypoint from the route, tap on it and select “Delete Waypoint” from the Pop-Up menu.
- To insert a waypoint, tap on the route leg where you want to insert a waypoint and select “Insert” from the Pop-Up menu. This creates a new waypoint that you can drag using the handle. Tap anywhere to validate the new waypoint position.
- To extend the route, tap on it and select “Extend” from the Pop-Up menu. This will restart the route building process from the last waypoint.
- To reverse a route, tap on it and select “Reverse” from the Pop-Up menu.
- To rename a route, tap on it and select “Rename” from the Pop-Up menu on iPhone, or tap on the name itself from the Pop-Up menu on iPad.

Note: By default, the route name is not displayed on the chart, but this can be adjusted by enabling “Route Label” from the [Routes](#) settings.

Hiding and Displaying Routes

After creating a route, the header will transform into the “Selected Route” header that allows you to either activate the route for navigation (left button) or hide the route (right button):



Note that when building or after selecting a route, the header will display a Time To Arrival (TTA). This time is based on the route length and the “Planning Route Speed” set in the [Routes](#) settings.

To help reduce clutter on your screen, TZ iBoat only displays one route at a time (the “selected route”). All other routes will be collapsed into a departure (default) or an arrival icon located respectively at the first or last waypoint of the route. To expand a route, simply tap on its collapsed icon:

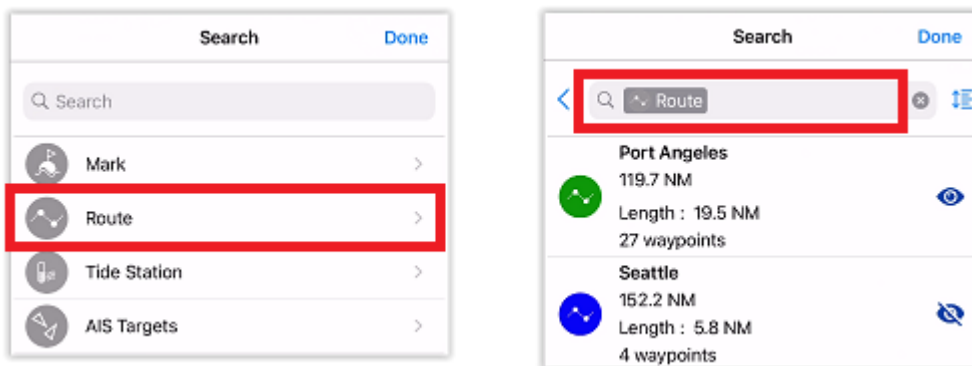


TIP: If you have lots of routes starting from the same departure point, it might make more sense to set the “Route Icon Position” to “Arrival” instead from the [Routes](#) settings. This way the collapsed route icon will be located on the last waypoint making it easier to select the route.

Once a route is expanded (or “selected”), the route header will be displayed at the top of your screen. If you want to collapse this route, either select another route or click on the “Hide” button located on the right side of the route header.

Route List

If you want to display a list of all your routes or search for a specific route by its name, you can use the Search feature of TZ iBoat. Tap on the “TZ” button located on the top left of your screen, select “Smart Search”, and select “Route”:



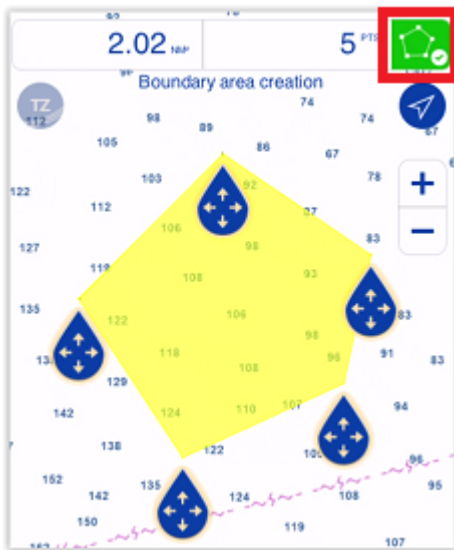
You can search by name and filter the content of the list if you start typing a text. You can also sort the list by name (alphabetical order), range (distance from boat), route length, date (creation date) or color.

When you select a route from a list, the route is automatically expanded (made visible) on the chart and will stay selected when you close the search window. You can then tap on the activate button from the selected route header to start navigating.

Boundaries

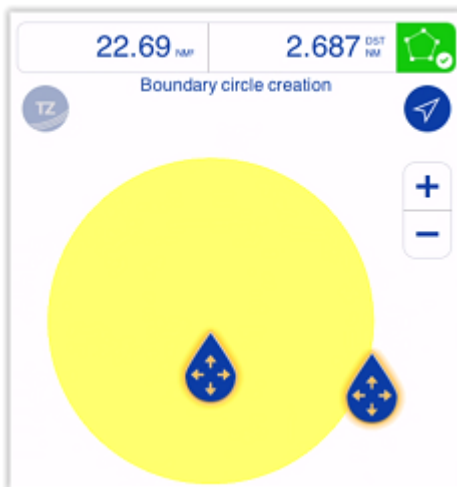
TZ iBoat allows for the creation of up to 100 Boundaries (Areas, Lines and Circles) with up to 50 points per Area or Lines.

To create a boundary, tap on the chart at the location you want the boundary to start and select “New Boundary” from the Pop-Up menu. A second menu will appear allowing you to select the type of boundary you want to create (Area, Circle or Line). For areas and lines, tap on the chart to create boundary points. While you are in boundary building mode, you can move all boundary corners by using the handle below each point. When you are done click on the boundary validation button in the header:



TIP: You can also create a boundary area or boundary line by entering a succession of coordinates. Tap on the “TZ” button located on the top left of your screen, select “Add by Lat/Lon” from the Quick Actions and then select “Add Boundary by Lat/Lon”. This will display a dedicated Lat/Lon keyboard that will allow you to create the boundary points using their coordinates. Simply enter the coordinate of the first point, then tap on “Add Point #1”. Repeat the process with all points that constitute the boundary. When you are done, tap on “Done”.

When you create a boundary circle, TZ iBoat will automatically create two handles that will allow you to move the center of the circle and another handle that will allow you to set the circle radius:



To change a boundary property (such as its color or pattern) tap on the boundary and select “Boundary Color” or “Pattern” from the Pop-Up menu.

If you wish to edit the boundary (move a point, add a point ...) tap on the boundary and select “Edit Points”.

TIP: To be able to see the pop-up menu of the boundary, make sure that the entire boundary is visible on screen. Then, tap on it and select “Edit Points”.

This will enable the boundary creation mode allowing you to move each point using the handles. If you want to insert a new point (for boundary line or boundary area), tap on the leg of the boundary where you want to insert a point and then drag it to move it to the desired location.

To delete a boundary point, zoom on it until it becomes visible (small dot). Tap on it and select “Delete Point”.

All boundaries can be displayed or hidden on the chart by tapping the “Layer” button located on the bottom right and enabling or disabling the “Boundaries” button under “User Data”.

Catches

TZ iBoat allows for the creation of up to 1000 Catches. Catches are marks with specific properties allowing to capture information about a single caught fish:

- Fish Species
- Fish Length
- Fish Weight
- Name & Comment
- Depth
- Pressure
- Sea Surface Temperature

The catch icon is fixed and automatically set according to the selected fish species. The color will vary automatically according to the average fish size caught by species (green for above average and red for under average among all the Catches you entered in TZ iBoat:



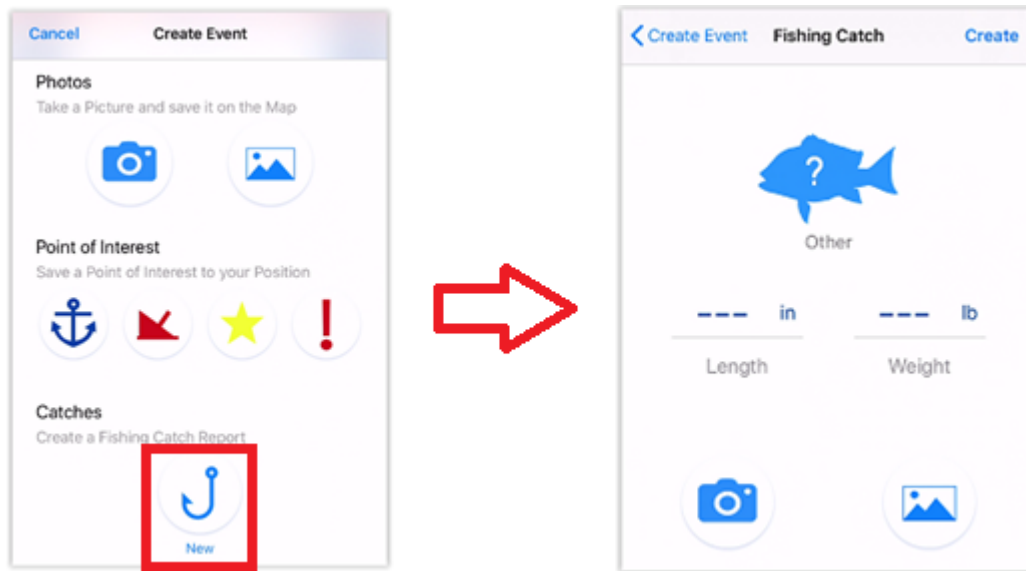
Catches are created from the event window (and automatically saved at your current position). To open the Events window on TZ iBoat, you can either:

- Tap on the “Action” button located on the lower right and select “Create Event”:



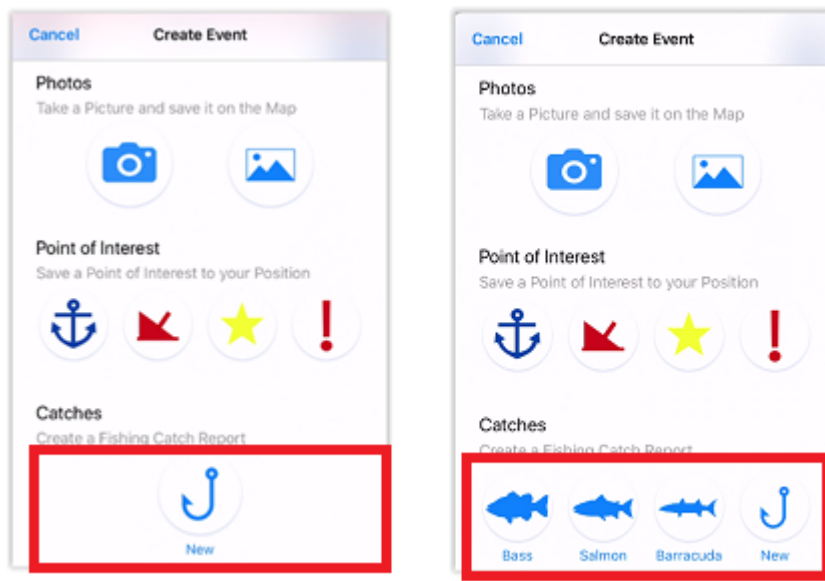
- Tap on your Boat icon and select “Create Event”
- Use the default function gesture by pressing and holding two fingers on the screen for 1 second

Once the Events window appears, tap on “New” under the “Catches” section.



The Fishing Catch window will allow you to select a species (mandatory to create a catch), and optionally enter a fish length, a fish weight and attach a picture (taken directly from your devices' camera or from your photo album). If TZ iBoat is connected to a NMEA Gateway providing depth or sea surface temperature or atmospheric pressure, these parameters will be logged as well.

Note: The first time you create a Catch, only the "New" button will be available. Once you start logging some catch, you will be able to directly select the fish species from the Event window (shortcut):



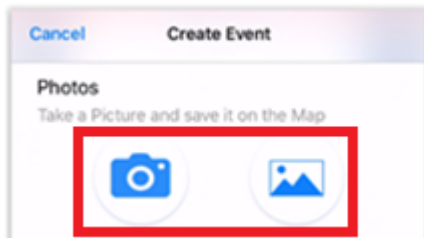
It is possible to edit a catch by tapping on it and selecting the corresponding option in the Pop-Up menu.

TIP: You do not have to add the picture when you initially create your Catch. You can add the picture later by tapping on the Catch and selecting "Add Photo". This is also useful if the Catch was created from another networked device that does not have a camera such as a computer (loaded with TZ Professional or TZ Navigator) or from a Furuno MFD (TZtouch 2 or TZtouch 3). In this case, you can use your iPhone or iPad to attach a picture to your catch.

All catches can be displayed or hidden on the chart by tapping the “Layer” button located on the bottom right and enabling or disabling the “Catches” button under “User Data”.

Photos

TZ iBoat allows for the creation of up to 1000 Photos. Photos are a great way to highlight specific points of interest on the chart. Just like Catches, Photos can be created at your current position from the Event window:



You can either take a photo using your device’s camera (camera icon) or select an existing photo from your library (picture icon).

You can also tap on the “TZ” button and select “Take a Picture” to take a quick photo using your device’s camera (shortcut).

All photos can be displayed or hidden on the chart by tapping the “Layer” button located on the bottom right and enabling or disabling the “My Photos” button under “User Data”.

Local Synchronization (Wi-Fi)

The Active Route and all User Objects (marks, routes, boundaries, catches, and photos) are automatically synchronized with all compatible TimeZero platforms that are connected on the same Wi-Fi network (TZ Navigator, TZ Professional, TZ iBoat, and Furuno TZT2/TZT3). Note that the local synchronization does NOT require an Internet connection to work (as it operates on the local network), but it does require all devices to be logged in with the same My TIMEZERO account (for security and privacy).

***Note:** [Trips](#) are also synchronized with all TimeZero platforms although, at this time, only TZ iBoat can create and display them.*

The automatic local synchronization is very useful as soon as you have more than one device on your boat. Here are a couple of examples:

- TZ iBoat running on an iPad at the helm and TZ iBoat running on your iPhone as a secondary/backup device. In this situation, you can create and plan your route on the iPad, then activate it and monitor your progress from your phone each time you step out of the helm. You can also use your phone to take pictures or log events that will be automatically synchronized back to your iPad.
- TZ Navigator or TZ Professional running on a fixed PC installed at the helm and TZ iBoat running on your iPad or iPhone. In this situation TZ iBoat can be used as a secondary backup device and to monitor your progress each time you step out of the helm. But when you are at home, TZ iBoat can be used to plan your navigation. You can create your routes from your iPhone or iPad and as soon as you come aboard, all your user objects will be updated/transferred automatically on your PC and be ready when it is time to navigate.



- Multiple iPads at the Helm running all TZ iBoat simultaneously. In this situation, you could use multiple iPads as your main navigation “bridge”. Having multiple iPads allows redundancy, but you can configure each iPad with different “layer” of information (one zoomed in on the chart for navigation purpose, and the other one displaying the weather at more general scale). Anytime you update or make a new user object (route, mark...), both iPads will be fully synchronized.
- A dedicated Furuno TZtouch 3 MFD (Multi-function display) and TZ iBoat running on your iPad or iPhone. In this situation, TZ iBoat is the perfect “companion” to a Furuno MFD (TZtouch 2 or TZtouch 3). Not only TZ iBoat will be able to synchronize all user objects with the MFD, but TZ iBoat will also be able to get all navigation data automatically from the MFD (GPS, Depth, AIS...).

Cloud Synchronization (Internet)

When you are connected to the Internet, your user objects (routes, marks, catches, boundaries, and photos) can be automatically synchronized to the TZ Cloud.

Note: [Trips](#) are also synchronized to the TZ Cloud.

The three main advantages of the TZ Cloud synchronization are:

- **Automatic User Object Backup:** all your user objects are automatically synchronized and backed up any time you make a modification. When you install TZ iBoat on a new device (up to 5 devices are supported under the same My TIMEZERO account), all your user objects will be automatically downloaded.
- **Remote Synchronization:** if your devices are not connected to the same network (for local synchronization), your user objects can be synchronized via the Internet (TZ Cloud) even remotely. For example, you may decide to plan your navigation at home on your iPad, but then decide to only take your iPhone to the boat. All modifications that were done on the iPad at home would be synchronized on your iPhone, even if you only launch TZ iBoat on your boat (with cell service).
- **Web Viewer:** You can look and make modifications to your user objects from any web browser at “cloud.mytimezero.com”. This is very useful if you want to review your navigation at home or with friends without having to use TZ iBoat.

Note: you can disable the cloud synchronization by tapping on the “TZ” button located on the top left of your screen, then tap on your account (at the very top). You will see a “Cloud Synchronization” checkbox that you can disable if you do not want TZ iBoat to synchronize your user objects with the TZ Cloud.

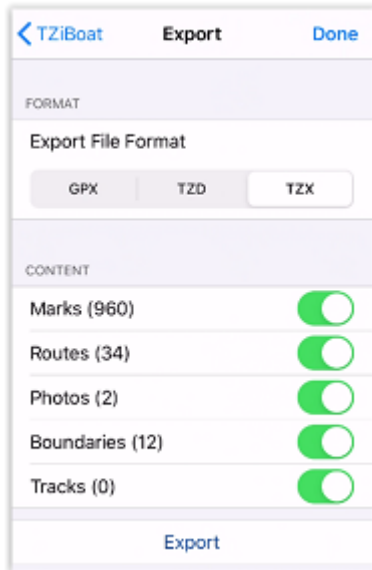
Exporting and Sharing User Objects

User objects can be shared with other TZ iBoat users via the export feature.

Sharing all your User Objects (filtered or not by category)

If you want to share all of your user objects or all user objects of a specific category (all your routes, or all your marks,) you can click on the “TZ” button located on the top left and select “Export”. A window will appear allowing you to select the format and the type of user object you want to export. Choose “GPX” when you want to share Marks or Routes with another application which supports the GPX format (note that boundaries and photos are not supported by this format).

Choose “TZD” when you want to share Marks, Routes or Boundaries with an old TimeZero software (that only supports the older TZD format). If you want to share user objects with another TZ iBoat users or a recent TimeZero platform, select “TZX” which is the latest format and supports all user objects:



When you click on “Export”, your iPhone or iPad will display the standard iOS sharing interface that will allow you to share the file via e-mail, or SMS, or any other App on your device that supports file attachment.

Sharing just one object

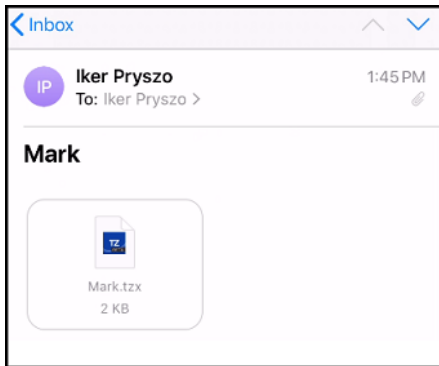
Sometimes you only need to export and share a single object (a route for example). For these cases, just tap on the object from the chart screen and select “Export” from the Pop-Up menu:



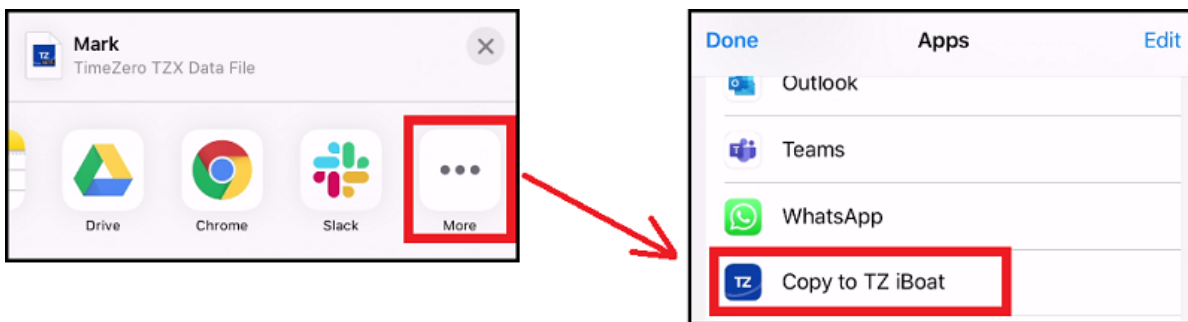
The same standard iOS sharing interface will appear and will allow you to share the file via e-mail, or SMS, or any other App on your device that supports file attachment.

Importing User Objects

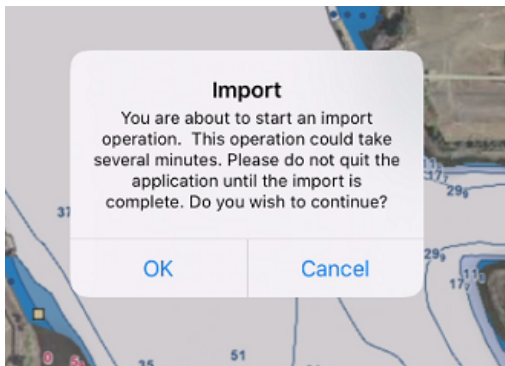
When you receive a TZX, TZD or GPX file via text message, e-mail, airdrop or from iCloud drive, you can just tap on it to open it with TZ iBoat. This will import (merge) the file content with your database.



When you tap on the file, iOS will ask to select the App you want to use. If you do not see TZ iBoat in the list, select “More” and “Copy to TZ iBoat”:



This will open TZ iBoat and display the import window:



Tap “OK” to validate. After importing (merging) the data, TZ iBoat will display a window letting you know the type and number of user objects that were imported.

Weather

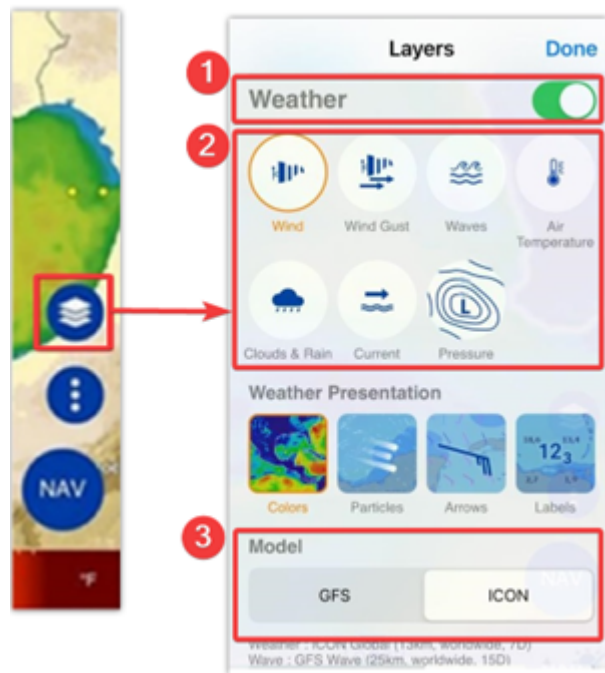
Displaying Weather Forecast on the chart

Display Mode

TZ iBoat lets you display the weather forecast in two different ways: either in "Online" mode, the weather will be streamed directly to your device or in "Offline" mode, the weather forecast will have to be downloaded to your device. The "Online" mode is very convenient (you can look at any area and see the weather immediately), but it requires an Internet connection. If you plan to be in an area without Internet connection, you should switch the mode to "Offline" and then download a specific area (please refer to [Downloading Weather Forecast](#) for more information). You can change the mode at any time by selecting "Offline Chart & Weather" under the TZ button, then selecting "Download Weather" and switching from Online to Offline in the bottom left corner of the screen. Another way is to change the mode connection in the [Weather Settings](#).

Display on chart

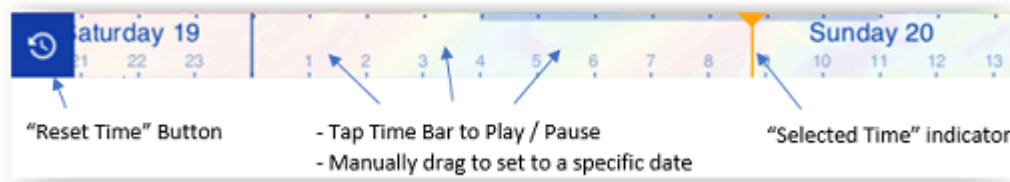
TZ iBoat can overlay weather forecasts directly on your chart using particles (animation), colors, labels, or traditional arrows. To display weather, simply tap on the "Layers" button located on the bottom right of your screen, activate the "Weather" section by pressing the ON/OFF button (1) and select the type of weather data you would like to see among Wind, Waves, Air Temperature, Clouds & Rain, Current, and Pressure (2):



Just below the type of weather data to display, you can select the type of presentation. Note that you can combine multiple display types if you wish. For example, you can choose to display wind in color + arrows + label.

Note that if the "Online" mode is selected and you have subscribed to the Premium Weather service, you can switch from one weather model to another, as shown in screenshot above(3). If you have not subscribed to the Premium Weather service, the model section will not be displayed in the layers, because only one model is available: the GFS model. The same applies if the "Offline" mode is selected, because you can only download and view one model at a time.

Once a weather parameter has been selected, a time bar is displayed at the bottom of the screen:

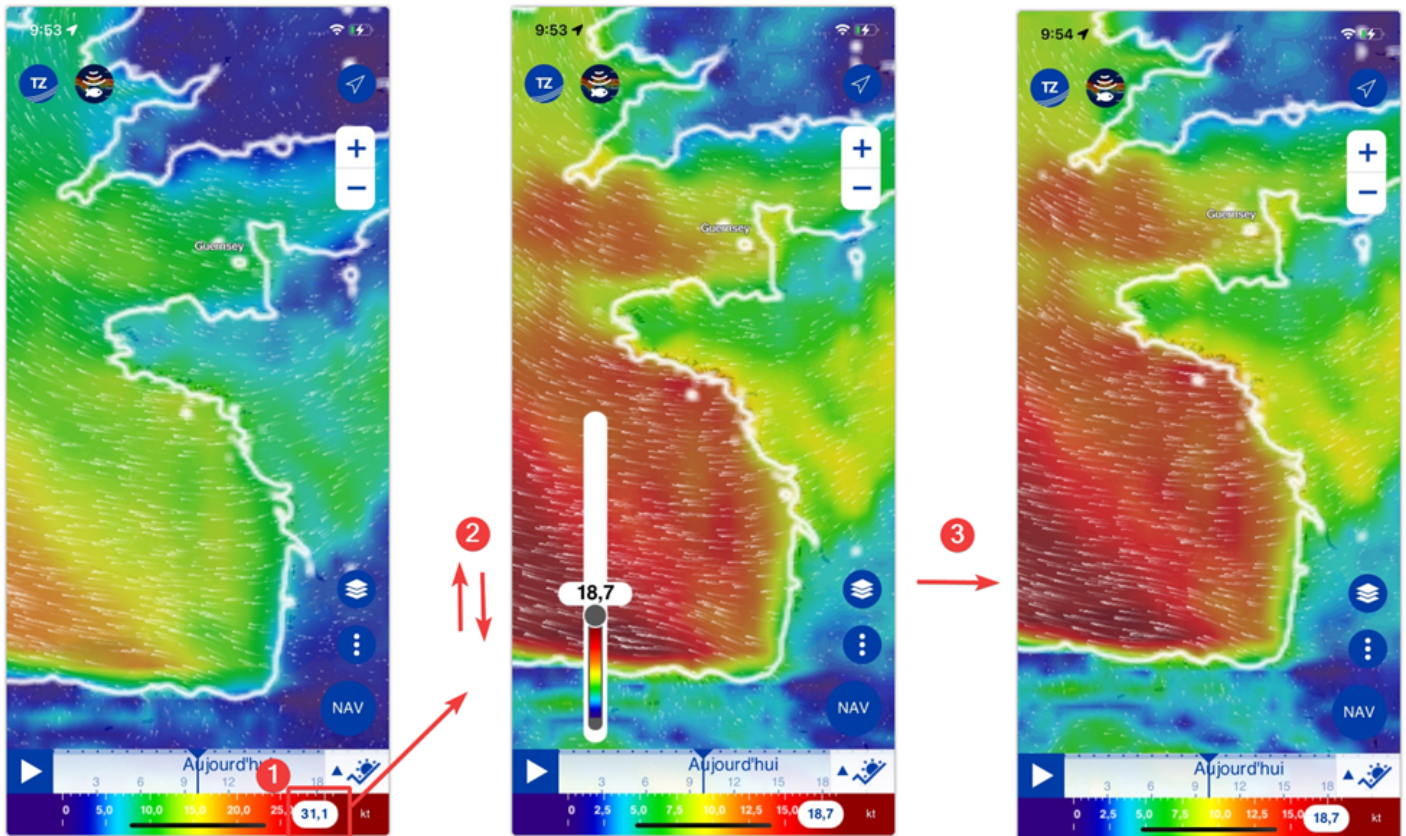


The time bar allows you to play an animation (tap on the time bar anywhere) or you can manually drag it to a specific date & time.

Note that if you are displaying the wind in color, you can adjust the maximum value of the color scale by clicking on the value label to the right of the color palette (1).

This will bring up the slider (2) that allows you to set a value between 0kn and 50kn.

The least extended palette (0-20kn) shows a better variation of the wind in a regular environment, as you can see in the screenshots below (3):



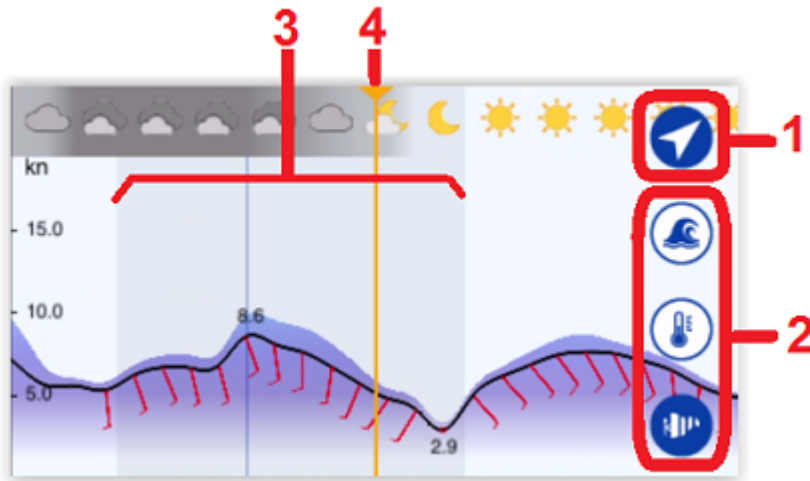
A wider color scale (0–50 knots) is more suitable for tracking storms or severe wind conditions.

Using the Meteogram

When you want to know the weather condition at a specific location, you can use the “Meteogram”. To display the Meteogram, first display any weather parameter on the chart and then click on the Meteogram button:

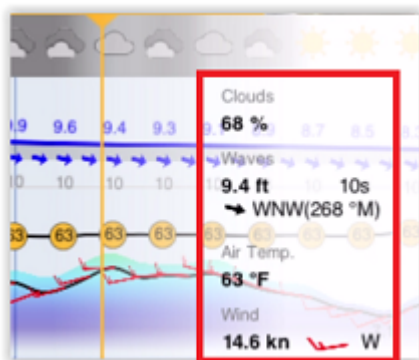


The Meteogram allows to see a graphical presentation of one or multiple meteorological variables with respect to time at a location (either your boat position or a custom location):

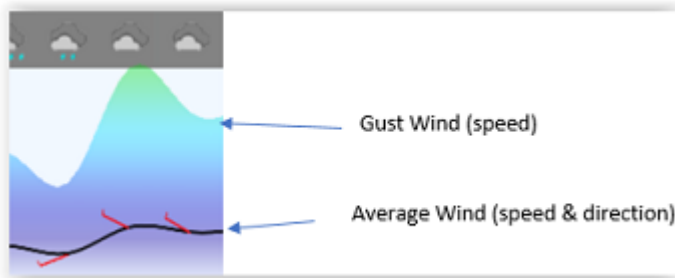


1. This button allows you to toggle in between your current location (GPS) and a custom location. When you are in “target” mode, an orange dot will appear on screen. You can drag this orange dot anywhere to see the weather overtime at any location.
2. These buttons allow you to select the parameters that will be displayed inside the Meteogram
3. Night is displayed inside the Meteogram in darker shade
4. Selected Time indicator

Note that when you drag the Meteogram, numerical value will be displayed giving you additional information:



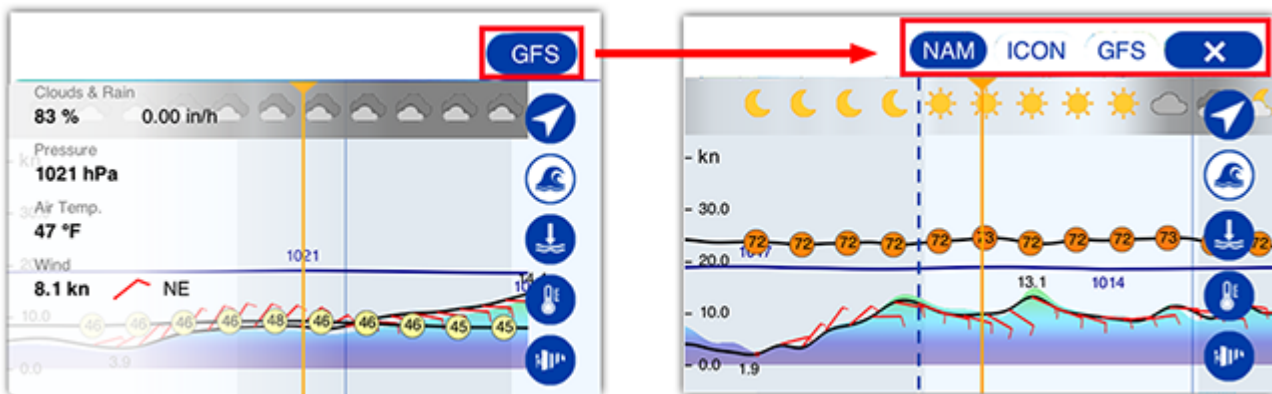
When you select wind, both the average wind and wind gust will be displayed inside the Meteogram:



To close the Meteogram, simply tap on the same button that allowed you to open it.

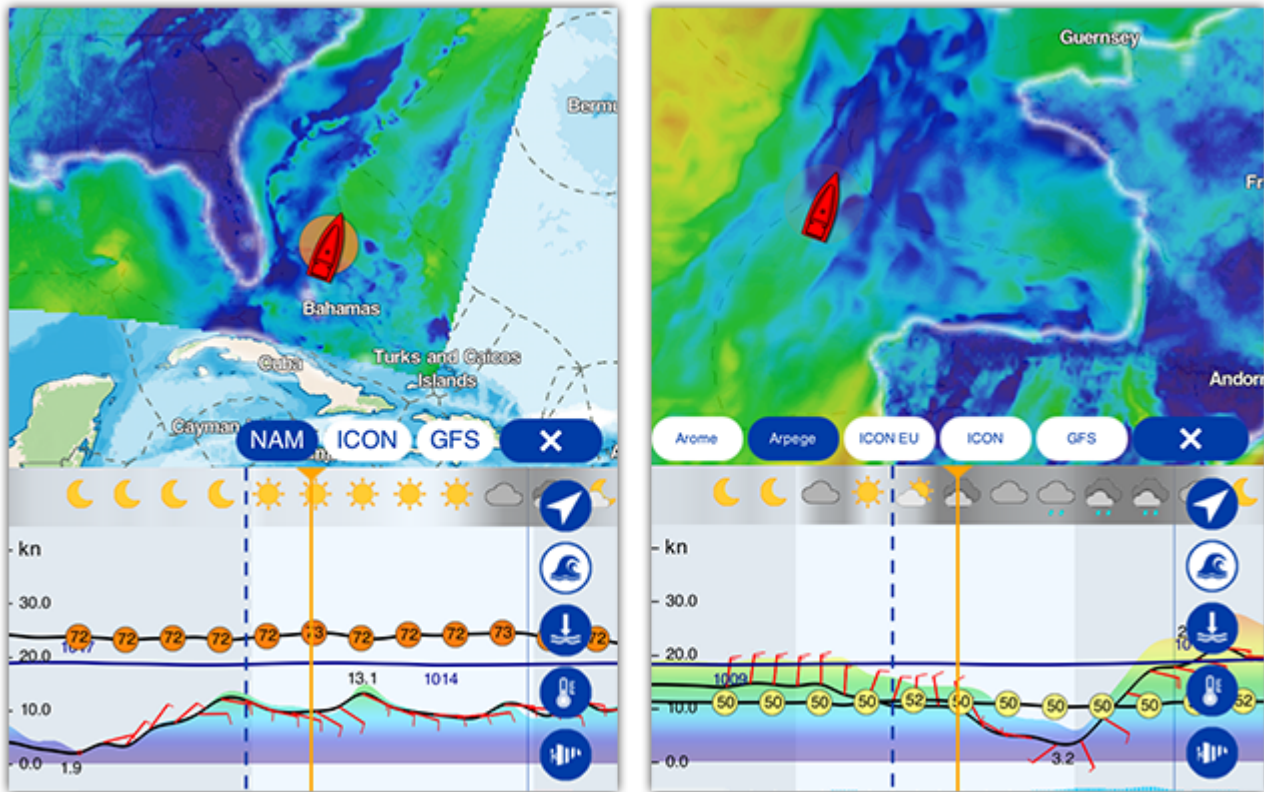
Display Meteogram in Online mode

The difference with the offline "Meteogram" is that in this mode you can view the live weather forecast and, if you've subscribed to the Premium Weather service, you can view the different weather forecast models directly from the "Meteogram", which are updated simultaneously on the chart. Please note that Online Weather requires an Internet connection. If Online mode is selected and you have subscribed to the Premium Weather service (see "[Subscriptions](#)" for more information), the currently selected model label will appear at the top of the "Meteogram":



Tap the label to easily switch from one model to another. Tap the "Cross" button to reduce the bar of model choices.

Note: Oceanographic data (SST, SSH, Chlorophyll and Current) are not available in the meteogram.



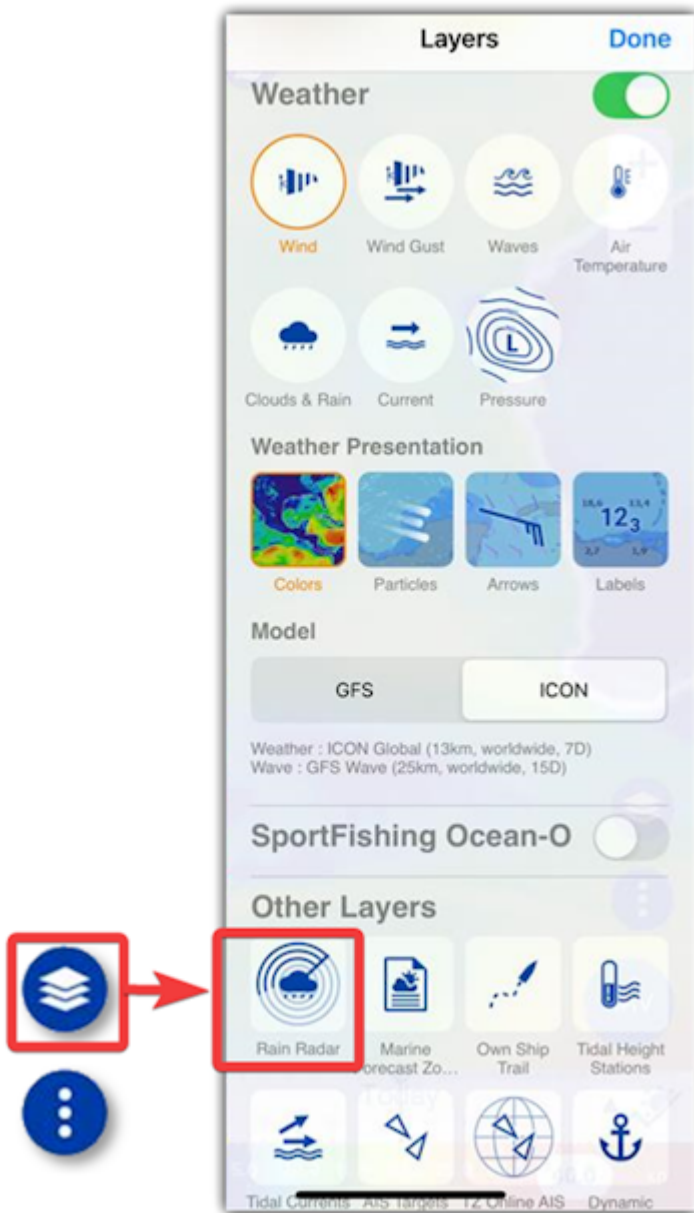
Please note that the different labels displayed depend on the availability of weather data models for the area displayed on the screen, as shown in the screenshots above (left if you're sailing in the USA, right if you're sailing in Europe).

Displaying Rain Radar

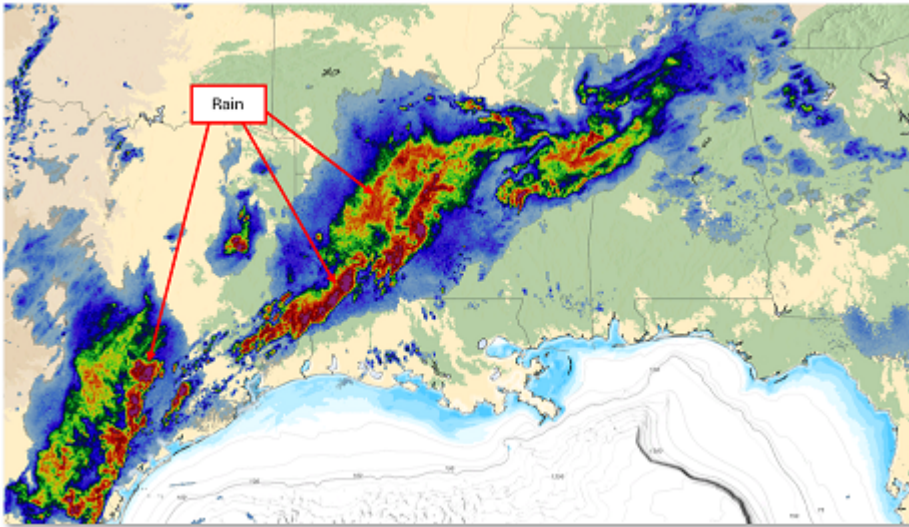
IMPORTANT: Due to the near-real time aspect of this feature, the Rain Radar requires an Internet connection. It is not possible to cache the data like it is for weather forecast. The Rain Radar feature requires a subscription to the Premium Weather service (please refer to [Subscriptions](#)).

The Rain Radar displays active precipitation areas, almost anywhere in the world. The last three hours of rain radar data can be animated at 10 minutes interval directly on the chart. This will allow you to see the storm track and have a good idea of where the rain is headed next.

To display the Rain Radar, simply tap on the “Layers” button located on the bottom right of your screen and select “Rain Radar” from the “Other Layers” section:

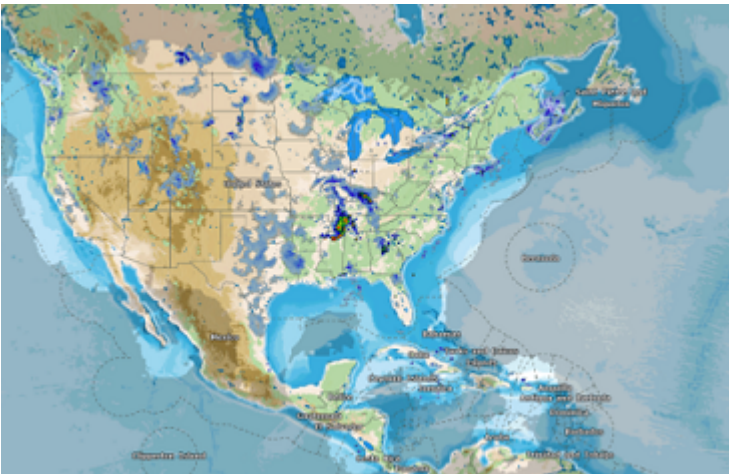


After a brief moment, the rain radar color will appear on top of your charts:



The colors vary according to the precipitation intensity, red and purple being used for heavy precipitations/storms. The color legend is displayed at the bottom of the screen in mm/h or in/h (the unit can be changed from the [Units](#) Settings).

Because radar coverage is an important information: to discriminate in between “no rain” and “no coverage”, a special color is used (dark gray) to indicate areas that are outside any radar coverage when the Rain Radar layer is activated. In the example below light areas correspond to the areas covered by the radars:

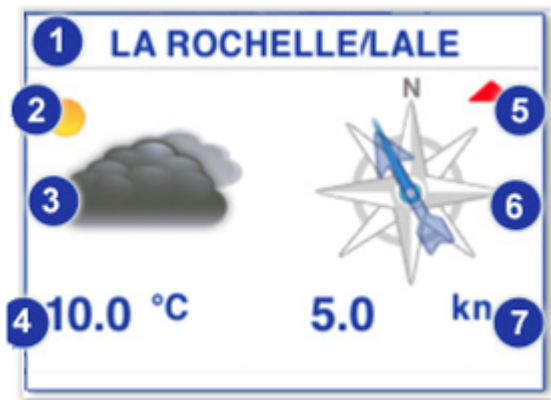


To start the rain radar animation and watch the evolution of precipitation over the last three hours, click on the "play" button located in the timeline at the bottom left of the screen. When the Rain Radar is displayed, the animation will automatically loop, helping anticipate precipitation movements.

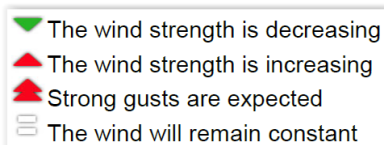
Note: The animation speed can be adjusted from the [General](#) Settings under "Animation Replay Speed".

Real Time Weather NavData

In addition to weather forecasts (that are derived from numerical weather model), TZ iBoat also can display real time weather data and tendency that is collected from observation stations (METAR stations). This real time weather information can be displayed in a NavData. TZ iBoat will always display the closest observation station from your own ship position:



1. Name of the station
2. Weather tendency for the next hours (in this example, the future trend is improving)
3. Current weather (observation)
4. Temperature
5. Wind Speed tendency:



6. Wind Direction:
 - a. Average Wind Direction is indicated with the arrow
 - b. The blue line, when present, indicates the wind variability (not displayed if the wind direction is steady)
7. Average Wind Speed

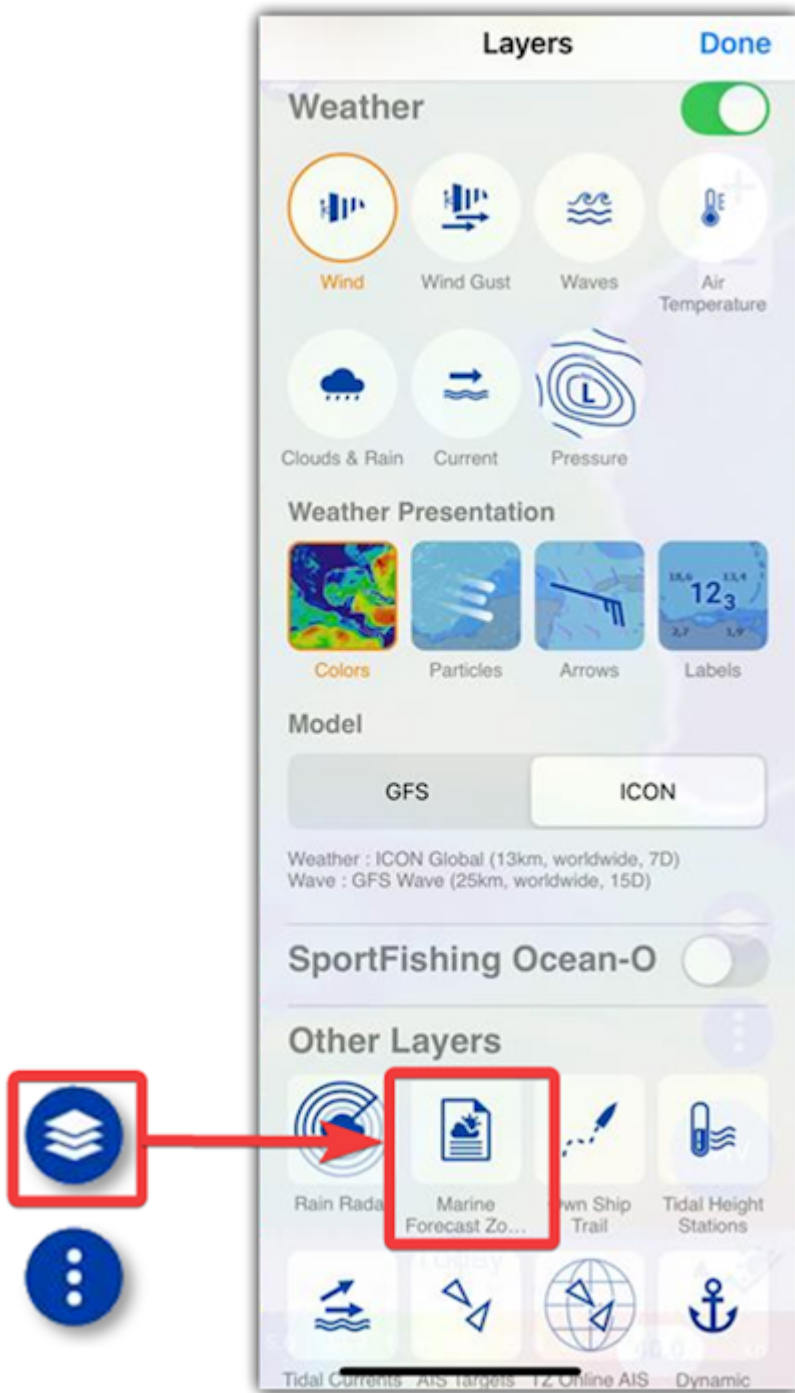
Note that an Internet connection is required to populate the Weather NavData (since this is an observation). The Weather NavData is grayed-out if your Internet connection has been lost for 20 minutes or more.

Marine Bulletins (USA)

IMPORTANT: The Marine Zone Forecast requires an Internet connection. It is not possible to cache the data like it is for weather forecast. The Marine Bulletins feature requires a subscription to the Premium Weather service (please refer to [Subscriptions](#)) and is only available in the USA at this time.

Marine Forecasts are designed to provide you with comprehensive text bulletins, offering a significant advantage over traditional model forecasts. These bulletins are crafted by seasoned meteorologists from NOAA who analyze weather patterns and identify potential hazards, ensuring that you receive information that is both precise and actionable. Marine Forecast bulletins may also include specialized sections for alerts and tropical storms, providing timely warnings that are crucial for planning and response strategies.

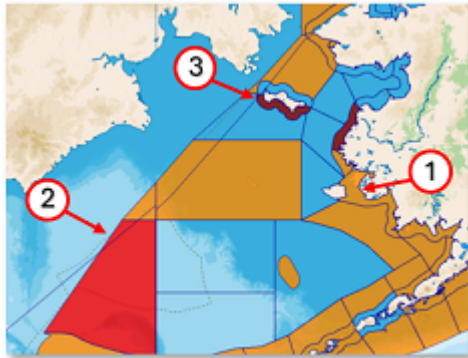
To display the Marine Forecast Zones layer tap on the “Layers” button located on the bottom right of your screen and select “Marine Forecast Zone” from the “Other Layers” section:



Marine Bulletins are organized into specific zones covering all U.S. territorial waters, each with a unique code name:



Zones which have an active alert are filled with a specific color depending on the severity:



1. Orange: minor severity
2. Red: moderate severity
3. Dark Red: extreme severity

To display the Marine Bulletin, tap inside an area and select "Show Marine Forecast" from the pop-up menu. The text bulletin will appear from the bottom or side of your screen according to your device (iPad or iPhone):



When an alert is active in the zone, the panel title becomes red, and the number of alerts is displayed next to it. An alert usually provides the following information:

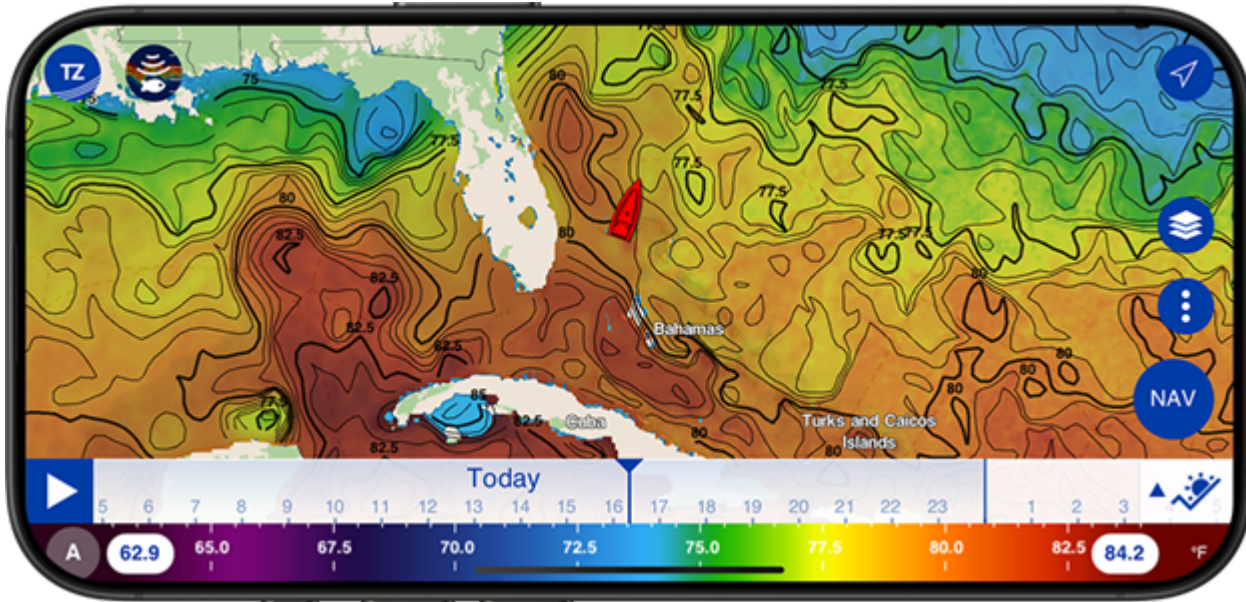
- Severity of the alert, for example [Minor]
- Type of the alert, for example "Small Craft Advisory", "Gale Watch"
- Issuance date of the alert
- End date of the alert
- Issuer of the alert, for example "NWS Houston/Galveston TX"
- "What", "Where", and "When"

To notify the user of a potential danger (even when the Marine Zones are not displayed on screen), TZ iBoat will trigger an alarm based on the GPS position when entering a zone with an active alert or when the current zone status changes. The alarm is enabled by default and can be disabled from the [Alarms](#) Settings under "Marine Forecast Alarm".



SportFishing Ocean-O

Introduction



The “SportFishing Ocean-O” service enables sport fishing enthusiasts to find the best fishing spots based on oceanographic conditions!

In addition to the meteorological data available in the “Weather Premium” service, you'll have access to new information: water surface temperature (SST), altimetry (SSH), chlorophyll concentration and currents.

The SportFishing Ocean-O service provides access to the following ocean forecasts:

- **The SST** (Sea Surface Temperature) is of prime importance. Identify the zones where fish concentrate according to their thermal comfort. Locate thermal fronts, natural frontiers rich in marine life.
- **Chlorophyll** concentration is essential, as there's a well-known correlation between it and the location of phytoplankton, which forms the basis of the food chain for the fish you're looking for. Larger fish such as tuna are more likely to be found at the edge of areas with high chlorophyll concentrations.
- **Altimetry** (SSH: Sea Surface Height) is invaluable. Find upwelling zones, where nutrients rise from the depths to attract fish and prey.
- **Currents**, you'll be able to identify areas of strong currents, clearly visible thanks to the large arrows drawing river-like patterns in the open sea. This will enable you to identify areas called Eddies, which trap nutrients and thus favor the presence of the species you're looking for.

This data can be represented by color gradients or contour lines.

Six predefined layers are available to display your data on the map, both in surface mode and in contour line mode, which can be superimposed on each other (for more information, see “How to choose layers”).

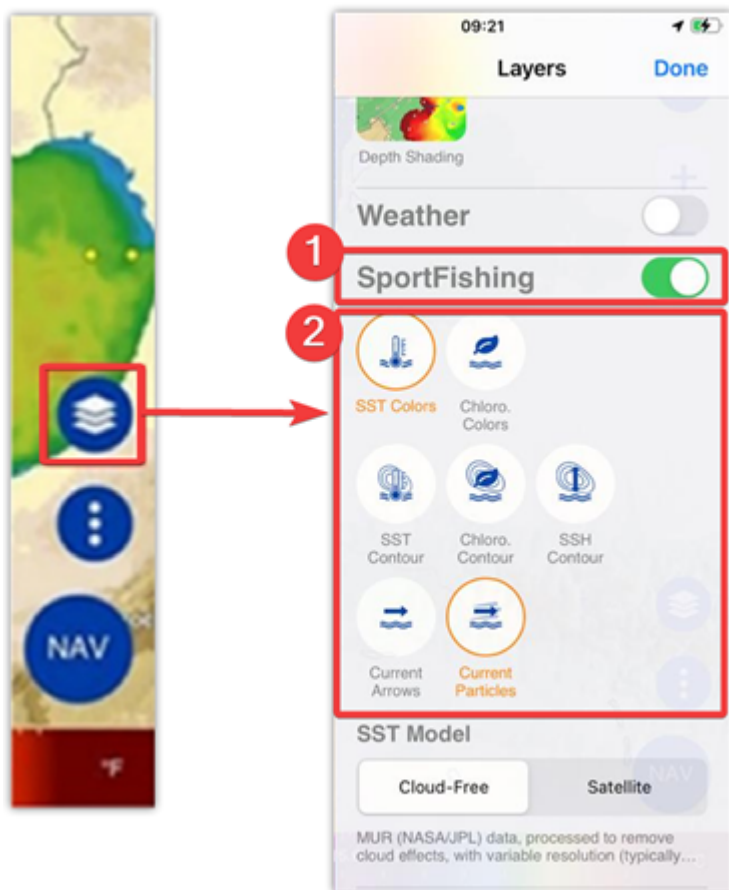
By analyzing the various data layers, superimposing them and cross-referencing information on temperature, chlorophyll and currents, you'll be able to pinpoint those strategic areas where fish congregate. It's an innovative and crucial approach to maximizing your chances of fishing success!

This data is automatically retrieved in real time if you have an Internet connection, with the “Online” mode activated by default. If you don't have an Internet connection during your navigation, you'll need to download the ocean forecasts before setting out to sea - this is the “Offline” mode (for more information, see the [“Online or Offline mode”](#) chapter).

Display Oceanographic Data on the Chart

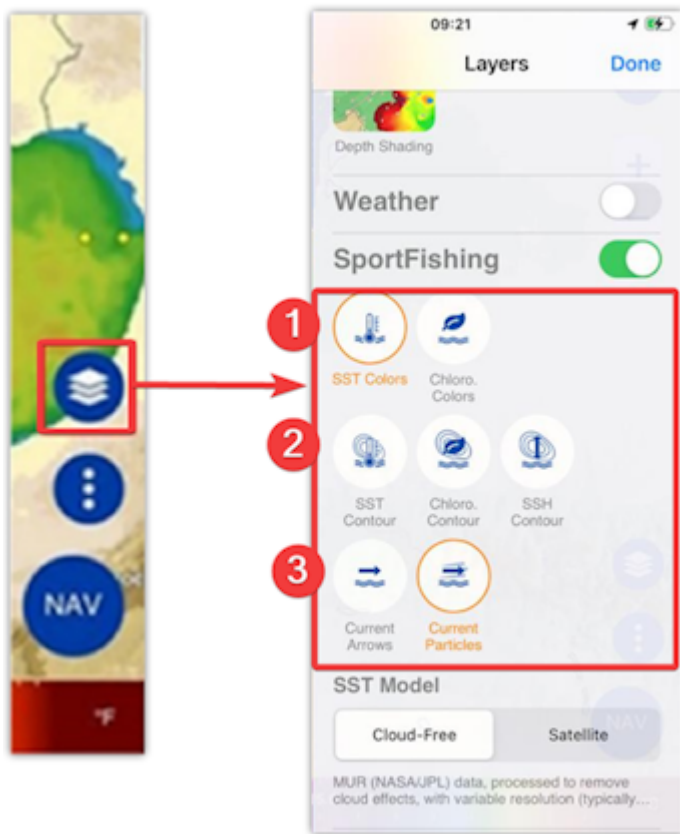
To display oceanographic data on the map, simply press the “Layers” button at the bottom right of the screen, activate the “SportFishing” section by pressing the ON/OFF button (1), six buttons corresponding to layers appear (2) below.

The “SST Colors” layer is selected by default.



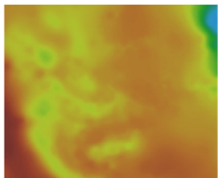
How to Choose Layers

The data can be displayed in either color gradient mode or contour lines, depending on the selected layers.



1. Color layers:
 - SST Colors (Sea Surface Temperature)
 - Chlora. Colors (Chlorophyll concentration in color)
2. Contour layers:
 - SST Contour (Temperature contour lines)
 - Chlora. Contour (Chlorophyll contour lines)
 - SSH Contour (Altimetry contour lines)
3. Arrows & Particles layers:
 - Currents (Arrows)
 - Currents (Particles)

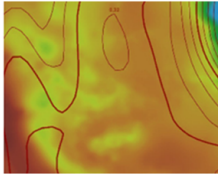
Examples of display:



SST Colors:
Warm areas (red/orange)
Cold areas (blue/green)



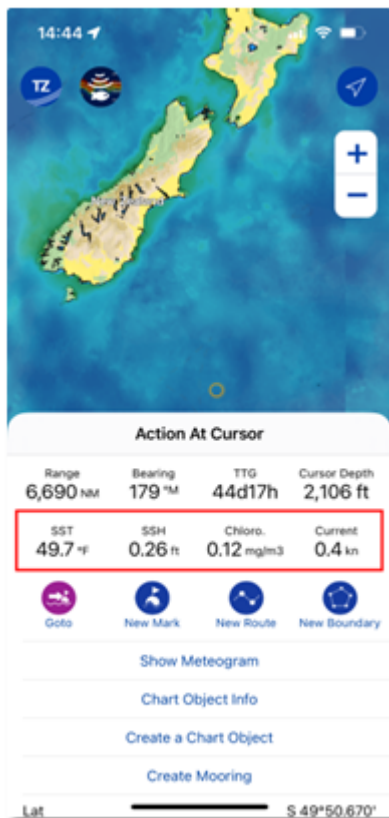
SSH Contour:
Sea level variations



SST Colors & SSH Contour

You can combine almost any layer, allowing you to pinpoint areas where conditions are favorable for fish, such as thermal breaks, upwellings or areas rich in phytoplankton.

Cursor Information

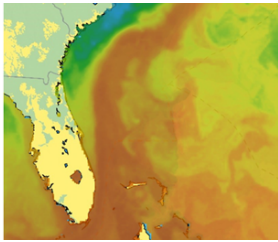


Notes: This information is available in both 'Online' and 'Offline' modes. In online mode, oceanographic data such as SST, SSH, chlorophyll and current are always displayed in the cursor information. In offline mode, values are only displayed if data has been downloaded.

Choose your SST Data Model, Cloud-Free or Satellite

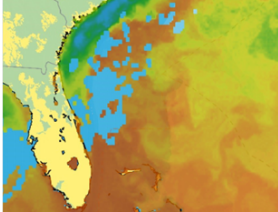
The SportFishing Ocean-O service offers two display models for SST: “Cloud-Free” and “Satellite”.

The “Satellite” model is preferable if the observed area is cloud-free, as it is extremely accurate. But if the observed area is cloudy, use the “Cloud-Free” model. This model is generated from mathematical models, using several data sources as inputs, and enables SST to be calculated and represented where cloud cover prevents satellites from observing the earth's surface. The drawback: the resolution of the data is lower.



Cloud-Free SST Model (without clouds):

MUR (NASA/JPL) data, processed to remove cloud effects, with variable resolution (typically 4 km)

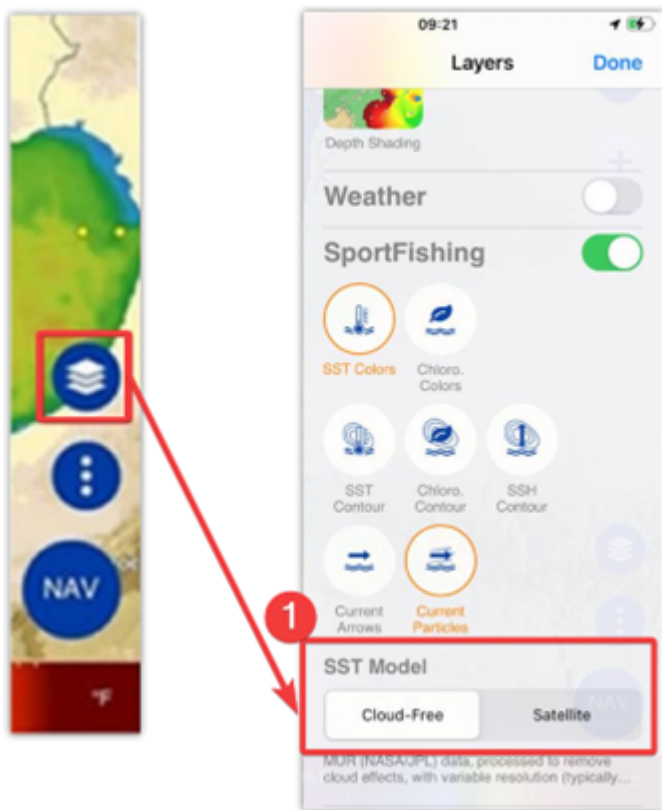


Satellite SST Model:

ACSP0 (NOAA) data, unprocessed, may include gaps due to clouds, with high resolution (2km).

Please note that model changeover is only possible when you are in “Online” mode.

When you are in “Online” mode (only), you can switch from the “Cloud-Free” model to the “Satellite” model in the “STT Model” section (1):

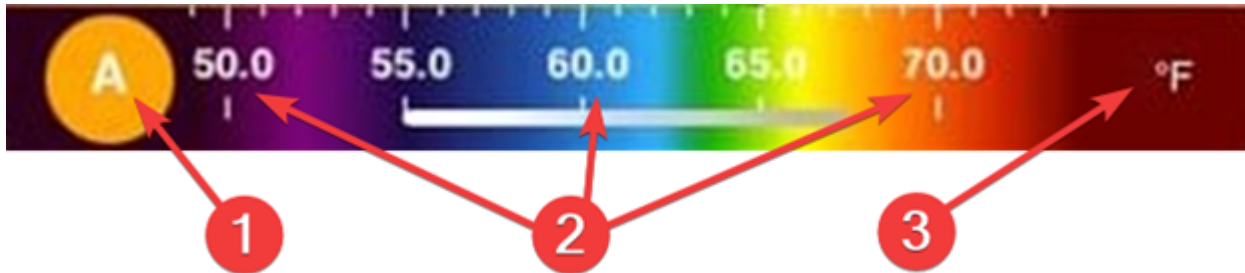


When you're in “Offline” mode, you won't be able to switch between models. The "SST Model" (1) remains selected on the model chosen at download and cannot be modified.

For more information, please refer to the "Download oceanographic forecasts" chapter.

Data Legend in Colors Mode

When you activate a layer in “Color” mode, a color scale appears at the bottom of the screen. This indicates the corresponding values associated with each color for SST or Chlorophyll.



1. Button to switch to Manual mode
2. Temperature or chlorophyll values and color gradient.
3. Units: °C or °F for SST - µg/L for Chlorophyll

The color scale lets you interpret the value associated with each color for the following parameters:

SST Colors – Sea Surface Temperature

The color graph goes from dark blue (cold water) to dark red (warm water).

Example:

- **Dark blue:** 15°C or 59°F
- **Green:** 17°C or 64°F
- **Red:** 23°C or 74°F

Chloro. Colors – Concentration de chlorophylle

The color scale represents the amount of phytoplankton (mg/m3).

Example:

- **Blue:** low concentration (poor water)
- **Green to brown:** high concentration (productive areas)

Press button (A) to switch from automatic to manual mode:

Automatic mode: (by default)

The minimum and maximum values adapt automatically to the data displayed on the screen. This is the default mode. It's very easy to use. From dark blue, coldest water, to dark red, warmest water.

Manual mode:

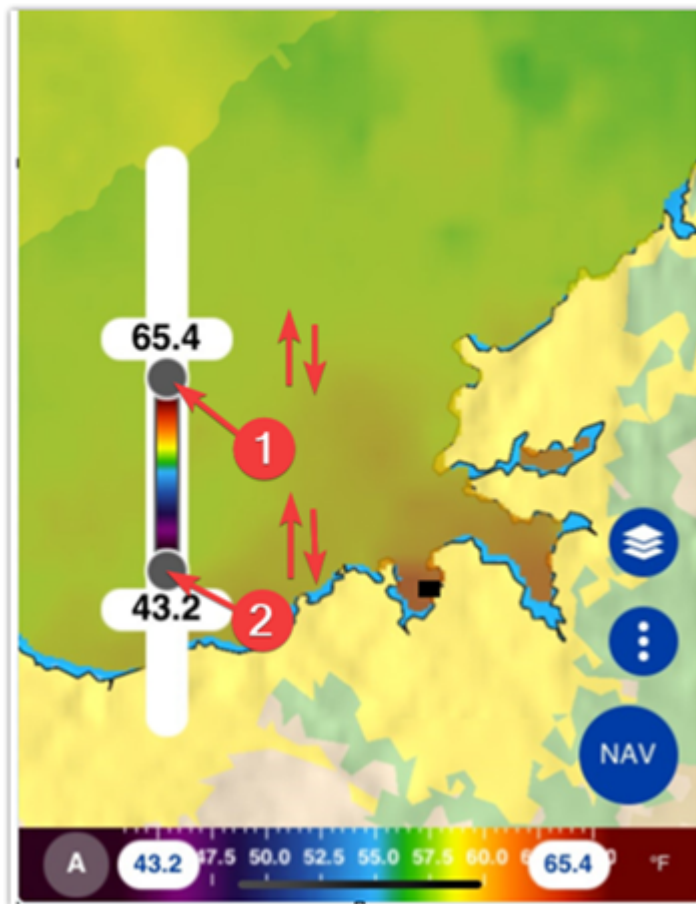
The manual mode allows you to reduce the temperature range to achieve greater contrast and focus more precisely on temperature values, for example to highlight temperature fronts (hot and cold zones).



You can adjust the minimum and maximum values of the color scale to narrow or widen the range.

Tap one of the color scale limits in the legend (1).

A slider will appear, allowing you to modify the minimum and maximum values by dragging sliders (1) and (2) up or down to change the range.



Optimize your Fishing

SportFishing is not just about casting a line randomly into the open sea. To maximize your chances, it is essential to understand and analyze oceanographic conditions. With the new SportFishing Ocean-O service integrated into TZ iBoat, you can now utilize data such as surface temperature, altimetry (SSH), and chlorophyll concentration to identify the most promising areas.

This article presents a simple and structured method for interpreting this information and refining your fishing strategy. Using a real case study in the Gulf of Mexico, we will see how to combine these data to identify the best fishing spots. Whether you're a beginner or an experienced angler, this approach will give you the keys to making the most of oceanographic tools and optimizing your trips at sea.

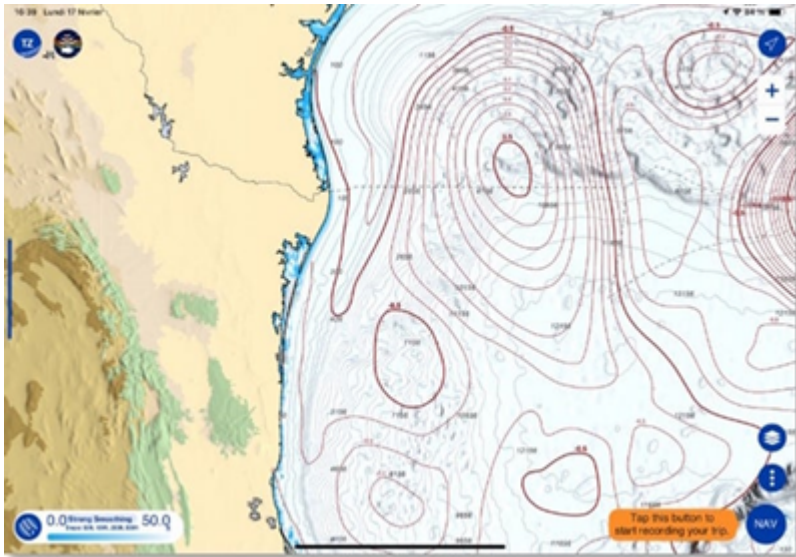


Identify the main areas using SSH

Start by displaying the SSH (Sea Surface Height), which represents the sea's altimetry, to get an initial global view of the situation and identify the major oceanic structures.

Next, locate the areas where deep, colder water rises to the surface (Upwelling) and those where surface water sinks to deeper layers (Downwelling). These movements appear as concentric circles, with Upwelling associated with lower SSH and Downwelling corresponding to higher SSH.

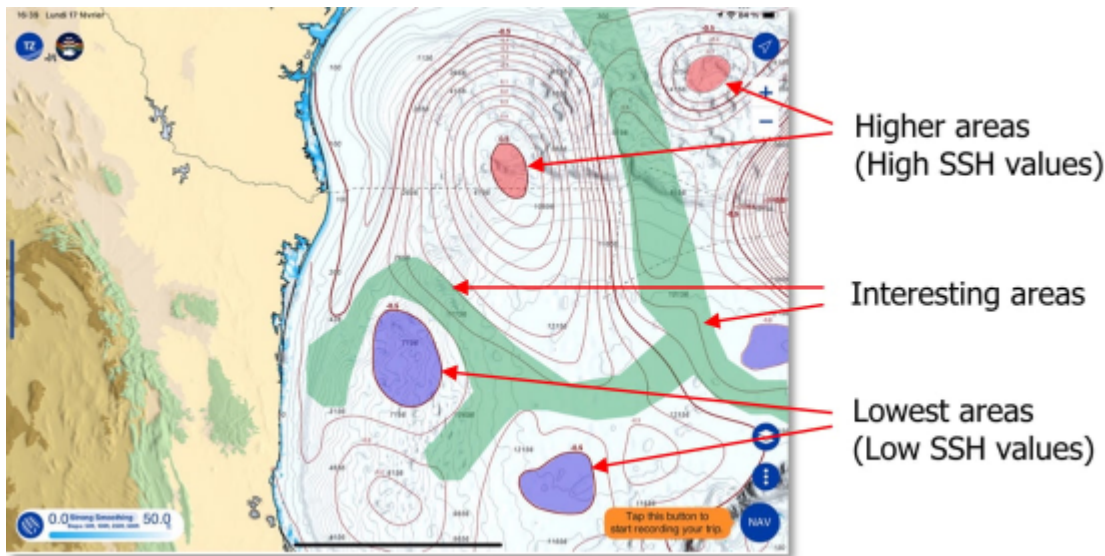
These areas themselves are not necessarily the best fishing spots; the real interest lies at their boundaries, where the differences in conditions are most pronounced. The identified areas serve as a useful starting point for further refining the search.



General display of SSH (Altimetry) with contour lines.

Identify the areas where the SSH lines are very close together and locate the more open spaces between them, as these less dense transitions are the most favorable for fishing.

By identifying the different areas observed earlier, we can define these patterns:

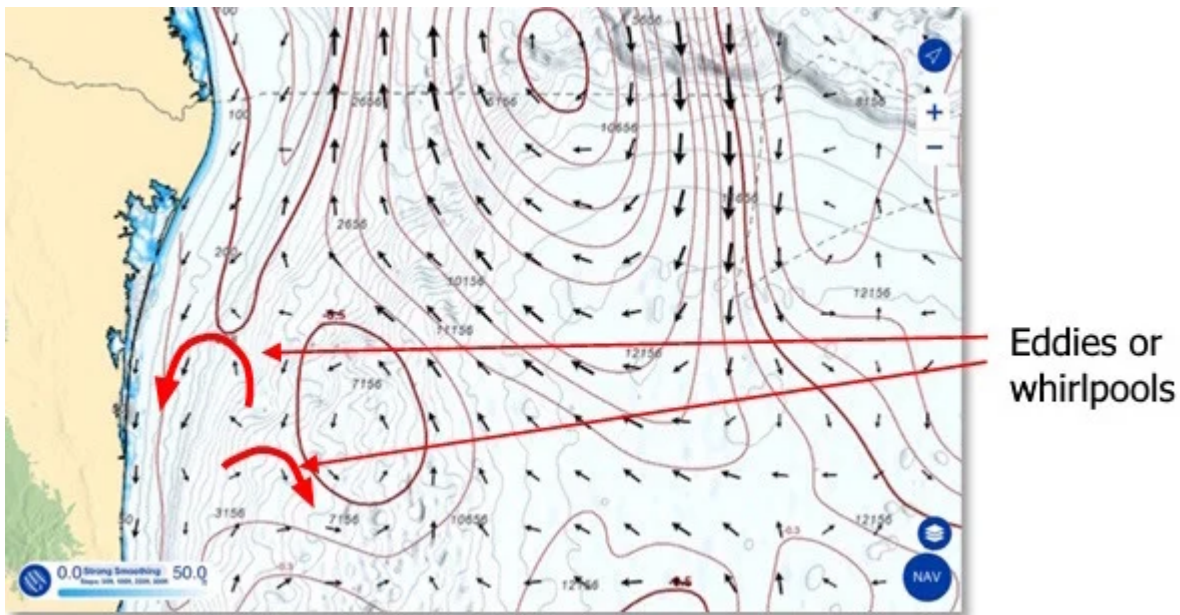


Refine your search using currents

Display the currents layer and first identify the areas of strong currents, clearly visible thanks to the large arrows that draw river-like patterns in the middle of the ocean.

Strong currents are not the most favorable areas for fishing. The anomalies along the edges of these currents, where small whirlpools (less than 10 km in diameter) called Eddies form, are more important. These Eddies trap and redistribute nutrients as well as plankton biomass, thus promoting the presence of the targeted species. There is a huge dynamic within these small structures.

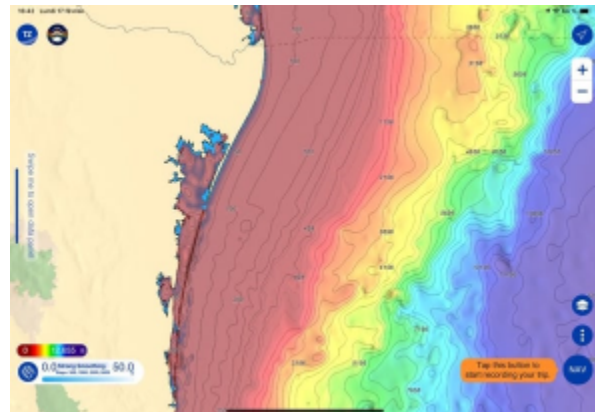
Eddies are small whirlpools driven by weak currents. They can form a complete circle or just a simple curve, sometimes at a right angle.



Eddies or
whirlpools

In this screenshot, the currents are represented by arrows and the SSH by contours.

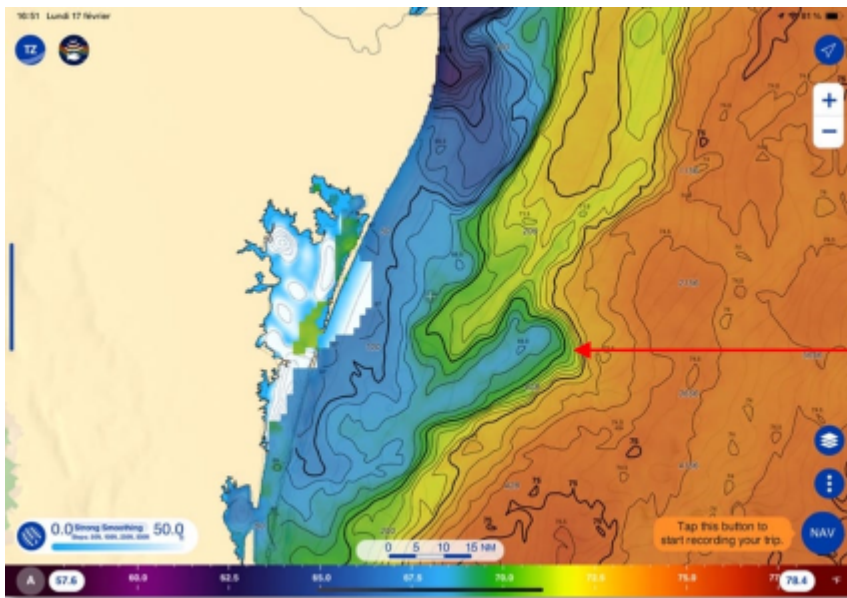
You can also identify areas where currents converge. These areas play a key role in ocean dynamics as they promote the accumulation of nutrients and plankton biomass. These regions create favorable conditions for phytoplankton development, which in turn attracts marine species in search of food.



Note: It is sometimes possible to establish a correlation between Eddies and bathymetry, as the seabed can enhance the upwelling effect. When this happens, the area found becomes even more interesting for further exploration.

Refine your search using the SST

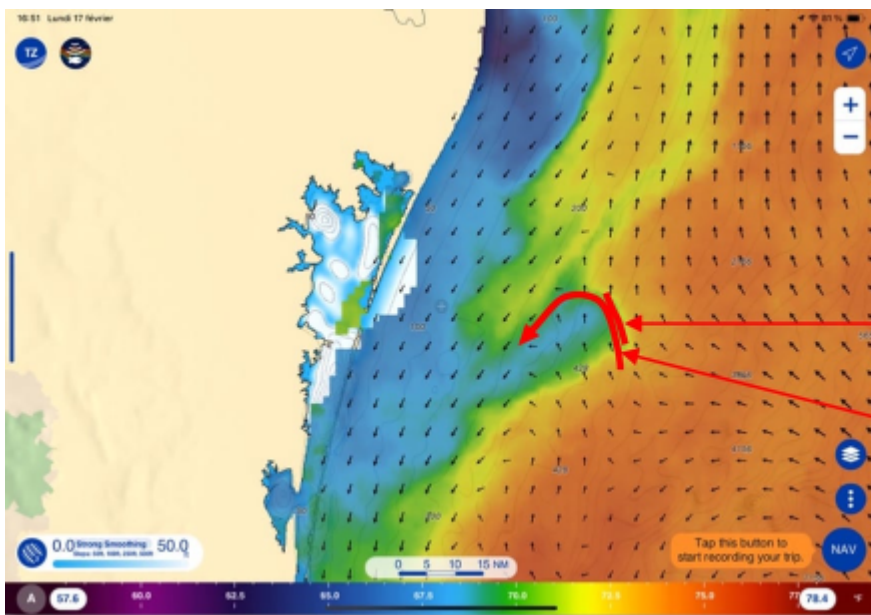
Now, display the SST (Sea Surface Temperature) layer and look for the "fronts," which represent abrupt temperature changes and mark the meeting of two temperature masses. These fronts are crucial because they act as "barriers" for fish. Most pelagic fish prefer to stay in the warm water zone and only cross this "barrier" (warm water/cold water) to feed or hunt.



Temperature
Front

The SST is displayed in colors and contours to better highlight the fronts.

To highlight these fronts, you can use the color display, where you look for abrupt color changes, or the contour line display, where you focus on areas where the contours become closer together. Displaying both at the same time can be a good idea to maximize your chances of finding the fronts!



Temperature
Front

Eddy

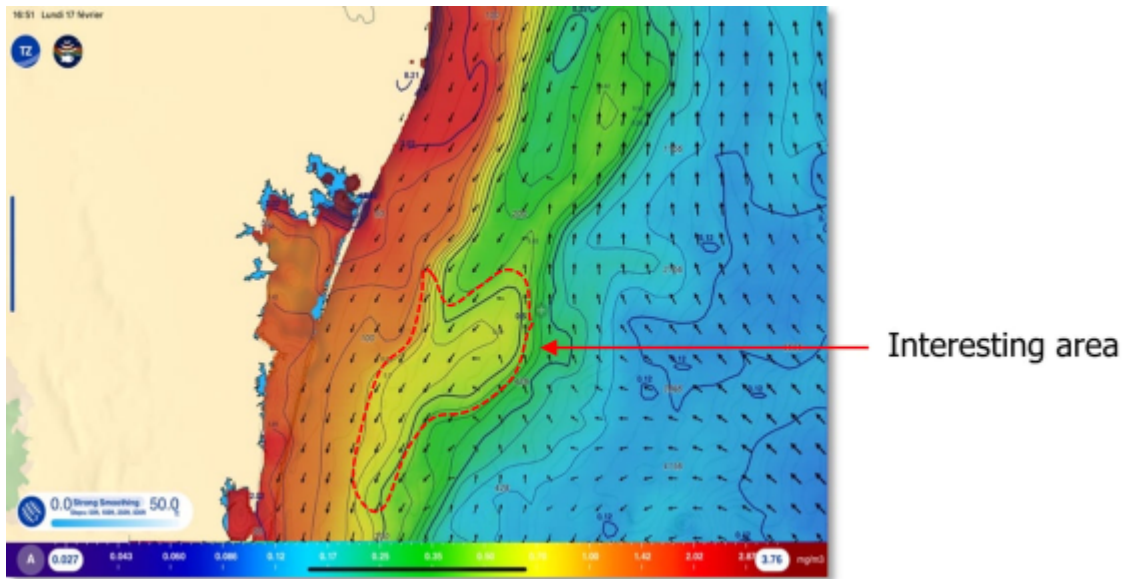
The current is represented by arrows above the SST, which is shown in colors.

Do you remember the Eddies observed earlier? Display the currents again and overlay them with the SST. Do you notice a clear boundary between the warmer and colder waters at the Eddies? If so, this indicates an area where an SST front meets a vortex, making it particularly interesting.

Cross with Chlorophyll

Areas with high chlorophyll concentration correspond to turbid waters rich in phytoplankton, which often attract fish. In contrast, low chlorophyll concentration indicates clearer waters, less favorable to plankton and fish presence. To refine your search, target chlorophyll patches in the middle of clearer waters.

The most interesting areas are found at the borders of these patches, where phytoplankton concentrates. To maximize visibility of these areas, switch to manual mode and adjust the minimum and maximum chlorophyll values. This will increase the color contrast on your screen, making the areas of interest easier to identify.

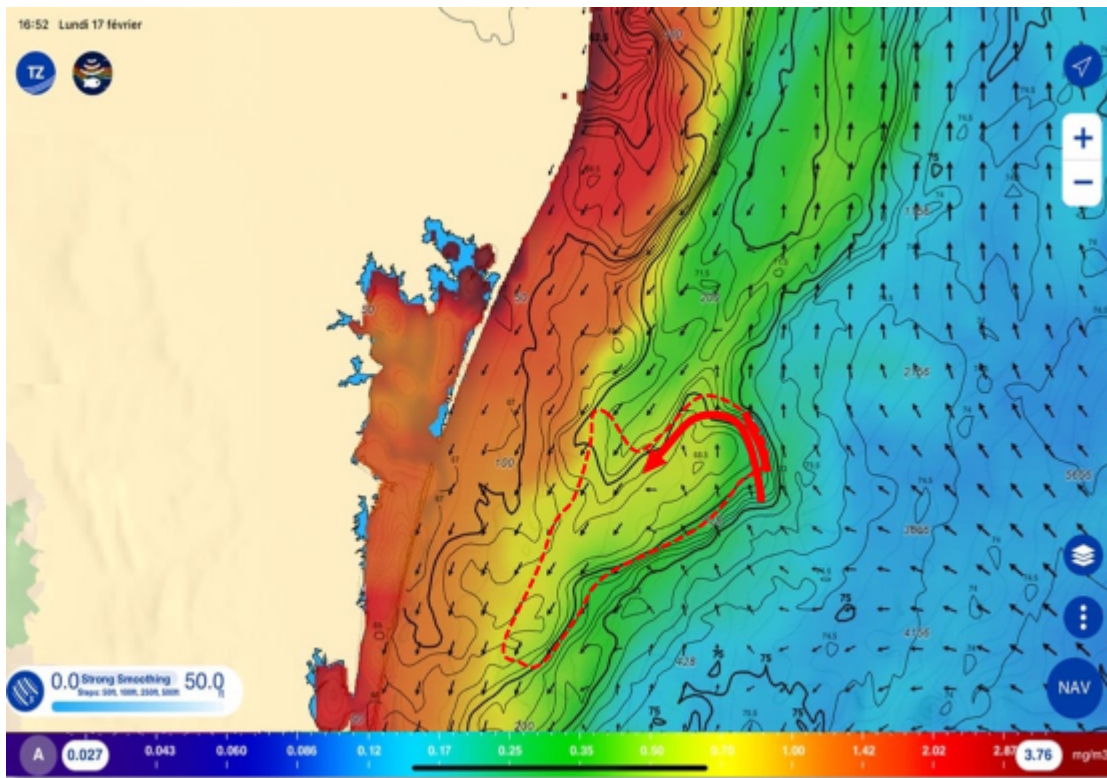


Chlorophyll is represented by colors and contours, while currents are shown by arrows.

Note: *There is often a strong correlation between SST fronts and high chlorophyll concentrations.*

Display SST (colors), Chlorophyll (contours) and currents

To summarize the different observations made earlier, let's see if we can find an area that "matches" well with the various data.



The chlorophyll colors, the SST contours, and the current arrows.

Conclusion

To sum up, several key elements help find the best fishing spots. The combination of these different factors will guide you. To analyze them, we use the different layers available in SportFishing Ocean-O.

First, it is essential to identify areas where SSH lines are more spaced out, as these specific locations offer better conditions for fishing.

Then, look for sea surface temperature (SST) fronts, especially those linked to eddies (small ocean whirlpools), because these dynamic structures influence the movement of nutrients and phytoplankton. Finally, search for small chlorophyll patches and check where they meet clear waters these transition zones can indicate areas of high biological activity.

By combining these elements, you will greatly improve your chances of having an amazing fishing trip!



Get Weather Forecast

Online or Offline mode

These are the two modes for retrieving oceanographic data.

TZ iBoat lets you display weather forecasts in two different ways: in “Online” mode, oceanographic data is displayed directly on your device in real time. in “Offline” mode, data must be downloaded.

The "Online" mode, which is enabled by default, is very convenient as it allows you to view any area and instantly access oceanographic forecasts. However, an internet connection is required.

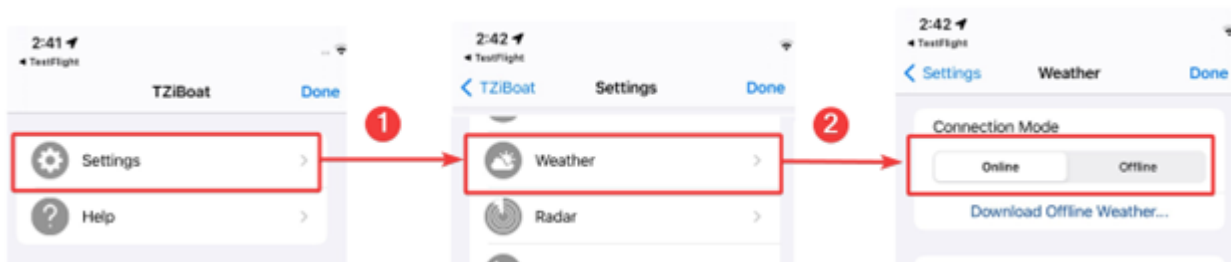
If you're heading out to sea and expect to be in an area without an Internet connection, you should switch to “Off line” mode, then download a specific area before departure (for more information, refer to “[Downloading ocean forecasts](#)” Chapter).

Switching between “Online” and “Offline” is done automatically, depending on the available Internet connection. However, certain settings can be made manually in the parameters if you wish to force the “Offline” mode.

You can change mode at any time by selecting “Offline Charts & Weather” under the “TZ” button located on the top left of your screen, then selecting “Offline weather data” (1) and switching from “Online” to “Offline” (2) in the bottom left-hand corner of the screen.



You can also change the connection mode (2) in the Weather settings (1) under the “TZ” button located on the top left of your screen.



Downloading Forecast

By default, TZ iBoat “streams” weather directly using an Internet connection (“Online” mode).

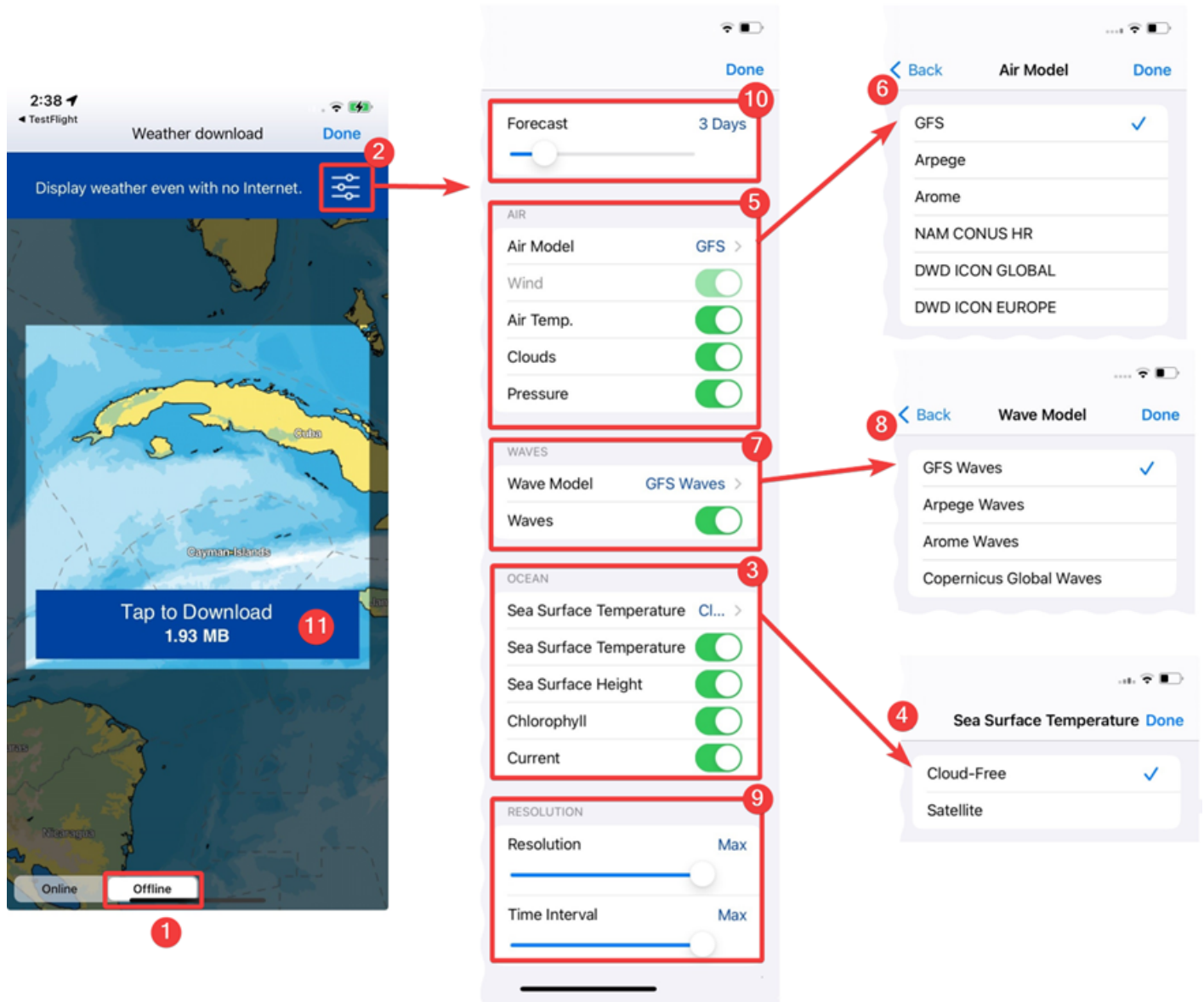
This mode is very convenient when using TZ iBoat at home or within cell coverage.

However, if you plan to be at sea without any Internet connection, you can download weather forecast for a pre-determined area at home before you leave by enabling the “Offline” mode from the [Weather Settings](#) under “Connection Mode”.

Tap on the “TZ” button located on the top left of your screen and select “Offline Charts and Weather”. Next, tap on “Weather Offline Data” to access the download interface. Make sure the “Offline” mode (1) is selected at the bottom of screen.

Adjust the download area by panning and zooming the chart.

Tap on the settings icon (2) to specify the parameters you want to download:



You are subscribed to the « Weather Premium » service.

You will have access to the following data:



- Air temperature, clouds, pressure (5) for the models (6): (GFS, Arpege, Arome, NAM CONUS HR, DWD ICON GLOBAL, DWD ICON EUROPE).
- Waves (7) for the models (8): (GFS Waves, Arpege Waves, Arome Waves, Copernicus Global Waves).
- Ocean Currents (3).

(Refer to the "Weather Premium Service Subscription" chapter for more information).

You are subscribed to the « SportFishing Ocean-O » service.

You will have access to:

- Sea Surface Temperature, Altimetry, Chlorophyll, and Currents data (3).
- Cloud-Free and Satellite models for SST (4).

(Refer to the "SportFishing Ocean-O Service Subscription" chapter for more information).

If you want to keep the downloaded file as small as possible, you can adjust the “Resolution” (9) and “Time Interval” (10).

Decreasing the resolution slider (to the left) will decrease the spatial resolution.

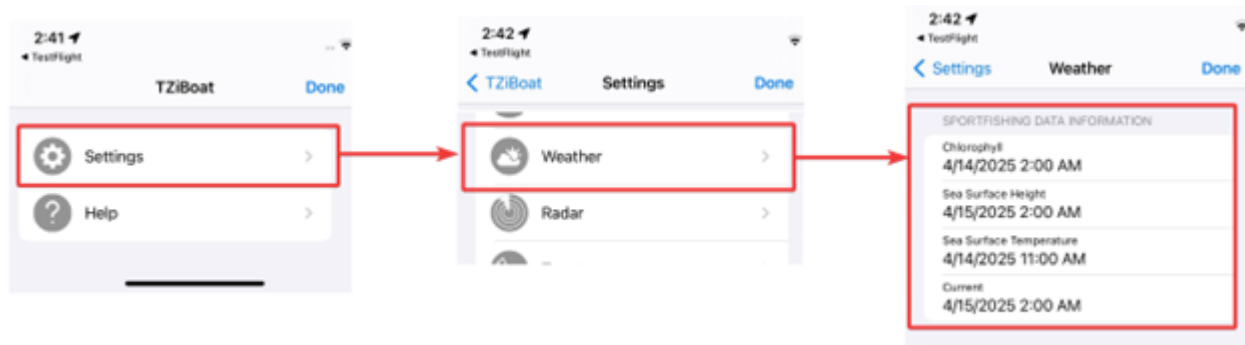
For example, the standard GFS model has a native resolution of 25KM. This means that there is one data point every 25Km. If you decrease the resolution, the data point will be further apart (every 50KM).

Decreasing the time interval slider (9) will decrease the forecast interval.

For example, the GFS model gives a forecast every 6H (in between each forecast, weather parameters are interpolated in time). If you decrease the time interval, you will decrease the amount of interval within the total forecast period (for example one forecast every 12H instead of one forecast every 6H).

Once you are satisfied with all the parameters and the download area, tap on the download button (11).

You can view information on the latest oceanographic data downloaded in the Weather settings parameters.



Using an Iridium Go

Note that TZ iBoat can use an “Iridium Go” to download weather forecast at sea, where Wi-Fi or Cellular connection is not possible. The Iridium Go is a satellite communicator that creates a Wi-Fi Hotspot for your device:



Although very slow (2Kbps), the Iridium Go offers an unlimited data plan for about \$150 per month that can be a very good solution to download weather anywhere, even during an ocean crossing. To setup the Iridium Go in TZ iBoat, set the "Connection Mode" to "Offline" and set the "Download Method" to "By Iridium" from the [Weather](#) settings. You will then be able to enter your Iridium Go login and password and test the connection.

Just make sure to connect your device to the Wi-Fi Hotspot created by the Iridium Go before testing the connection or attempting to download weather data.

***Note:** TZ iBoat communicates directly with the Iridium Go. There is no need for third party app to establish the connection. When pressing the "Download" button, TZ iBoat will automatically establish the satellite connection link (dial up), download the data, and finally close the connection (to save power). In case of interruption during the download, the progress bar will turn orange. Do NOT press on "Cancel" to try to relaunch the process manually, TZ iBoat will automatically attempt to reconnect and resume the download at the point where it left off. Note that for data download to start, the satellite status needs to have at least 3 bars.*

Once setup, the "Offline Weather" screen download button will change to display "Download with Iridium GO!".

After pressing the download button, TZ iBoat will automatically establish the Iridium Go satellite connection (dial up), download the weather data, and finally close the connection (to save power). In case of interruption during the download, the progress bar will turn orange. Do NOT press on "Cancel" to try to relaunch the process manually, TZ iBoat will automatically attempt to reconnect and resume the download at the point where it left off. Note that for data download to start, the satellite status needs to have at least 3 bars on the Iridium Go.

***Note:** The real-world speed of the Iridium Go is about 10KB/minute. A weather download of 80KB will take a little less than 10 minutes on average. The default maximum size is set to 100kB (from the Weather Options), but you can increase it to up to 1MB (but it might take as long as 2 hours to retrieve 1MB).*



Tides & Tidal Currents

Displaying Tides and Currents on the Chart

TZ iBoat can predict the tide level and tidal currents direction/strength for thousands of tide stations around the world. To display tides and currents on the chart, tap on the "Layer" button located on the bottom right of your screen and select "Tidal Heights Stations" and/or "Tidal Currents".

The tide icons displayed on the chart are dynamic and show you a preview of the water level:



Rising from low to high



Falling from high to low

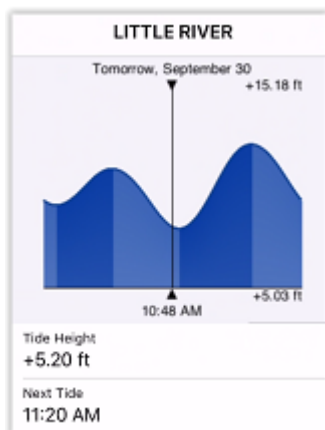


At slack (low and high)

Tidal Currents will change direction, color, and size according to the current direction and strength:



If you tap on a tide icon, a Pop-Up menu with a small tide graph will appear:



TIP: If you are looking for a specific tide station, you can search for it by tapping on the "TZ" button located on the top left of your screen, selecting "List and Search" and "Tide Station". A list with all the tides will be displayed. You can sort this list by range (distance from your boat) or type a name.

If you tap on a tidal current icon, a Pop-Up menu with a small current graph will appear:



Note that when you display either the tides or tidal currents, the time bar appears at the bottom of the screen allowing you to animate the tide and current icons directly on the chart by moving the time bar:



Note: If the time bar is not displayed at the bottom of the screen, the Tides and Currents Pop-Up menu will display real time information. If the time bar is displayed, the Tides and Currents Pop-Up menu will match the date/time selected in the time bar.

Tide & Current NavData

Tide NavData

A small tide graph is available in the NavData panel that can be opened by swiping your finger from the left edge of your screen:



Note: If the Tides & Currents NavData was removed from your NavData panel configuration, simply tap on the “Add” button located on the upper left corner of the NavData panel and select “Tide Graph”. Please refer to the [Displaying and Configuring NavData](#) chapter for more information.

This NavData displays information from the nearest tide station:

- A 24H tidal graph
- The selected date/time
- Tide height value for the selected date/time
- Next tide (the time at which the next high or low tide event will occur)

Note: the maximum search distance for tide station is 50NM. If there is no tide station within this distance, the NavData will display no information.

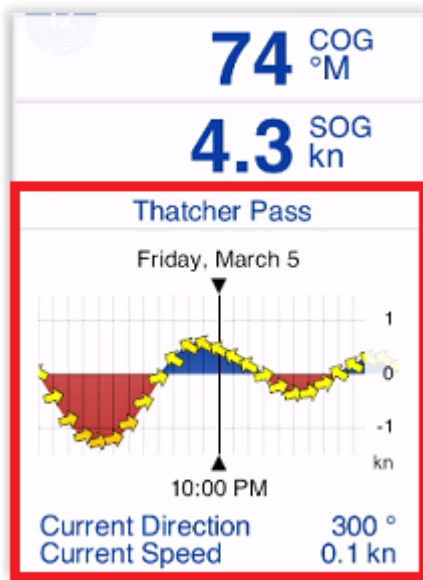
If a Tidal Current station is available within 5NM of your position, the Tide NavData will also include tidal current information:

- Current icon (indicating the current direction for the selected date/time)
- Current direction value for the selected date/time
- Current speed value for the selected date/time

Note: A dedicated current NavData is also available, allowing you to display a graph of the tidal current (see next chapter).

Current NavData

A small tidal current graph can be added to the NavData panel. Tap on the “Add” button located on the upper left corner of the NavData panel and select “Tidal Current Graph”:



Note: Please refer to the [Displaying and Configuring NavData](#) chapter for more information about how to open and configure the NavData panel.

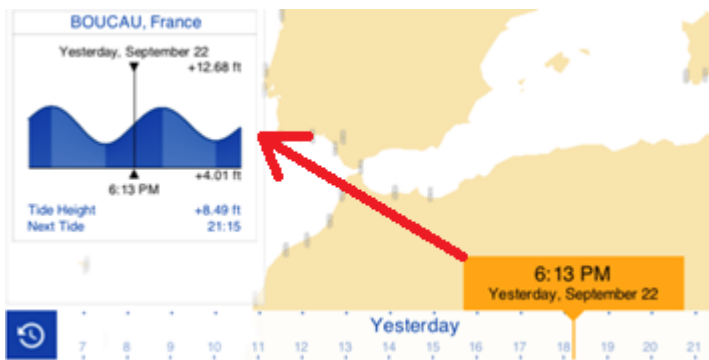
This NavData displays information from the nearest current station:

- A 24H current graph
- The selected date/time
- Current direction value for the selected date/time
- Current speed value for the selected date/time

Note: the maximum search distance for current station is 5NM. If there is no current station within this distance, the NavData will display no information.

Tides and Currents forecast

If the time bar is not displayed at the bottom of the screen, the Tides and Currents NavData will display real time information. If the time bar is displayed, the Tides and Currents NavData will match the date/time selected in the time bar. This allows you to check tides and currents data for any date/time by dragging the time bar located at the bottom of your screen:

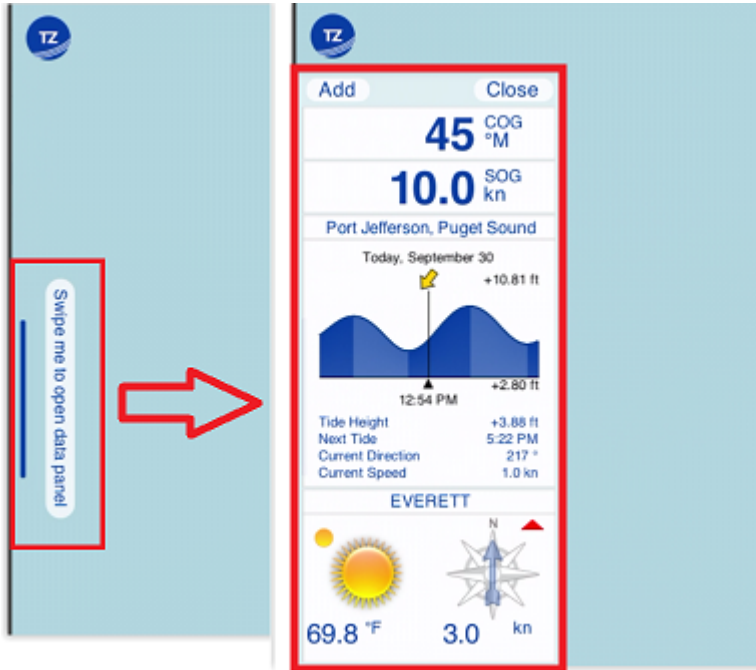


Note that for the time bar to appear, you must display on the chart either the Tides, Currents, or Weather from the "Layer" button.

NavData

Displaying and Configuring NavData

A panel displaying various types of data can be displayed on the left side of your screen. This panel can be configured with multiple “NavData”. To open the NavData panel, simply swipe your finger from the left:



To close the NavData panel, you can either swipe it away, or simply click on the “Close” button located at the top right of the panel. To add a new NavData, click on the “Add” button located on the top left of the panel. If you want to modify an existing NavData (for example, change the data it displays), simply tap on it and select the new data type. To remove a NavData from the panel, tap on it and select Remove NavData.

There are multiple types of NavData:

- Numerical NavData: used to display a sensor value (Speed, Depth, Wind...) or the Active Route data (Time to Go, Cross Track Error...) using text:



TIP: When you activate a route, steering and route data will automatically appear at the top of your screen in the Active Route header (you do not necessarily need to create a NavData). You can cycle in between multiple values by tapping on the header.

- Graphic NavData: to display a sensor value using a graphic gauge:



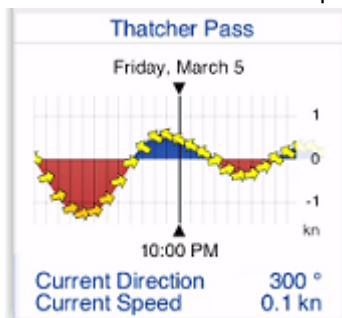
To configure a gauge NavData, first add a numerical NavData with the data you want to display, then tap on it and enable “Graphic” from the Pop-Up menu.

- Tide NavData: to display the closest tide station information as a small graph, and when applicable, the closest tidal current direction and speed.



Note: the maximum search distance for tide is 50NM. If there is no tide station located within that radius, the Tide NavData will not display any information.

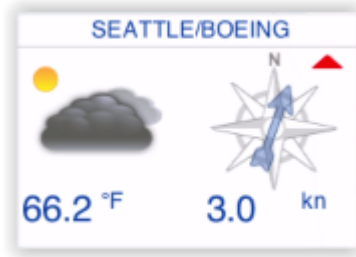
- Current NavData: to display the closest tide station information as a small graph, and when applicable, the closest tidal current direction and speed.



Note: the maximum search distance for current is 5NM. If there is no current station located within that radius, the Current NavData will not display any information.



- Real Time Weather NavData: to display real time weather from the closest METAR station (requires Internet connection)



- Chart Zone NavData: to display a list of all the chart areas your vessel is currently in. For more information, please refer to the [Smart Zone](#) chapter.



- Flashing Light NavData: to display a list of the lighted navaids that are ahead within your field of view sorted by distance. For more information, please refer to the [Dynamic Lights](#) chapter.



Note that the NavData panel was designed to be used in landscape mode (and preferably on a larger screen such as on an iPad). However, it is possible to display the NavData panel in portrait mode. On iPhone, this would only be practicable to have a quick glance at the NavData, and then close the panel once you no longer need it.

AIS

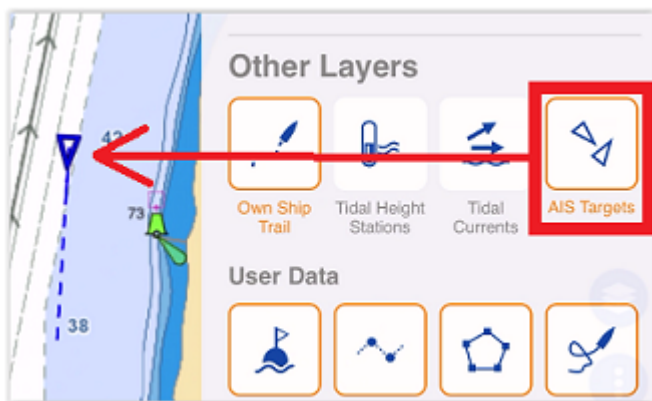
AIS Targets

IMPORTANT: The AIS Module needs to be purchased to be able to connect TZ iBoat to an AIS receiver or AIS transceiver and display AIS targets on your charts. To purchase the AIS module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

Automatic Identification System (AIS) is an automated tracking system that displays other vessels in the vicinity. It is a broadcast transponder system which operates in the VHF mobile maritime band. If you install an AIS receiver on your vessel, you will be able to see any other vessels on your charts that are equipped with an AIS transceiver. If you install an AIS transceiver on your vessel, your own ship also shows on the screens of other vessels in the vicinity.

IMPORTANT: To display AIS targets, TZ iBoat must be connected to an AIS receiver or AIS transceiver via Wi-Fi using NMEA0183 sentences. TZ iBoat is not “compatible” with AIS over the Internet. Please refer to [NMEA Gateway](#) to learn how to connect an AIS system to TZ iBoat.

Once TZ iBoat is connect to an AIS Receiver/Transceiver, you will be able to display AIS target on the charts by selecting “AIS” from the “Layer” button located on the bottom right of your screen:



Note: you can also display real-time AIS targets over the Wi-Fi (NMEA0183 compatible) and share them with the community. Please refer to the "[TZ Online AIS](#)" chapter.

AIS Symbols are small triangles colored in blue for AIS Class A and green for AIS Class B. The AIS symbol (triangle) will point toward the heading value of the vessel, while the speed vector will use the vessel COG (Course Over Ground):



Note: You can adjust the AIS target speed vector length from the “Targets” settings

Below are the various symbols used by AIS:



AIS Class A with Heading, Rate of Turn (turning starboard) and COG data



AIS Class B



AIS Icon with one (or multiple) important data missing preventing proper orientation on the chart (missing heading and COG) or preventing CPA/TCPA computation (missing COG and SOG of AIS target or Own Ship)



AIS Lost Icon. An AIS gets lost if no information updating the target location is received after a period of time. The time that causes an AIS to get lost varies with the class of AIS (A or B), its speed and its status (moored, in navigation, etc...). A lost AIS icon will disappear from the screen after 30 seconds.



AIS Search and Rescue Aircraft



AIS Base Station Icon

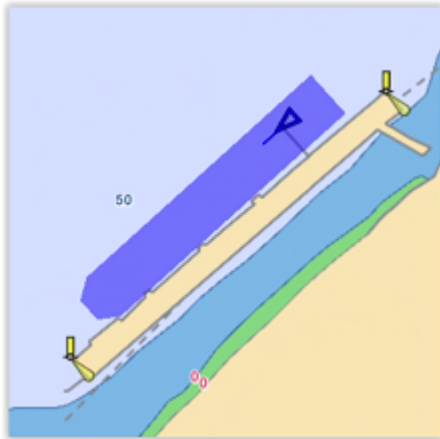


AIS AtON (physical or virtual Aid to Navigation)



AIS SART (Personal Man Over Board transponder)

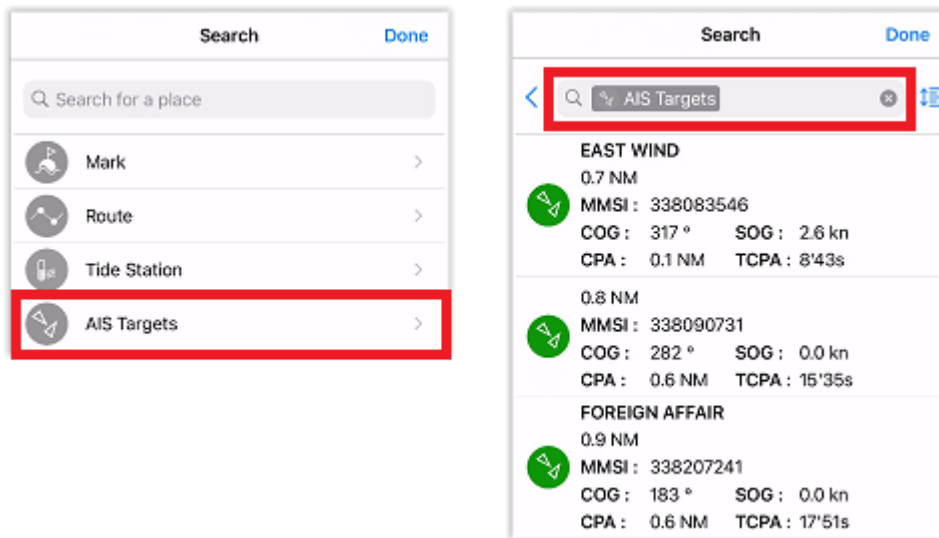
Each AIS symbol can reflect the actual size of the ship when you zoom in far enough on the chart (and if that AIS target is transmitting its size):



By tapping on the AIS symbol, you can learn the ship name, course and speed, call sign, MMSI, and other information. Maneuvering information, such as range, bearing, closest point of approach (CPA), time to closest point of approach (TCPA) are also available.

It is possible to setup alarms based on CPA/TCPA and proximity. For more information, please refer to the [Target Alarm](#) chapter.

If you want to display a list of AIS targets or would like to search for a specific vessel, you can use the Search feature of TZ iBoat. Tap on the “TZ” button located on the top left of your screen, select “Smart Search”, and select “AIS”:



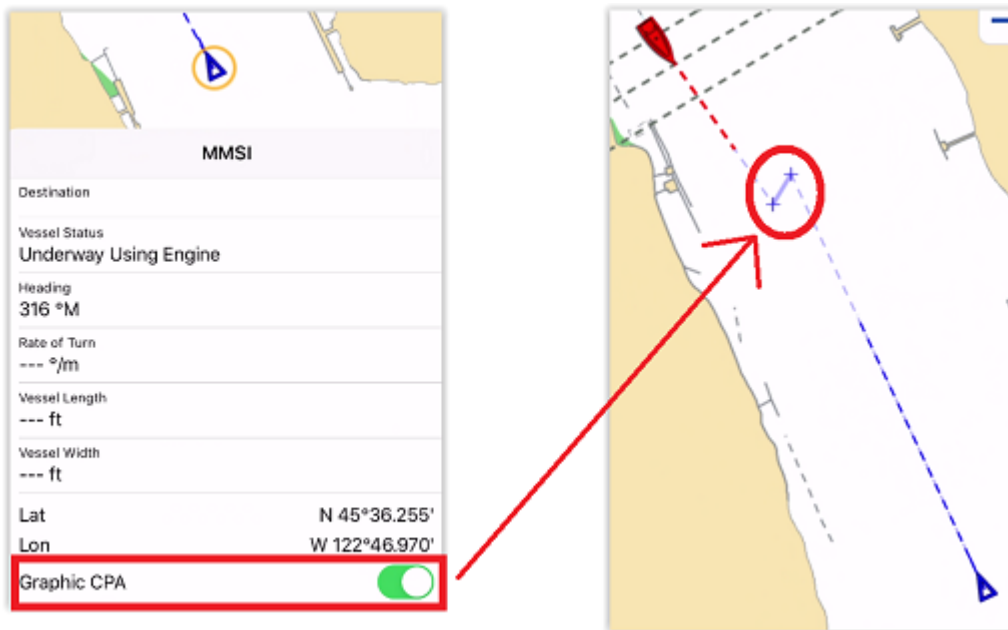
You can search by name and filter the content of the list if you start typing a text. You can also sort the list by name (alphabetical order), range (distance from boat), speed (SOG), CPA or TCPA.

CPA & TCPA

One of the most useful features of AIS is the ability to display and raise alarm from the CPA and TCPA values. The CPA (Closest Point of Approach) is the closest that you will come to the vessel in question should you both maintain your current course and speed. The TCPA “Time to Closest Point of Approach” states when the closest pass will occur.

AIS target alarm (CPA/TCPA and AIS Proximity alarms) can be set from the “Targets” settings. When a target predicted closest point of approach (CPA) becomes smaller than the CPA alarm value and when its predicted time to CPA becomes smaller than the TCPA alarm value, the target becomes dangerous, and its icon is displayed in red. If the CPA/TCPA alarm is enabled, an alarm will also appear at the top of the screen to draw your attention. Please refer to the [Target Alarm](#) chapter for more information.

If you want to visualize on the chart the location where you will be meeting a specific target, tap on it and enable “Graphic CPA”. A graphic representation of the target Closest Point of Approach (Graphic CPA) will appear:



This information is continuously updated and warns you about potential collisions by locating on the chart the location where you will meet a specific target.

TZ Online AIS

IMPORTANT: TZ online AIS requires you to purchase the AIS Module in order to connect TZ iBoat to an AIS receiver or transceiver and display AIS targets on your charts. To purchase the AIS module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

In addition to displaying the AIS targets provided by your receiver, the AIS Module also gives you access to AIS targets beyond your local range by connecting to our global AIS network via the Internet. When enabled, all AIS targets within the range of your local receiver are automatically shared with the community. TZ Online AIS also allows you to access AIS targets worldwide via the internet, even without an AIS receiver on board.

To show or hide Online AIS targets on the chart, simply tap the "Layers" button in the bottom right corner of the screen, then tap the "TZ Online AIS button":



The "TZ Online AIS" symbols are small orange triangles. The AIS symbol (triangle) indicates the boat's direction, while the length of the dotted line indicates the boat's COG (Course Over Ground). The label below the symbol indicates the boat's name and speed:

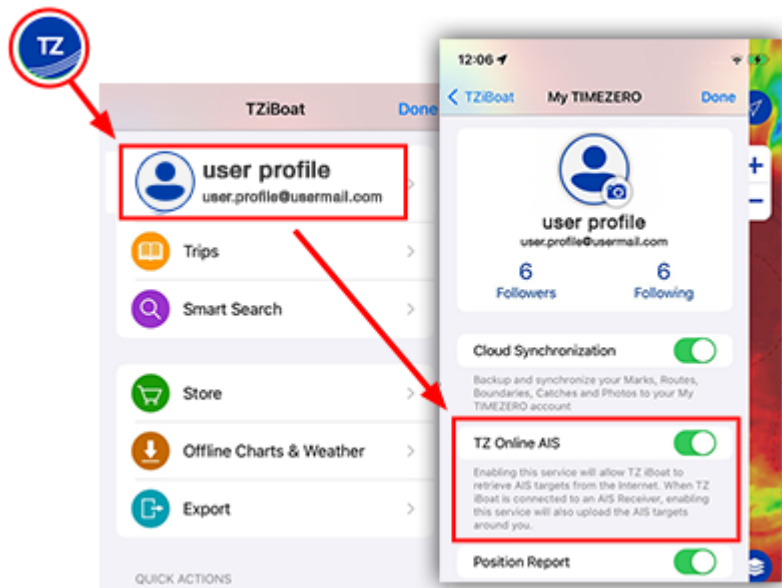


You can get available information (such as boat name, MMSI, course and speed, and other information) about a selected AIS target by simply tapping on it.

Note that this service allows you to keep "TZ Online AIS" targets around you on the screen, even if the Wi-Fi is turned off for a few moments.

Disable the "TZ Online AIS" Connection

"TZ Online AIS" is enabled by default, but if you don't want to share and upload AIS targets around you with the community, you can turn off "TZ Online AIS" at any time by tapping the "TZ" button in the top left corner of your screen, then tapping your account (at the top) and turning off "TZ Online AIS":



Alarms

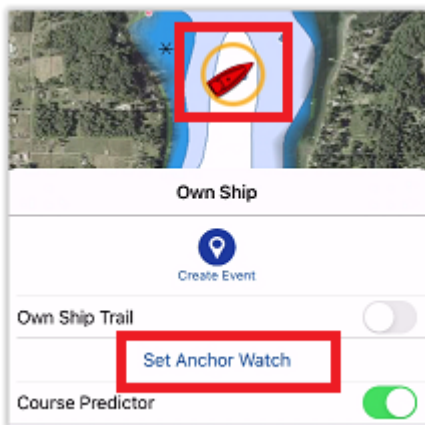
Anchor Watch

The Anchor Watch Alarm allows you to set and monitor your position relative to an anchor point. If your current position strays too far from that set point, a warning and alarm will be triggered.

TZ iBoat includes an advanced Anchor Watch Alarm that is automatically synchronized on the local network among other compatible TimeZero devices (other TZ iBoat on iPhone or iPad, Furuno TZtouch 2 / TZtouch 3, and TimeZero on PC). The Anchor Watch Alarm can also be sent to the TimeZero Cloud (Internet connection required) so that you can monitor your boat remotely from any web browser.

Set the Anchor Watch Alarm

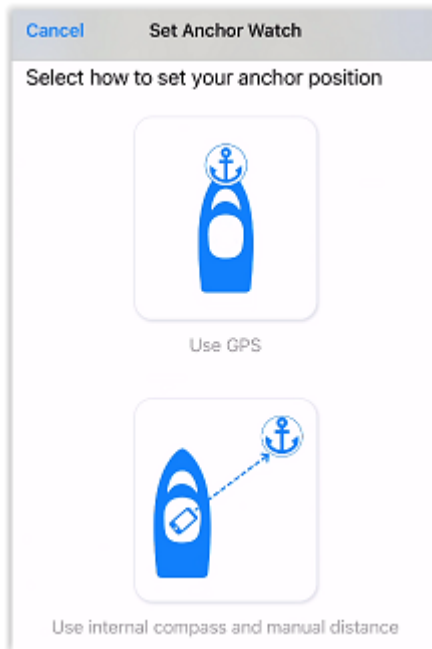
You can enable the Anchor Alarm by tapping directly on the Own Ship icon and selecting "Set Anchor Watch":



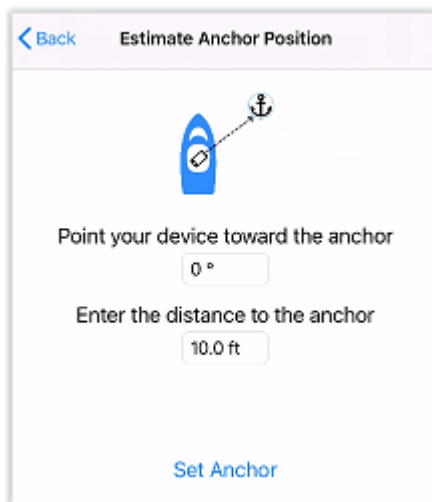
You can also tap on the Action button and select "Anchor Watch":



Once enabled, you have two methods to set the initial anchor position (the "drop point"). You can either drop it at your current position (at the bow of your vessel if you have a heading sensor connected), or drop it at a set distance and bearing (using the internal compass of your device):



The first method is used if you can set the anchor point in TZ iBoat just after dropping the anchor. Use the second method to set the anchor point afterward. In this case, another screen will allow you to enter the approximate distance and bearing to the anchor point by pointing your device toward the anchor drop direction:

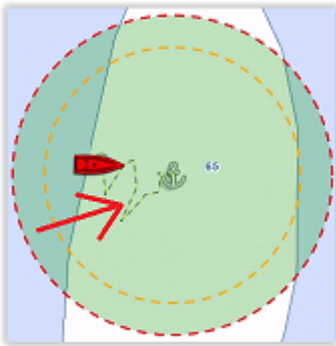


Note: The distance you enter during this step is not used for the anchor watch alarm radius. The distance is used to position the anchor point on the chart. The Anchor Watch Alarm radius is adjusted from the [Alarms](#) settings or directly from the chart by editing the anchor watch after it has been enabled (see next paragraph).

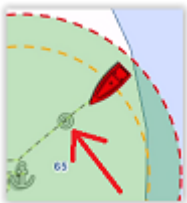
After tapping on "Set Anchor", an icon is dropped at the anchor point, a red dashed circle corresponding to the anchor watch alarm radius (adjusted from the [Alarms](#) setting) is drawn on the chart, and an Anchor Watch header is displayed at the top of the screen with a distance (current distance from GPS position to anchor point) and speed indication :



When the anchor watch is enabled, the trail is automatically displayed and restricted to the time the anchor watch was dropped. This allows you to view the movements of your vessel since you started the anchor watch:



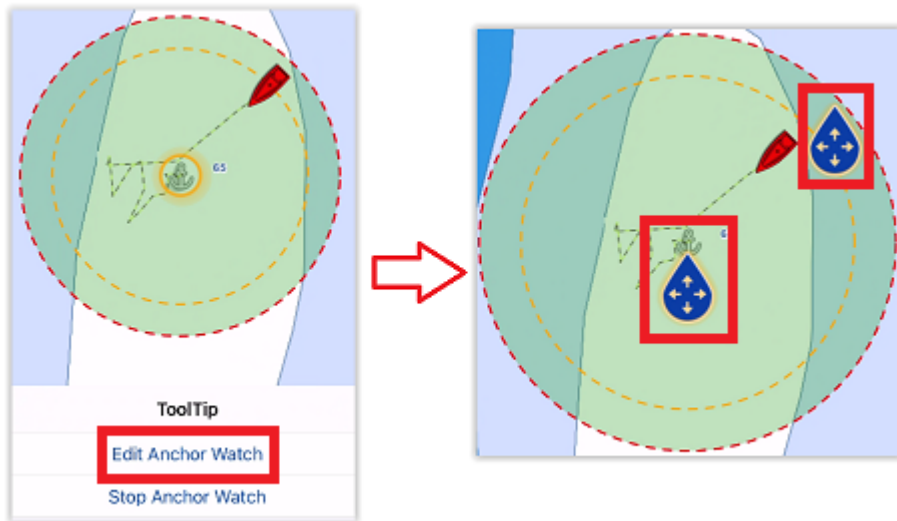
If you notice big swings in position that are due to GPS inaccuracies, it is possible to enable the Anchor Watch "Position Averaging" from the [Alarms](#) settings. When enabled, this will average your GPS position over the specified duration (from 5 seconds to 45 seconds). Note that if you enable position averaging, the averaged position will be displayed on the chart:



***Note:** Enabling position averaging will delay the Anchor Watch warning, but it might avoid lots of false alarms.*

Adjust the Anchor Watch Alarm Position and Radius

If you need to adjust the anchor watch position and/or radius after it has been dropped, simply tap on the anchor icon and select "Edit Anchor Watch" from the Pop-Up menu. You will then be able to drag the anchor point and adjust the alarm radius by using the two handles that will appear in edit mode:



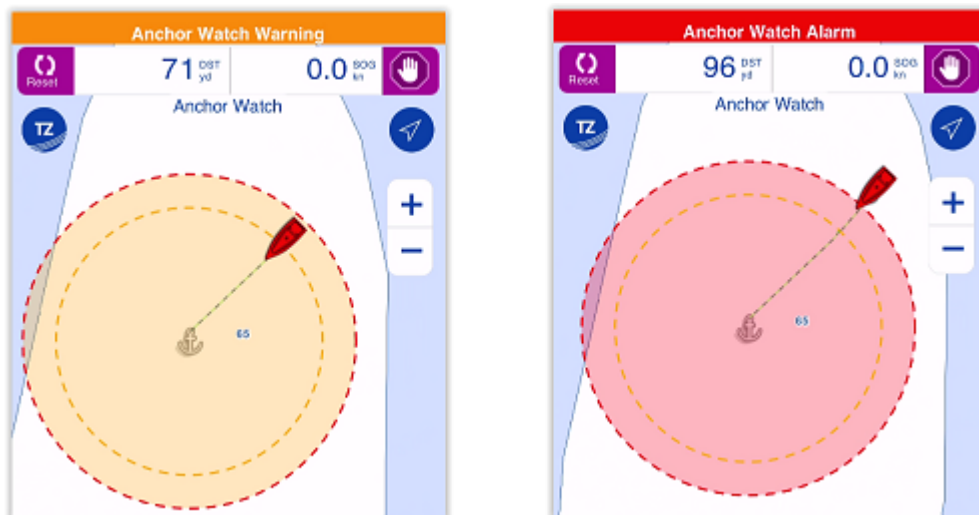
TIP: when the anchor point or circle is in edit mode, the alarm radius is displayed in the Anchor Watch Editing header at the top of the screen.

To validate the change, either tap anywhere or tap on the validation button located in the Anchor Watch Editing header at the top right of the screen.

If you just need to reset the Anchor position to the bow of your vessel, select the "Reset" button from the Anchor Watch header displayed at the top of the screen.

Anchor Watch Warning and Alarm

When the vessel is at a safe distance from the anchor point (when the distance from the anchor point to your GPS position is less than 80% of the alarm radius), the circle background is green. When the distance reaches 80% (but stays under 100%), you are in the "warning" area: the circle background will turn orange, a yellow warning ("Anchor Watch Warning") will appear in the status bar and a short warning sound will play through your speakers. If your GPS position goes outside the alarm radius, the circle background will flash in red, a red alarm ("Anchor Watch Alarm") will appear in the status bar, and an alarm sound will play through your speakers every 30 seconds:



Please refer to the [Alarm Sound](#) chapter to learn more about sounds and background processing (if you want to use the Anchor Watch Alarm overnight).

To stop the Anchor Watch Alarm, you can tap on the anchor point and select "Stop Anchor Watch" or tap on the stop button located on the top right of your screen.

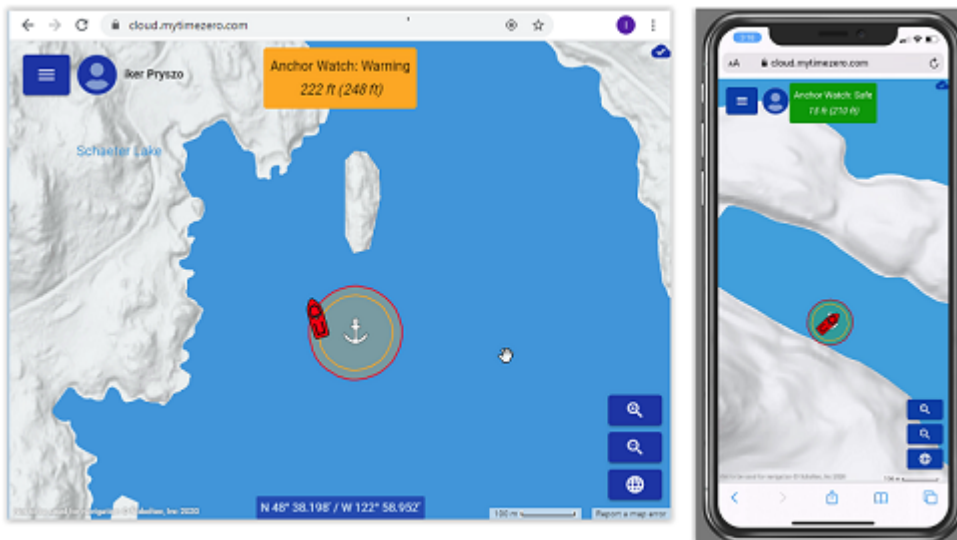
Local Synchronization of the Anchor Watch Alarm

If multiple compatible TimeZero devices are connected on the same local network (other TZ iBoat on iPhone or iPad, Furuno MFD TZtouch 2 / TZtouch 3, and TimeZero on PC), the Anchor Watch will be automatically synchronized on all devices. Any modification made to the Anchor Watch after it has been set will also be synchronized on the local network. This allows you to drop the Anchor Watch from an iPad, MFD or PC and then monitor it from your iPhone for example.

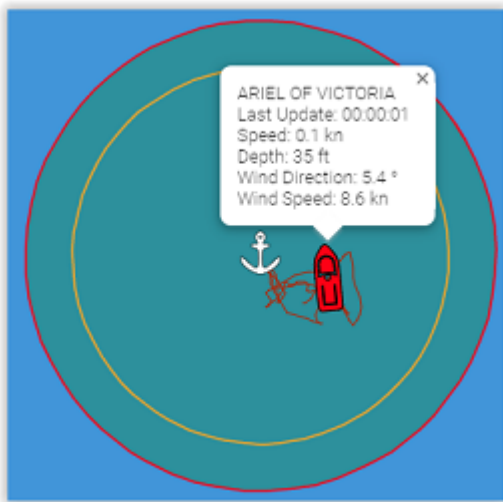
Remote Monitoring of the Anchor Watch Alarm

If your iPad is connected to the Internet (or has a cellular connection), it is possible to monitor your Anchor Watch using a Web Browser from any location. Just make sure to enable "Report my position to My TIMEZERO" from your account settings (tap on the "TZ" button located on the top left of your screen and tap on your profile icon).

As long as your iPad is powered ON (with TZ iBoat running) and has an Internet connection, you will be able to monitor your anchor watch alarm from shore using any web browser (including iOS or Android mobile phone web browser such as Safari or Chrome) and login to your TZ Cloud account at: <https://cloud.mytimezero.com/>:

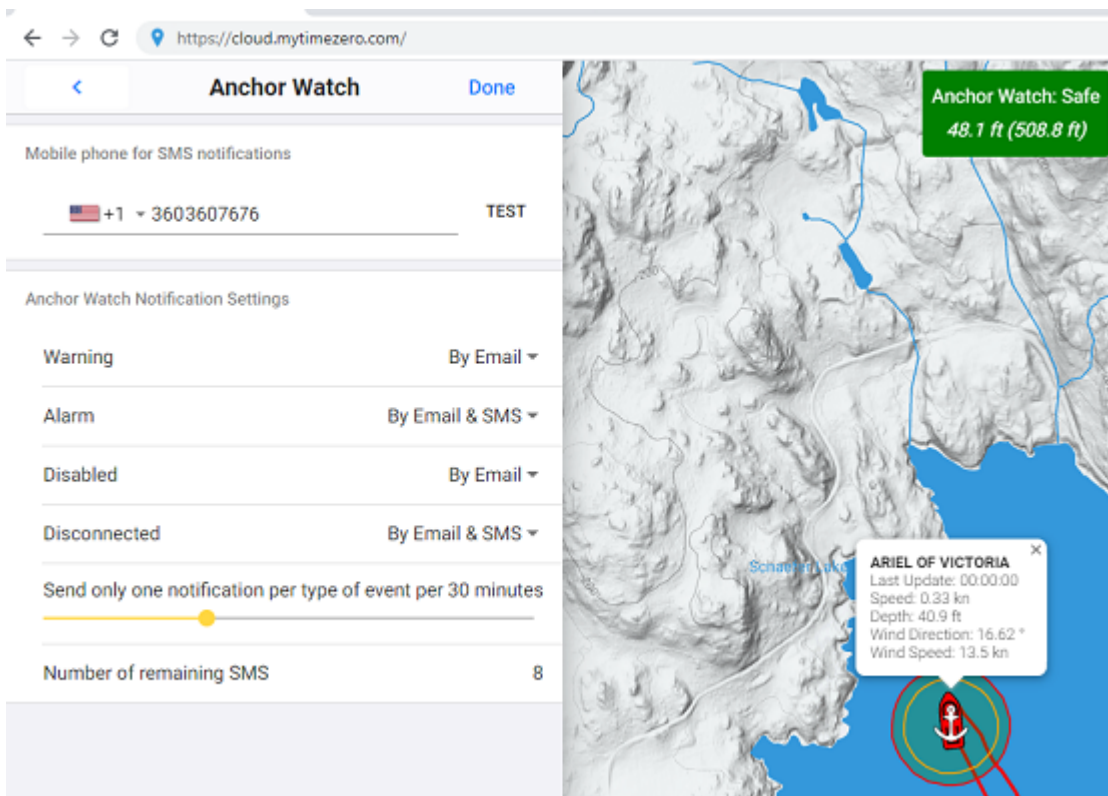


Note that you can click on your vessel from the web browser to get real time information including speed, depth and wind if TZ iBoat is connected to a NMEA gateway with the appropriate sensors:



IMPORTANT: The device running TZ iBoat (usually an iPad) has to stay on the boat. The device that you take with you (usually a phone) will NOT be running TZ iBoat. You will be using a web browser to monitor the Anchor Watch remotely (from either an iPhone or Android phone).

The TZ Cloud also has the ability to notify you automatically by E-Mail and/or SMS, so that you do not need to keep the web page open. Simply click on the "TZ" button located on the top left of the Web Page and select "Anchor Watch" to enter a mobile phone number and adjust your preference



For each event related to the Anchor Watch Monitoring (Warning, Alarm, Disabled or Disconnected), you can decide if you want an email and/or SMS notification.

Note: At this time, you are allowed to receive a maximum of 10 SMS per month (test SMS not included). At the beginning of every month, the counter is reset to 10. So, you should keep the SMS notification only for important events. Note that there is no limit on the number of e-mail notifications that can be sent.

Sensor Alarm

Various sensor (position, depth, wind, and battery) alarms can be enabled and adjusted from the [Alarms](#) settings. When an alarm is triggered, a red status bar with the name of the alarm will appear at the top of the screen. If the alarms sounds are enabled, a siren will play through your device speakers followed by a voice that will enunciate the name of the alarm (refer to the [Alarm Sound](#) chapter for more information).

Position Lost Alarm

By default, TZ iBoat will warn you if it loses position. Note that devices that have an embedded GPS (iPhone and iPads with cellular connection) should very rarely trigger this alarm (because they have a dedicated GPS sensor). If you are using a Wi-Fi only iPad and are not connected to a Bluetooth GPS or Wi-Fi NMEA Gateway (at home for example), you may want to disable the position alarm from the [Alarms](#) settings. For safety, it is recommended to leave this alarm turned ON when you are on the water.

Depth Alarm

TZ iBoat can warn you when the depth below your vessel becomes smaller than a specific value (adjusted from the [Alarms](#) settings). Note that this alarm will only work when TZ iBoat receives depth data from a [Wi-Fi NMEA Gateway](#) connected to a depth sounder.

Note: This alarm does not use the chart data to warn you.

To make sure that TZ iBoat receives valid depth information, you can add a numerical NavData setup to display depth (refer to [Displaying and Configuring NavData](#) for more information).

Wind Alarm

TZ iBoat can warn you when the wind speed goes over a specific value (adjusted from the [Alarms](#) settings). Note that this alarm will only work when TZ iBoat receives wind data from a [Wi-Fi NMEA Gateway](#) connected to a wind sensor.

Note: This alarm does not use the wind forecast data to warn you.

To make sure that TZ iBoat receives valid wind information, you can add a numerical NavData setup to display wind speed (refer to [Displaying and Configuring NavData](#) for more information).

Battery Warning

TZ iBoat can warn you when your device battery falls under 10%. Note that unlike the other alarms that are displayed in red, this one will be displayed in orange and will only trigger a short beep (if the alarms and warnings sound are enabled).

Route Alarm

You can setup TZ iBoat to warn you when a route is activated and when your vessel position strays over the route XTE (Cross Track Error):

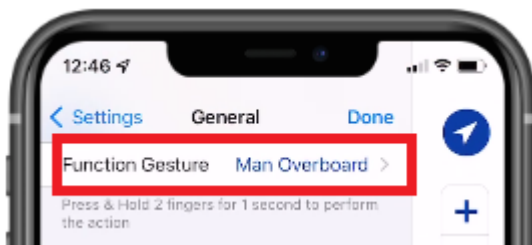


You can enable or disable this alarm from the [Alarms](#) settings. The alarm distance is link to the route XTE value that can be adjusted from the [Routes](#) settings under "XTE Value".

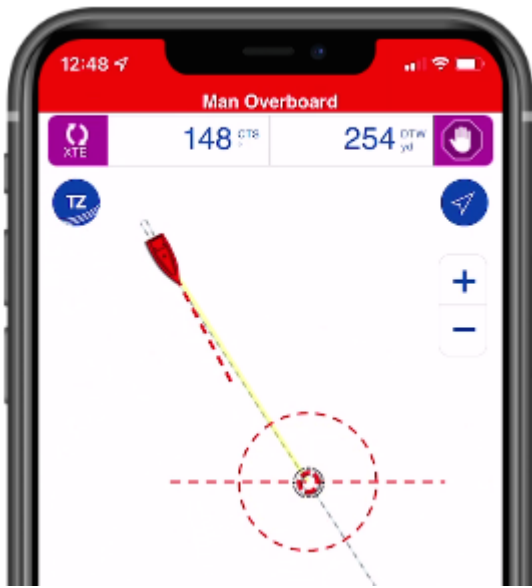
When the vessel goes outside the route XTE, a red status bar will appear at the top of the screen, and if the alarms sound are enabled (refer to the [Alarm Sound](#) chapter), a siren will play through your device speakers.

MOB Alarm

The Man Over Board Alarm (also known as a MOB Alarm) can be triggered on TZ iBoat using a function gesture. Note that by default, the function gesture will only drop an event (a mark under the boat). If you want to use the MOB alarm instead, you will have to reassign the function gesture from the [General](#) Settings:



Once setup, press and hold two fingers on the screen for 1 second. TZ iBoat will automatically drop a mark (MOB icon), activate a route to that point, and trigger an alarm (red notification with a warning sound if enabled):



Note that unlike a traditional Active Route or Goto, the switching circle radius (allowing to trigger the end of the active route in normal circumstance) is ignored with a MOB alarm. To cancel the alarm, you must manually stop the activate route by pressing the button located on the Route Bar.

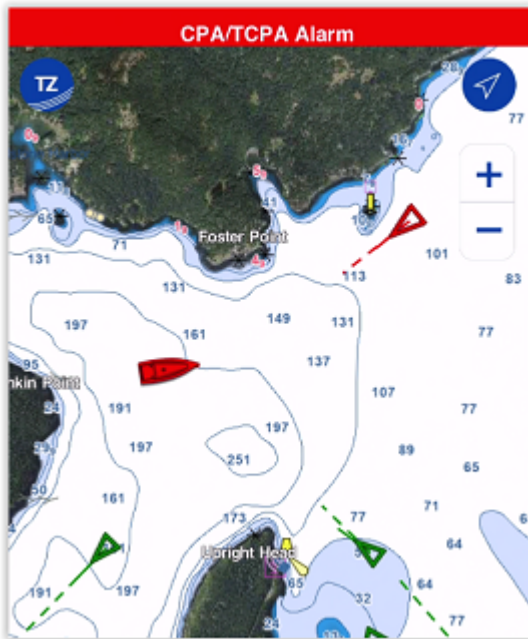
The MOB alarm will automatically be synchronized with all compatible TimeZero platforms that are connected on the same Wi-Fi network (TZ Navigator, TZ Professional, TZ iBoat, and Furuno TZT2/TZT3).

Target Alarm

IMPORTANT: The AIS Module needs to be purchased to be able to connect TZ iBoat to an AIS receiver or AIS transceiver and access the Target Alarm settings. To purchase the AIS module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

CPA / TCPA Alarm

A target CPA/TCPA alarm can be set from the [Alarms](#) settings. When a predicted closest point of approach (CPA) of any target becomes smaller than the CPA alarm and when its predicted time to closest point of approach (TCPA) becomes smaller than the TCPA alarm, the target becomes dangerous and its icon is displayed in red. If the CPA/TCPA alarm is enabled from the [Alarms](#) settings, a red status bar will appear at the top of the screen. If the alarms sounds are enabled (refer to the [Alarm Sound](#) chapter), a siren will play through your device speakers:



Note: The CPA/TCPA alarm is raised when both the CPA and TCPA conditions (thresholds) are met.

If you want to visualize on the chart the location where you will be meeting the dangerous target, tap on it and select "Graphic CPA". A graphic representation of the target Closest Point of Approach (Graphic CPA) will appear indicating the meeting point:



Proximity Alarm

The AIS proximity alarm is more basic than the CPA/TCPA alarm. It simply triggers an alarm if any AIS target becomes closer than a preset value, regardless of its direction.

Exclusion (Alarm Filter)

To avoid false alarms around harbors or in locations with lots of moored vessels, it is possible to enable a speed based filter on the CPA/TCPA and Proximity alarms. When "Ignore Slow Target Alarms" is enabled from the [Alarms](#) settings, any AIS target moving slower than the set value will not raise any alarm.

Alarm Sound

Alarms and Warnings Sound

When an alarm or a warning is triggered, a sound is played through your device speakers (a short beep for warnings and a siren for alarms). If you prefer the warnings and alarms to remain silent (and just trigger a visual notification in the status bar), you can disable "Warnings and Alarms Sound" from the [Alarms](#) settings.

Note that the warnings and alarms sound is using the "Ringer and Alerts" volume that is adjusted from the iOS "Settings" under "Sound & Haptics" (or simply "Sound" under iPads). This allows you to set a specific volume for warnings and alarms, which remains independent from the "media" volume (used for music playback) that is adjusted with the volume buttons on the side of your device. If your device is on "Silent Mode", then, the warnings and alarms will cause your device to vibrate.

Alarm "Text to Speech"

Alarms have the additional option to enunciate themselves (the text of the alarm is spoken in your device languages). This can be enabled or disabled independently from the warnings and alarms sound from the [Alarms](#) settings (by adjusting "Enunciate Alarms").

Note that the text to speech is using the "media" volume.

***Note:** If you play music while using TZ iBoat, and if a warning or an alarm is triggered, the music volume will be temporarily lowered automatically while playing the sound and enunciating the alarm (if enabled).*

Background Processing

To guarantee proper processing of the alarms in TZ iBoat, it is better to leave the App running in the foreground with "Prevent Auto-Lock" enabled from the [General](#) settings. This will prevent the device from going automatically in sleep mode and allow TZ iBoat to run continuously and monitor all alarm conditions.

***Note:** TZ iBoat goes in "low power mode" automatically after 30 seconds of inactivity and reduces the frame-rate to save power consumption. But, if your device is mounted and used as a primary source of information, it is recommended to connect it to a power source.*

Note that TZ iBoat has been designed to keep running in the background when some alarms are enabled or in specific circumstances (for example, when a route is activated). The alarms that will keep TZ iBoat running in the background are:

- Anchor Watch Alarm
- Route XTE Alarm
- Depth Alarm
- Wind Alarm

***Note:** At this time, the target alarms (CPA/TCPA and Proximity alarms) are not supported in the background.*

When one or multiple of these alarms are enabled, TZ iBoat will continue to monitor your position (and NMEA data in the case of Wind and Depth alarms) and check the alarm conditions even if your device is put in sleep mode or if TZ iBoat is not the foreground app anymore. When an alarm is triggered, you will be able to hear the siren sound and then know the type of alarm thanks to the text to speech function (when enabled).

IMPORTANT: The background processing is not guaranteed! When TZ iBoat runs in the background, the iOS operating system will allow less CPU time to TZ iBoat and may even "kill" the app at anytime to reclaim resources if needed. Our internal tests have demonstrated that running TZ iBoat in the background (or putting your device to sleep) with just GPS data while connected to a power source allows TZ iBoat to run reliably in the background for more than 24 hours. That means that the Anchor Watch should run without issue overnight, even if the screen is turned off. HOWEVER, we've also noticed some delay in processing data if TZ iBoat is connected to a Wi-Fi NMEA Gateway with lots of data (GPS, Depth, Wind, AIS,...). In these conditions we've seen the depth alarm or anchor watch alarm with a delay of up to 30 seconds.



FURUNO 1st Watch Radar (DRS4W)

Introduction

IMPORTANT: The Radar Module needs to be purchased to be able to connect TZ iBoat to the Furuno DRS4W 1st Watch Radar. To purchase the Radar module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

The FURUNO DRS4W 1st Watch Radar is the world’s first wireless Radar that you can access directly from your iOS devices and TZ iBoat! With the FURUNO 1st Watch Wireless Radar, you can do things previously impossible. Bring the Radar display wherever you go, even put it on the iPhone in your pocket. Since the display is untethered, you are free to roam the vessel while maintaining full situational awareness of your surroundings. The installation is simple with its compact and lightweight Radar antenna:



Mount it, plug in the power cord and you are done. Due to the portability of the iOS devices this makes the system a good option for boats where space constrictions are of concern or for boats that want to only use iPads and iPhone as primary navigation devices.

TZ iBoat paired with an AIS receiver and the DRS4W is the ultimate solution.

Setup

The DRS4W Radar creates its own wireless network access point when powered ON. The first step is to setup your iPhone or iPad to join the Radar’s wireless network by following the usual procedure to join a Wi-Fi network. All DRS4W Radars create a network with an identifier (SSID) starting with “DRS4Wxxxxxxx”. The wireless network is protected using a password (WPA2-Personal) which is unique to each DRS4W Radar and available inside your DRS4W User Guide.

Basic Setup

While recommended, an external heading sensor is not mandatory to overlay the Radar echoes on the chart. TZ iBoat can use your device’s internal (or Bluetooth) GPS Course Over Ground (COG) to align the Radar on the chart, making the installation very easy:



Note that the radar echo will appear with high transparency if your vessel is moving below 1Kn (to indicate that the Heading derived from your course over ground is inaccurate).

Advanced Setup

To better align the Radar echo on the chart, it is recommended to connect a heading sensor to TZ iBoat. This can be done using a NMEA to Wi-Fi gateway (the gateway can also be used to bring additional data such as depth, wind or AIS):



You need to make sure that the Wi-Fi Gateway you want to use can join an existing Wi-Fi network to connect to the DRS4W network. This means that you should be able to program the Gateway to connect to the DRS4W network by entering the DRS4W's SSID and Password.

IMPORTANT: The DRS4W does not have the ability to join an existing wireless network: it must create its own. Because the iPhone or iPad can only join one Wi-Fi network at a time, the Wi-Fi Gateway bridging



the NMEA data (GPS, Heading, Depth, Wind, AIS...) MUST join the DRS4W network. Only then the iPhone or iPad will be able to get Radar Echo and NMEA data (by only connecting to the DRS4W network).

The Wi-Fi Gateway must output NMEA0183 sentences over UDP or TCP. Here is a list of recommended NMEA0183 to Wi-Fi Gateways that support connecting to an existing network:

- Digital Yacht NMEA-0183 Wi-Fi Gateway - WLN10 (single port)
- Digital Yacht NMEA-0183 Wi-Fi Gateway - WLN30 (three ports)
- Yacht Devices NMEA-0183 Wi-Fi Gateway - YDWN-02 (dual ports)

Note that if your instruments output data using NMEA2000, most NMEA2000 to Wi-Fi Gateway will support transcoding the NMEA2000 data into NMEA0183 before outputting the data over UDP or TCP. Here is a list of recommended NMEA2000 to Wi-Fi Gateways that support connecting to an existing network (and NMEA0183 transcoding):

- Actisense NMEA-2000 Wi-Fi Gateway - W2K-1
- Digital Yacht NMEA-2000 Wi-Fi Gateway - NavLink2
- Yacht Devices NMEA-2000 Wi-Fi Gateway - YDWG-02

If you are considering purchasing a new AIS unit, you should consider buying an AIS that has Wi-Fi capabilities and can act as a gateway to bridge existing instruments to the Wi-Fi network multiplexed with the AIS data:

- Vesper AIS Transponder with Wi-Fi and NMEA 2000 Gateway - WatchMate XB-8000
- Digital Yacht AIS Receiver with Wi-Fi Gateway – iAIS Receiver
- Digital Yacht AIS Transponder with Wi-Fi Gateway – iAISTX
- Digital Yacht AIS Transponder with Wi-Fi and NMEA200 Gateway – iAISTX Plus

For all type of gateways, the three steps below need to be achieved:

- Configure the gateway to join the DRS4W Wi-Fi network. Follow the manufacturer instructions to configure the gateway with the DRS4W's SSID and Password.
- If the gateway only supports TCP connection, you will have to setup a fix IP address for the gateway. We recommend using 172.31.100.100 for the gateway's fixed IP address once connected to the DRS4W network.

Note: This step (fixing the gateway's IP address is optional if you plan to use UDP)

- Connect TZ iBoat to the DRS4W Wi-Fi network and configure the Wi-Fi Gateway UDP or TCP port from the "Initial Setup" settings (enable the NMEA Gateway connection and click on "NMEA Gateway Configuration"). Please refer to the gateway's user guide to know the UDP or TCP port number.

Note: If TCP is used, you will also need to enter the gateway's IP address in TZ iBoat (that is why it is important to fix the gateway's IP address when using TCP). If the gateway supports it, we recommend using UDP instead (easier to configure).

Displaying Radar

Radar Overlay

Once TZ iBoat is connected to the DRS4W network, you can display radar echo directly on the chart by selecting "Radar" from the "Layer" button located on the bottom right of your screen:

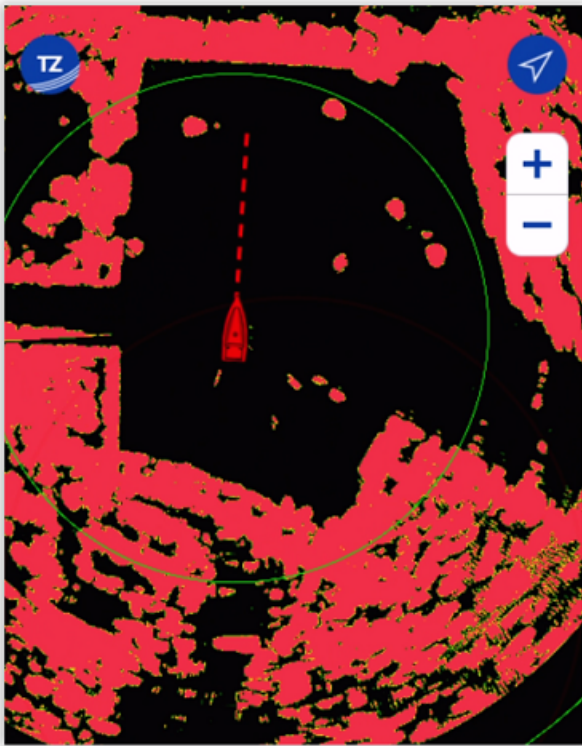


By default, radar echoes are displayed in multicolor with red representing the strongest radar return, yellow medium return and then green for weak return. You can change the radar overlay color palette from the [Radar](#) settings.

You can also adjust the radar overlay transparency. By default, the radar echoes are very opaque so that they are clearly visible on your screen. But, if you prefer to be able to see chart through the radar echoes, you can increase the “Radar Overlay Transparency” from the [Radar](#) settings.

Standalone Radar display

Note that if you prefer to focus solely on the radar echoes, it is possible to disable the chart from the “Layer” and only leave “Radar” selected. In this case, TZ iBoat will render the Radar Echo on a black background. In this mode, pan movements will be limited to the radar range (the radar coverage area).



Radar Control

The DRS4W has limited controls to keep it as easy to use as possible. The radar range is automatically adjusted as you zoom in/out or pan the chart. There is no “Gain” or “Sea” filter like on a traditional radar (these parameters are automatically adjusted by the DRS4W). By default, the “Rain” filter is set to Auto, but “Auto Rain” can be turned OFF from the [Radar](#) settings allowing you to manually adjust the Rain filter.

Note: For most users it is recommended to leave the Rain filter on Auto. If you find that the DRS4W has issue picking up small targets at a distance when it is not raining, you can try to turn OFF “Auto Rain” and set the “Rain Adjust” to 0 to eliminate any rain filtering that has a tendency to weaken some echo. On the opposite, if you have too much noise caused by rain, you may also try to turn OFF “Auto Rain”, but this time increase “Rain Adjust” until the noise goes away.

To Transmit or Standby the radar, click on the Radar Scale located on the bottom left:



Note: When you enable the radar overlay from the “Layer” button, TZ iBoat will automatically set the radar in Transmit mode.



FURUNO Sounder (FCV600/800)

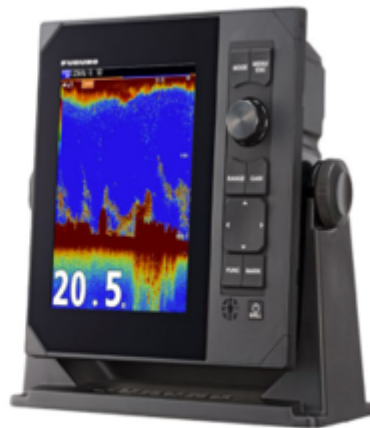
Introduction

IMPORTANT: The Sounder Module needs to be purchased to be able to connect TZ iBoat to the Furuno FCV600 or FCV800 fish finder. To purchase the Sounder module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

The FURUNO FCV600 and FCV800 are stand-alone Fish Finders built on the foundation of award-winning Furuno sounders that fishermen rely on (TruEcho CHIRP, ACCU-FISH, Bottom Discrimination, Color Expansion...). These fish finders include Wi-Fi capability which allows connectivity with TZ iBoat:



FCV600



FCV800

Connecting TZ iBoat to the FCV600 or FCV800 will allow you to see and control the sounder echogram directly from TZ iBoat. You will be able to monitor the depth and the bottom profile thanks to the sounder history, locate fish on the sounder screen or on the chart, and know the seabed type thanks to the bottom discrimination feature of the FCV600/800.

TZ iBoat paired with an FCV600 or FCV800 is the ultimate fishing solution.

Setup

IMPORTANT: Before connecting TZ iBoat to the FCV600/800, make sure to follow the Furuno Operator's manual to set up all the initial adjustments of the fish finder (transducer model selection, draft offset...).

FCV600/800 Wi-Fi Setup

The FCV600/800 can either operate in "AP Mode" or "Client Mode" for Wi-Fi connectivity. When set up in "AP Mode" (default), the FCV600/800 will create its own Wi-Fi network. When setup in "Client Mode", the FCV600/800 will connect to an existing Wi-Fi network on your boat.

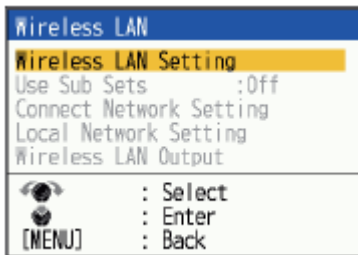
***Note:** Only one device can be connected to the FCV600/800. It is not possible to connect two devices (iPhone or iPad) to the same FCV600/800 unit.*

Access Point Mode

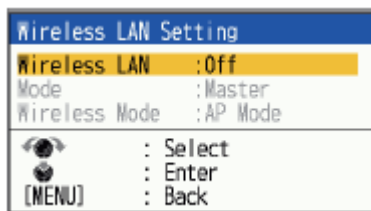
The "AP Mode" (Access Point Mode) is the most common setup. The FCV600/800 creates its own Wi-Fi network and you simply connect your iPhone or iPad to it:



To enable the "AP Mode", press the MENU/ESC key on the FCV600/800, select [Network] , select [Wireless LAN]:



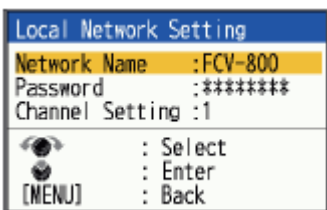
Select [Wireless LAN] and set it to "ON":



Make sure to leave [Mode] to "Master" and [Wireless Mode] to "AP Mode".

Press the MENU/ESC Key and select "Yes" to the confirmation. This will cause the FCV600/800 to restart.

Repeat this process to access the [Wireless LAN] setting window. This time the [Local Network Setting] can be selected:





From this window, you can change the default Network Name and Password.

Tip: To view the default Wi-Fi password, simply select [Password] and press the Knob. This will reveal the default password.

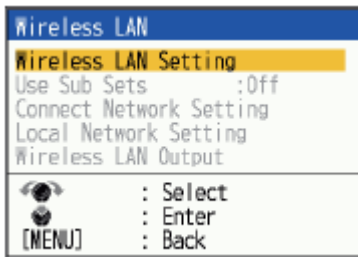
This concludes the Wi-Fi configuration on the FCV600/800 for "AP Mode". Continue the set up steps by following the "FCV600/800 Settings" chapter below.

Client Mode

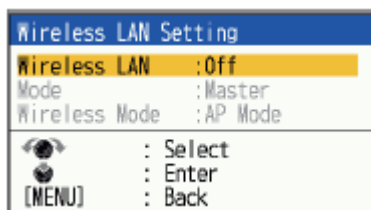
If you have an existing Wi-Fi network on your boat which is already set up for your iPhone or iPad, you can setup the FCV600/800 to join that network by using the "Client Mode":



To enable the "Client Mode", press the MENU/ESC key on the FCV600/800, select [Network] , select [Wireless LAN]:



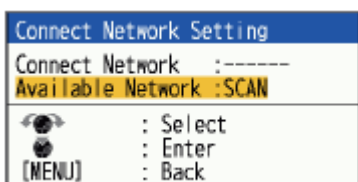
Select [Wireless LAN] and set it to "ON":



Make sure to leave [Mode] to "Master" and set up [Wireless Mode] to "Client Mode".

Press the MENU/ESC Key and select "Yes" to the confirmation. This will cause the FCV600/800 to restart.

Repeat this process to access the [Wireless LAN] setting window. This time the [Connect Network Setting] can be selected:



Select [Available Network] and press the Knob to Scan nearby Wi-Fi networks.

The list of Wi-Fi networks will automatically appear. Select the network name you would like to connect to and select "Connect". The Password window will automatically appear. After entering the password, a "Connecting..." message will appear. If the connection is successful, the message will disappear and the wireless LAN icon (📶) will appear in the upper right corner of the FCV600/800's screen.

IMPORTANT: For Class C network (any network using a subnet mask of 255.255.255.0) only addresses in the 192.168.x.x range are supported by the FCV600/800. Any other address range such as 10.0.x.x or 172.31.x.x are assumed to be using a subnet mask of 255.255.0.0 (Class B network).

Client Mode Configuration Examples

- FCV600/800 & NMEA Gateway

If you would like TZ iBoat to connect to instruments on the boat (AIS, Wind...) in addition to the FCV600/800, the best is to connect your instruments to a NMEA Wi-Fi Gateway and have both TZ iBoat and the FCV600/800 join the Wi-Fi network of the Gateway like below:



Note: For more information on how to connect a NMEA Gateway to TZ iBoat, please refer to the [External Instruments](#) connection chapter.

- FCV600/800 & DRS4W

If you would like TZ iBoat to connect to both the DRS4W and FCV600/800, simply configure the FCV600/800 to join the DRS4W network:



- FCV600/800 & DRS4W & NMEA Gateway

For the most advanced boaters, it is possible to add a NMEA gateway to the DRS4W network together with the FCV600/800. This configuration will allow you to get radar, fish finder, AIS, and any other instruments supported by TZ iBoat:



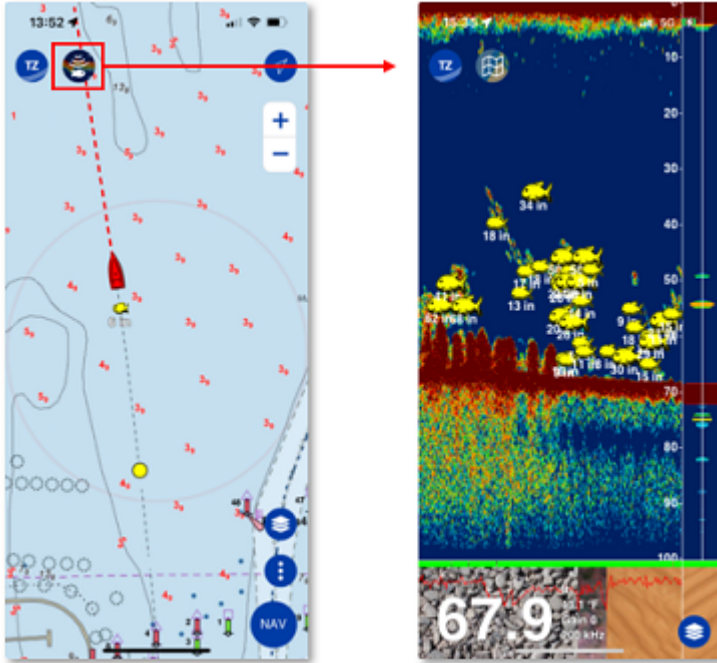
FCV600/800 Settings

If you want to have full control of the FCV600/800 from TZ iBoat (display mode, range, shift, gain mode...), then, make sure to activate the "sub monitor". Press the MENU/ESC key on the FCV600/800, select [Network], select [Wireless LAN], and make sure that [Use Sub Sets] is set to "ON".

By default, the FCV600/800 will only output depth data. If you have a transducer with a temperature sensor and/or speed through water sensor, you will need to adjust the "Wireless output LAN" setting. Press the MENU/ESC key on the FCV600/800, select [Network], select [Wireless LAN], select [Wireless LAN Output], and make sure to set [Weather] to "ON" (for sea surface temperature) and [Navigation] to "ON" (for speed through water).

Displaying Fish Finder

To display the Fish Finder screen on TZ iBoat , tap on the Sounder button located next to the TZ button:



Note: To revert back to the chart screen, simply tap on the Map button that replaces the Sounder button when you are on the sounder screen. At this time, it is not possible to display a chart screen and a sounder screen side by side.



Sounder screen overview

1. Sounder Echo: The sounder picture moves from right to left. Echo on the far right represents "real time" return (what is picked up by the transducer under your boat). With each new transmission, sounder echoes are shifted to the left creating the sounder history. Note that the sounder history is "time based" (bottom profile will appear flat if the boat stays stationary).

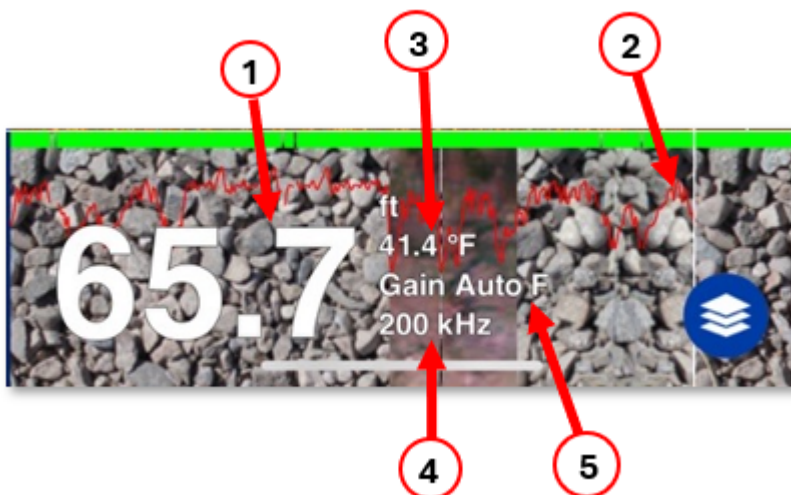
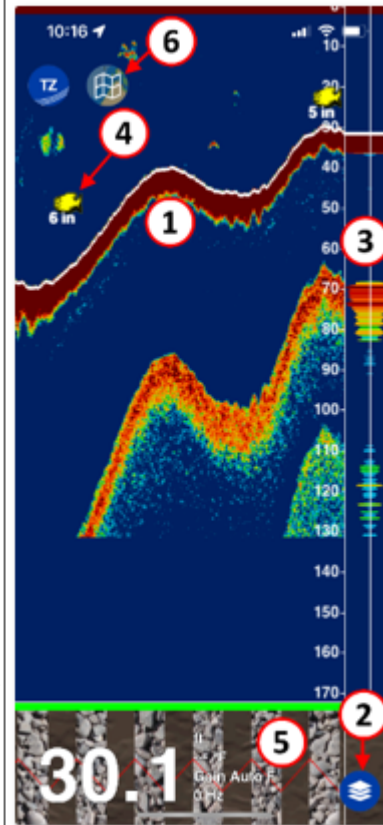
2. Layers Button: Tap on this button to open the Layers panel and access the sounder settings and modes selection.

3. A-Scope: The A-Scope displays the real time echo return just under your boat. The amplitude (width) and the color will vary with the echo strength making the A-Scope useful for estimating fish return and bottom composition.

4. ACCU-Fish Icon: The ACCU-Fish feature of the FCV600/800 can be used to detect individual fish using an icon. It helps beginners to identify fish targets on the display. Note that this feature requires a compatible transducer.

5. Bottom Discrimination: The bottom Discrimination feature of the FCV600/800 displays the type of bottom (rock, gravel, sand, mud) in a colorful graphic display when enabled from the Layers panel. Note that this feature requires a compatible transducer.

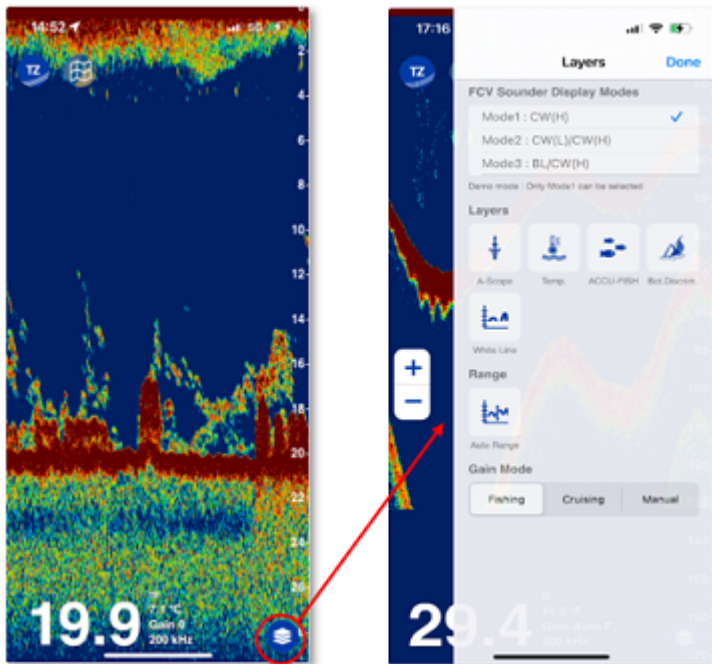
6. Chart Button: Tap this button to return to the chart screen.



1. Depth Indicator: Indicates the depth sent by the sounder.
2. Bottom Discrimination probability curve: Provides an indication of the reliability of the seabed detection.
3. Temperature Graph: Indicates the water temperature at the transducer (Sea Surface Temperature).
4. Frequency Indication : Indicates the transducer operating frequency.
5. Gain Mode Indication: Indicates the Gain Mode ("Manual" for manual gain adjustment, "Auto F" for fishing mode, and "Auto C" for cruising mode),

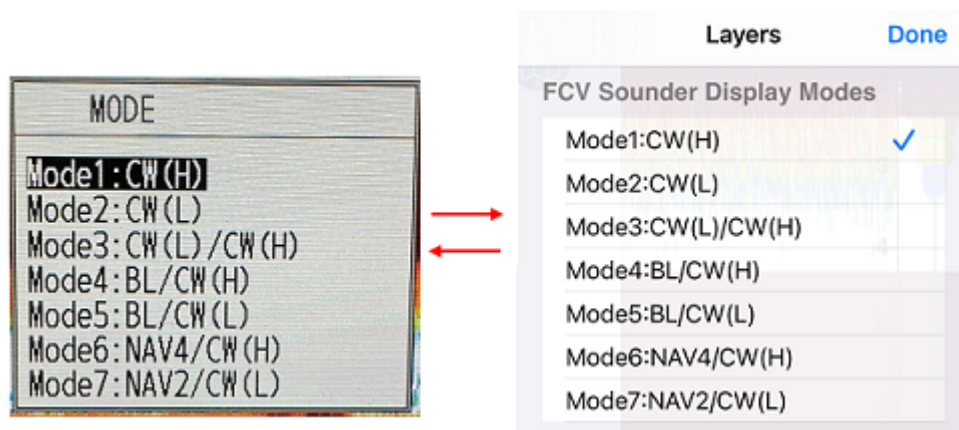
Configure the Sounder Screen

Tap the Layer button to open the Layers panel and access the most common sounder setup:



FCV Display Modes

The FCV600/800 can operate in various "modes" (single frequency, dual frequency, bottom lock...). These modes can be selected directly from TZ iBoat under the Layers panel and be synchronized over to the FCV600/800:



Note: For a more detailed explanation of all the FCV600/800 modes, please refer to the Furuno user's guide.

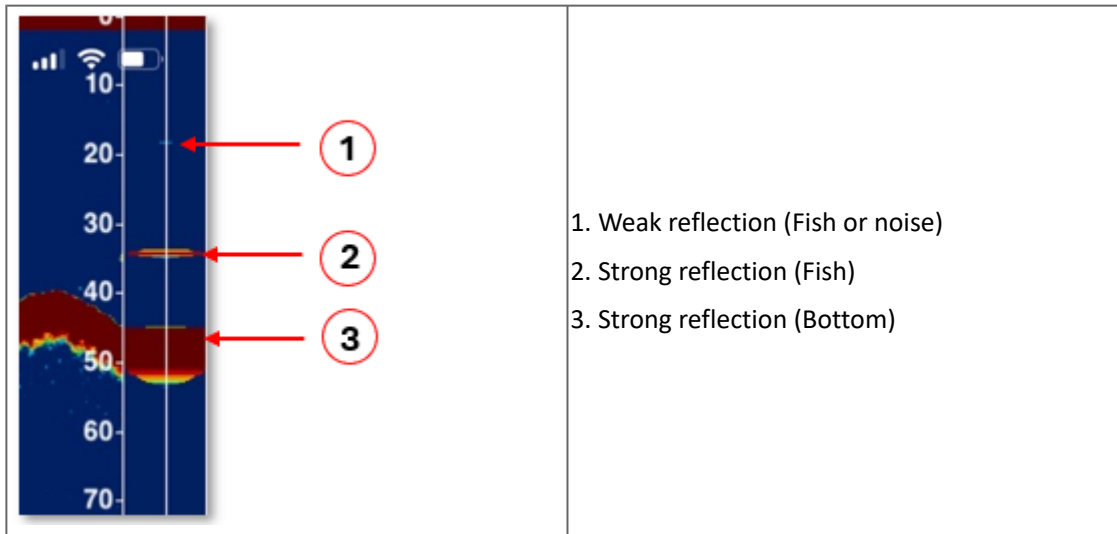


Sounder Screen Layers

It is possible to add or remove various fish-finder components or layers to your sounder screen. You will find various options under the Layers panel:

A-Scope

The A-Scope shows the echo return under the transducer in real time. The amplitude (width) and the color vary with the echo strength making the A-Scope useful for estimating fish return and bottom composition:

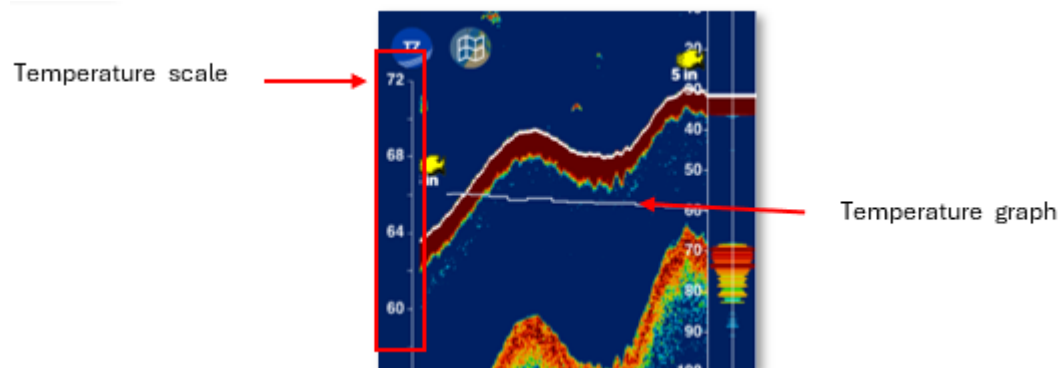


If the echoes displayed in the A-Scope disappear too fast, you can enable the A-Scope Peak Hold from the [Fish Finder](#) Settings.

The A-Scope selection is independent on TZ iBoat and on the FCV600/800 (not synchronized).

Temperature Graph

If your transducer includes a temperature sensor, it is possible to overlay a temperature graph to the sounder screen from the Layers panel:

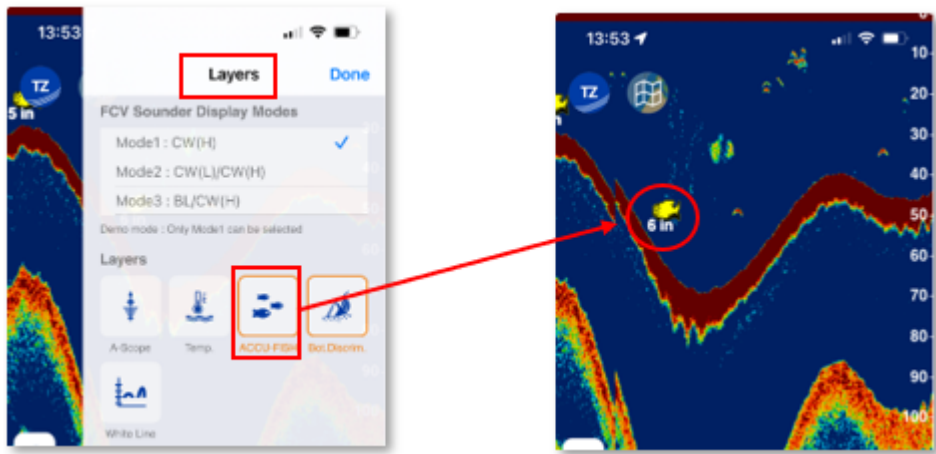


The temperature graph is useful to monitor small changes in temperature over time that could act as barriers for fish movements and affect feeding patterns.

The Temperature Graph selection is independent on TZ iBoat and on the FCV600/800 (not synchronized).

ACCU-Fish

If your transducer is compatible with the ACCU-Fish feature, you can enable it under the Layers panel of TZ iBoat:



ACCU-Fish is designed to help anglers assess the size of fish detected on the screen. When ACCU-Fish is activated, fish icons with a label indicating the sizes will appear on the fish finder's display, representing the estimated size of the detected fish. These icons can help anglers quickly identify potentially larger fish targets amidst smaller ones, allowing them to prioritize their fishing efforts. Note that the accuracy of ACCU-Fish may vary depending on factors such as water conditions, the sensitivity of the transducer, and the quality of the transducer installation. While it can provide helpful guidance, anglers should use their judgment and experience in conjunction with ACCU-Fish readings to interpret fish size accurately.

Note that the ACCU-Fish icon can be selected from the [Fish Finder](#) Settings under ACCU-Fish Symbols:

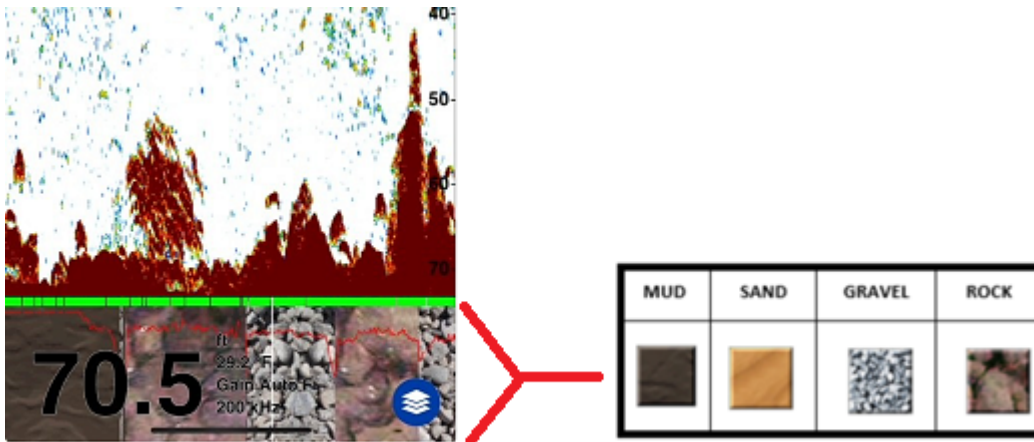
Label only	Solid	Striped	Circle	Square

The ACCU-Fish selection on TZ iBoat is synchronized with the FCV600/800 and changes the TX pulse length (which can affect the sensitivity of the sounder).

Bottom Discrimination

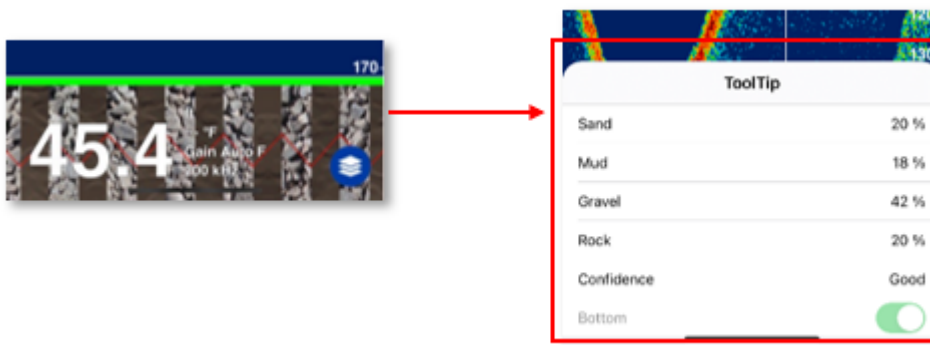
The bottom discrimination feature analyses the bottom echo to categorize seabed in one of four types: rock, gravel, sand, and mud. Note that a transducer that supports the bottom discrimination is required.

You can enable the Bottom Discrimination from the Layers panel in TZ iBoat. This will display the seabed type below the sounder echogram:



A confidence indicator and a probability graph are also displayed:

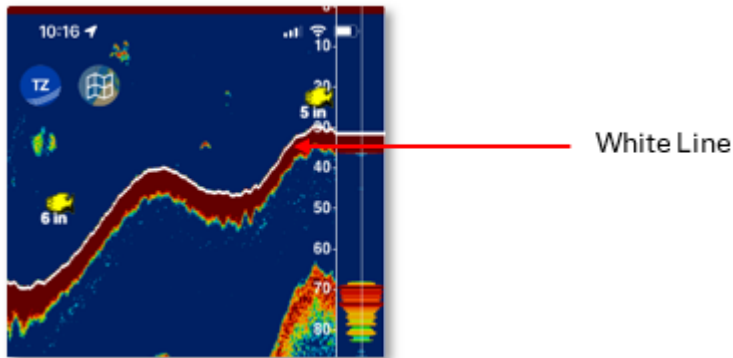
- The confidence indicator can be either green (normal) or yellow (caution). The confidence indicator is displayed at the top of the bottom discrimination texture.
- The probability graph gives you the probability of the corresponding seabed type (the higher the red line, the more confident the result is). Note that you can tap on the seabed type to get more detail about the probability of each category:



The Bottom Discrimination selection on TZ iBoat is synchronized with the FCV600/800 and alternates the transmission of high and low frequency (regardless of the current mode selection) which causes the refresh rate to be slower. When enabled, the bottom discrimination also set the Auto-Range of the FCV600/800 (manual range is not possible). Also note that the operating depth of the bottom discrimination feature is in between 16 to 328ft (5 to 100m) and its operating speed is less than 10 knots.

White Line

The White Line function makes it easy to see the bottom location on the sounder echo. It also makes it easy to distinguish bottom fish from the seabed (bottom fish echo would be displayed above the white line):

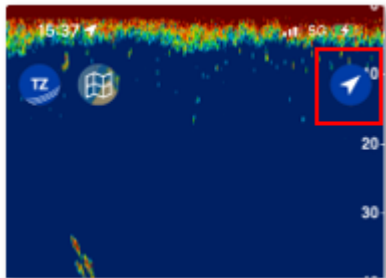


The White Line selection is independent on TZ iBoat and on the FCV600/800 (not synchronized).

Sounder history

TZ iBoat records sounder history (up to 10,000 sweep). To access the sounder history, position your finger on the screen and then drag the sounder picture to the right. The range of the sounder history will automatically scale to what is displayed on your screen.

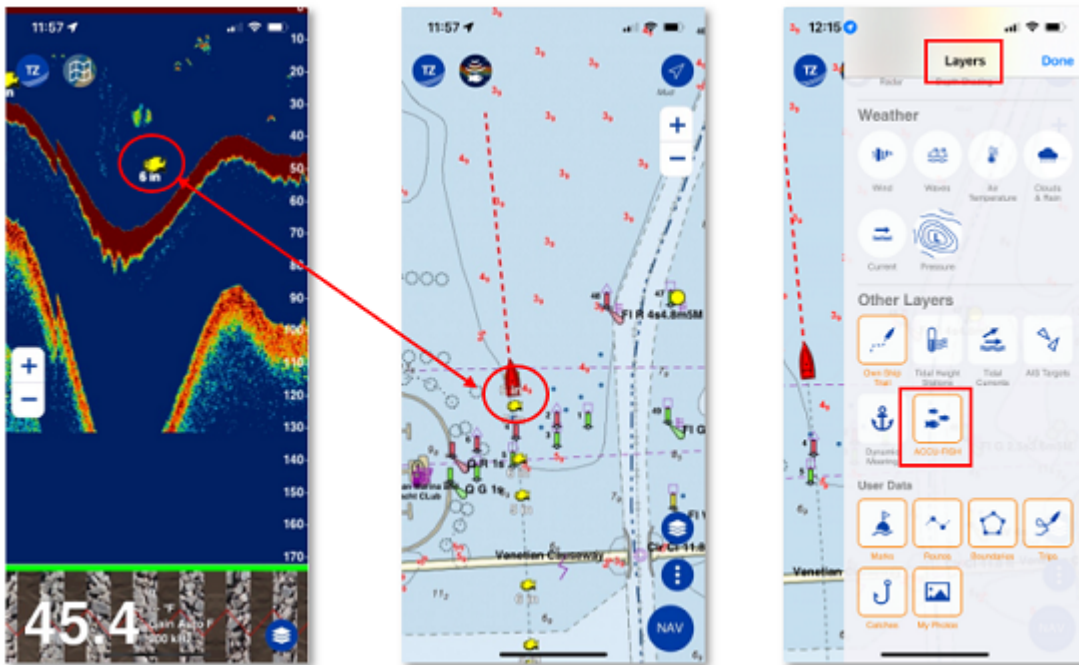
When you display the echo history, the echogram scrolling stops. To return to the current position (to restart the scrolling of the echogram display), click on the button at the top right of your screen:



Geo-location

ACCU-Fish

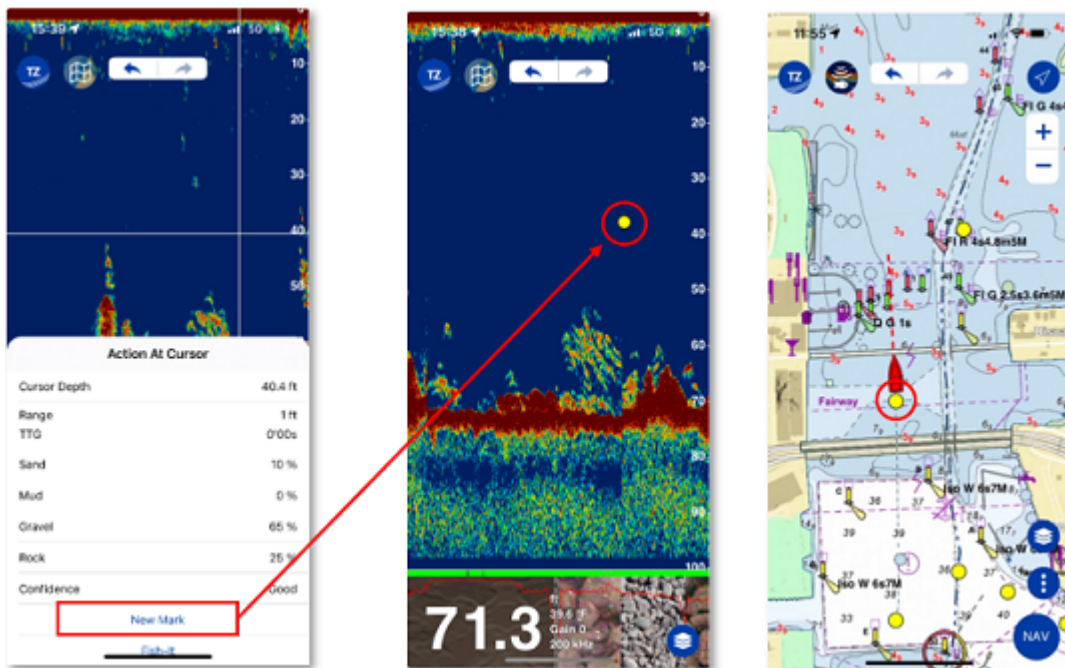
When the ACCU-Fish mode is enabled, fishes that are detected by the FCV600/800 will appear on the sounder screen, but also on the chart screen (if the ACCU-Fish layer is also enabled on the chart screen):



This unique feature of TZ iBoat makes it very easy to circle back and place your boat over the fish.

Mark

If you tap on the sounder screen to create a mark, the mark will also be displayed on the chart screen automatically:

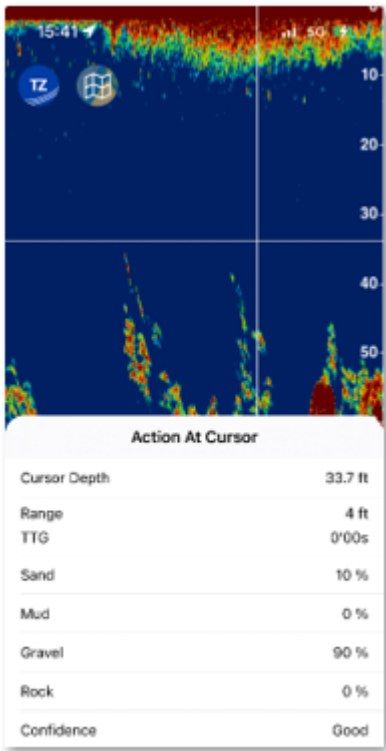


This feature makes it very easy to save reef and obstruction location that are easily identified on the fish finder screen. You can also use this feature to manually mark the position of a fish.

Information menu

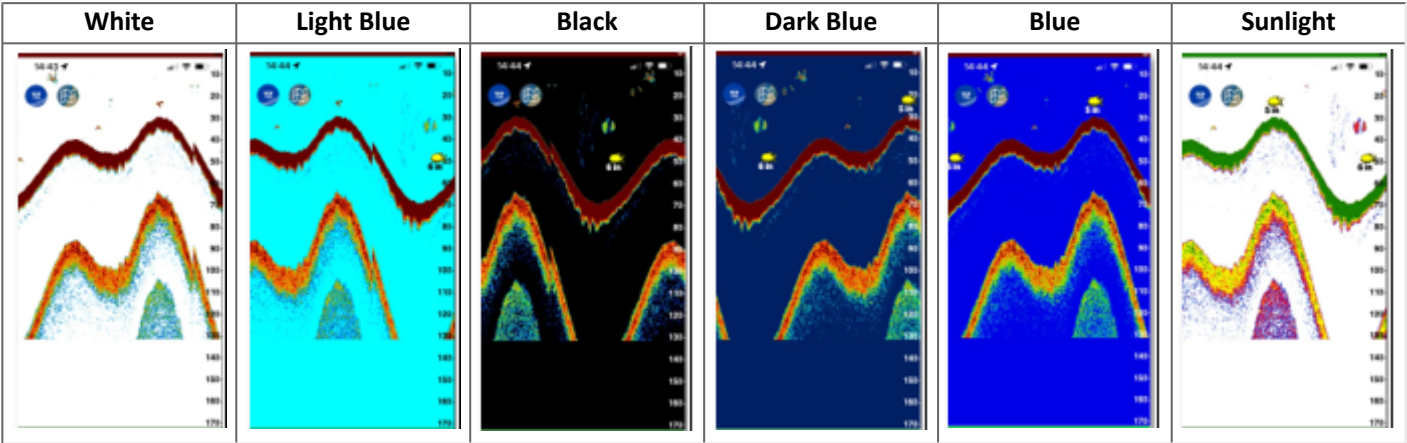
Whenever you tap on the sounder screen, the pop-up menu will display the information below:

- The depth at the tapped location.
- The range (distance) from your boat to the tapped location.
- TTG: the "time to go" it will take you to get to the tapped location if you go straight at keep current speed.
- The different possible bottom type with their corresponding probability (in percentage) when the Bottom Discrimination feature is enabled.



Background and Echo color display

The sounder screen can use the following combination of background and echo color:



The color palette can be selected from the [Fish Finder](#) Settings. You can select one palette for the day time and another for the night time.



Fish Finder Adjustments

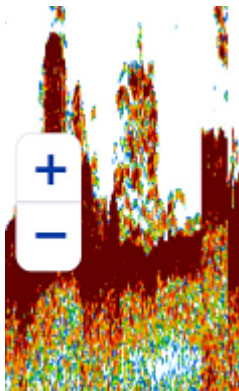
The FCV600/800 has been designed to work in Auto mode (Auto Gain and Auto Range). However, advanced users may find it useful to manually adjust some of the FCV600/800 parameters.

Range & Shift

Manual Range

The FCV600/800 can operate in Auto Range or Manual Range. When set to Auto Range, the FCV600/800 will automatically adjust the range to always display the seabed on screen. However, if you want to focus on specific area of the water column or prevent the FCV600/800 to automatically change its range, you can disable the Auto Range from the Layers panel in TZ iBoat.

When the Auto Range is disabled, a "+" and "-" buttons will appear to manually change the range:



It is also possible to use the pinch gesture to adjust the range.

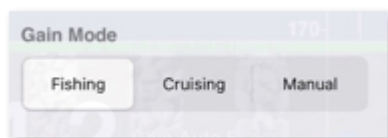
***Note:** If the Bottom Discrimination function is enabled, the range is forced to Auto Range. If you set the FCV600*

Manual Shift

To shift the echo picture and focus on a specific area of the water column, simply drag up and down.

Gain Mode

User can choose between 3 modes to control the fish finder gain: Fishing, Cruising, and manual. The gain mode can be adjusted from the Layers panel of TZ iBoat:



Automatic Modes (Fishing & Cruising)

There are two types of automatic modes: "Fishing" and "Cruising". The Automatic Fishing mode optimizes the sounder to display schools of fish, while the Auto Cruising mode optimizes the sounder to detect the bottom. Note that the Auto

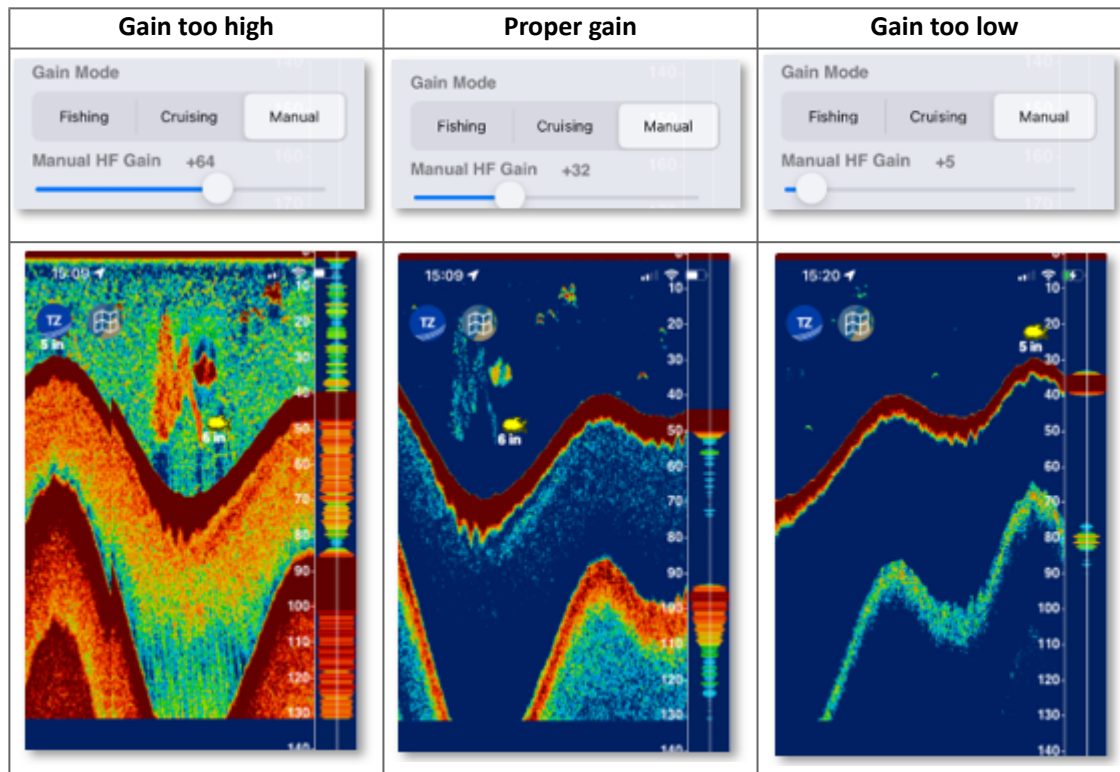
Cruising mode uses a higher clutter removal setting than "Auto Fishing". Do not use "Auto Cruising" when your purpose is to find fish, because the clutter removal circuit can erase weak echoes.

When the Automatic Fishing or Cruising mode is enabled, manual adjustment of the gain, clutter, and TVG is not possible.

Tip: According to your transducer model and installation, you may find the auto mode to be too "strong" or too "weak". In this case, you can try to adjust the Auto Gain Offset from the [Fish Finder](#) Settings.

Manual Mode

If you prefer to have manual control of the Fish Finder gain, you may select the "Manual" mode. A slider will appear allowing you to manually change the gain:



Thanks to the DIGI-Echo technology, the manual gain adjustments will affect both future and past echoes (sounder history).

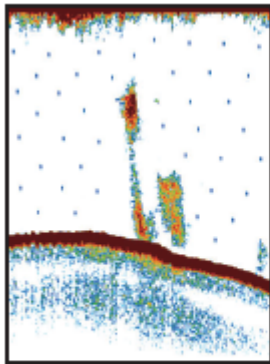
Note: While the manual gain mode selection is synchronized in between the FCV600/800 and TZ iBoat, the manual gain value (slider adjustment) is independent.

Clutter

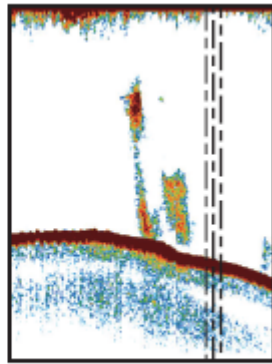
When manually adjusting the gain, it might be difficult to find a good balance in between noise caused by sediments in the water (which may force you to use a lower gain) and having strong fish returns (which may force you to use a higher gain). To handle this scenario you may want to try to adjust the clutter from the [Fish Finder](#) Settings: keep a higher gain, but increase the clutter setting to see if the noise is getting removed.

Interference Rejection

Interference from other nearby fish finders or other electronic equipment on your boat may show itself on your sounder screen as shown in the figure below:



Interference from
other sounder



Interference from
electrical equipment

If you see these patterns on your sounder screen, you may want to adjust the Interference Rejection from the [Fish Finder](#) Settings. There are 3 manual settings (low, medium, high) and one automatic setting.

Note: If you do not experience any interference, it is always better to set this setting to "Off". If you do experience any interference, try the "Auto" setting first.

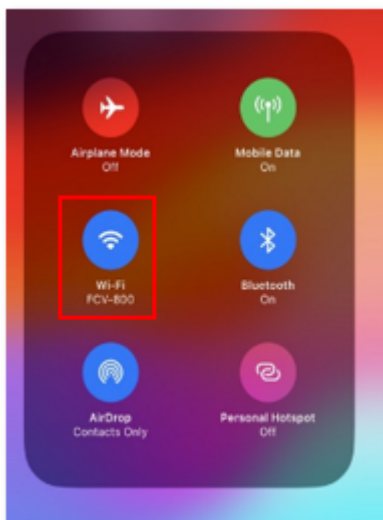
Color Erase

If you would like to erase weak echo that could be caused by sediments or plankton in the water and only care about strong return, you can try to adjust the "Color Erase" from the [Fish Finder](#) Settings. Raising the Color Erase slider will simply erase from the real time return and the sounder history any weak echo.

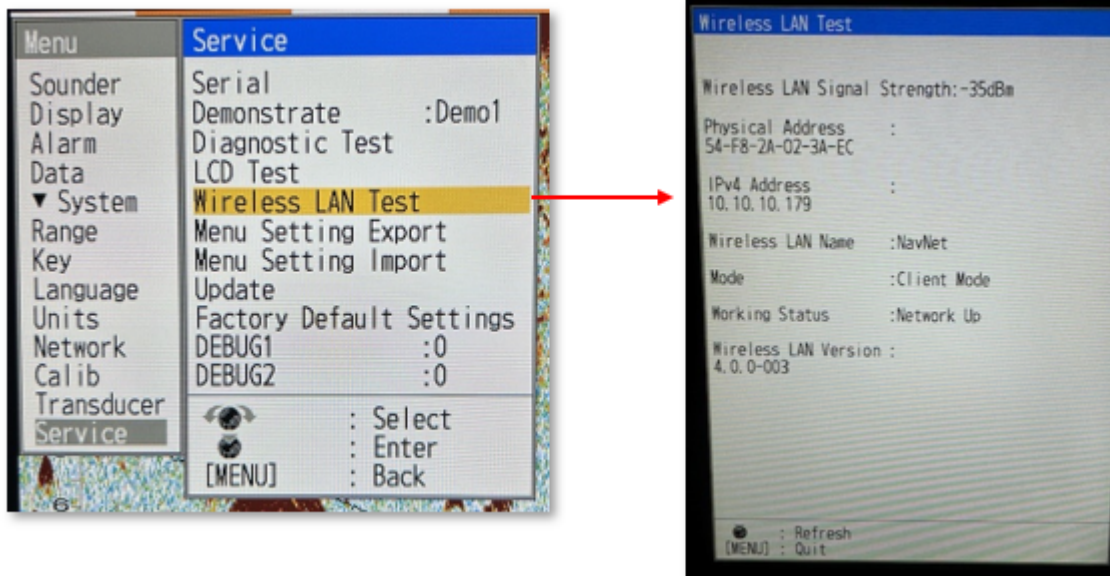
Troubleshooting

Wi-Fi Connection

The first step is to make sure that your iPad or iPhone is connected to the FCV600/800 Wi-Fi network:



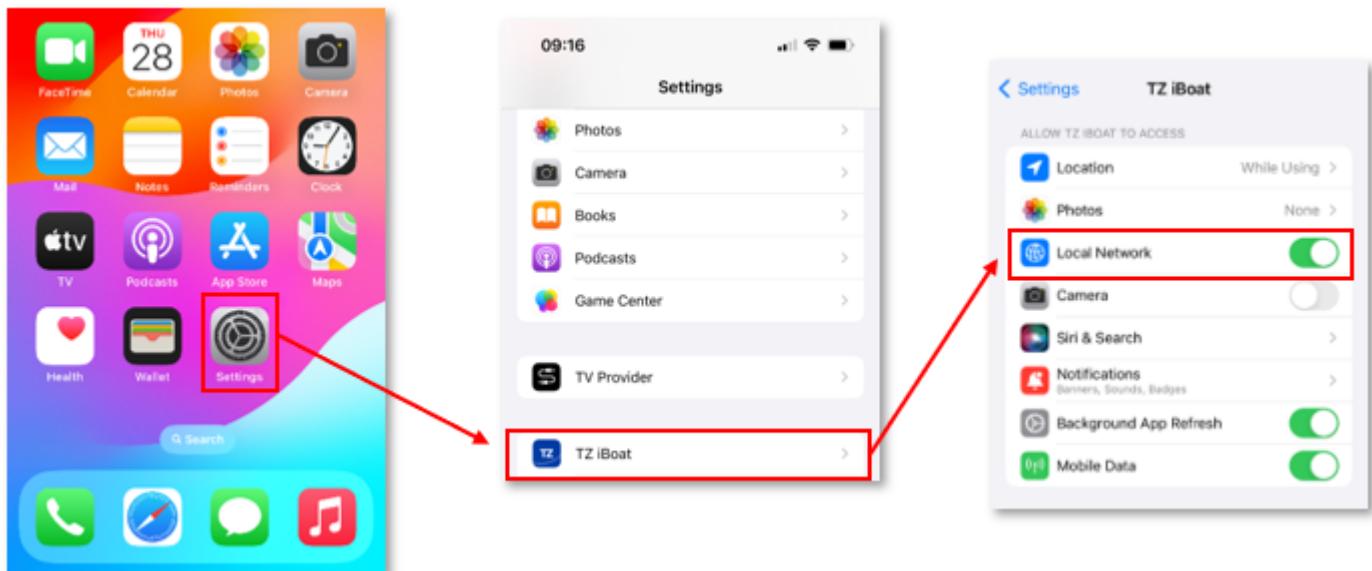
If you use the "Client Mode", you can make sure that the FCV600/800 is properly connected to the Wi-Fi network and has acquired a proper IP address from the DHCP server:



Then, make sure that your iPad or iPhone is connected to the same network.

Local Network Permission

In order to receive sounder echo from the FCV600/800, TZ iBoat needs to have access to the Local Network. Make sure that you have enabled the "Local Network" permission from the Settings App of your device:





FCV600/800 Settings

Make sure that the FCV600/800 is setup to be a "Master" from the Wireless LAN setting window of the FCV600/800. Press the MENU/ESC key on the FCV600/800, select [Network], select [Wireless LAN] and make sure that [Mode] is set to "Master".

If you receive echo in TZ iBoat but you are not able to control and change the mode of the FCV600/800, make sure to activate the "sub monitor". Press the MENU/ESC key on the FCV600/800, select [Network], select [Wireless LAN], and make sure that [Use Sub Sets] is set to "ON".

Limitation

Only one TZ iBoat can be connected to a FCV600/800. If you have two FCV600/800 and use the "SUB" function, you cannot use TZ iBoat at the same time:





Instruments Connection

Internal & Bluetooth GPS

TZ iBoat is compatible with the internal GPS that can be found in every iPhone and iPad with cellular connection. However, if you have a “Wi-Fi only” iPad (without an integrated GPS receiver), you can purchase a Bluetooth GPS (compatible with the Apple Core Location Service) to get an accurate position at sea.

IMPORTANT: Although the iPad “Wi-Fi only” models will give you an approximate location on land, you must connect an external GPS (either Bluetooth or via a [Wi-Fi NMEA Gateway](#)) in order to use TZ iBoat at sea.

External Instruments (NMEA0183)

If you prefer to use an external GPS (non-Bluetooth) or connect additional instruments (depth, AIS, wind, autopilot...), it is possible to connect a NMEA gateway to TZ iBoat that will relay NMEA0183 sentences over Wi-Fi on a single TCP or UDP port. TZ iBoat can currently decode the following NMEA0183 data over TCP or UDP:

- Position (GLL, GGA, RMC, VDO)
- Course and Speed Over Ground (RMC, VTG, VDO)
- Heading (HDG, HDM, HDT, VHW, PFECATT, VDO)
- Depth (DBT, DPT)
- Wind (MWV, MWD)
- Sea Surface Temperature (MDA, MTW)
- AIS (VDM) (*)

() AIS targets can only be displayed when the optional AIS module is purchased*

In addition, and when a TCP connection is configured, TZ iBoat has the capability to output NMEA0183 autopilot information. Please refer to the [Autopilot Connection](#) chapter for more information on how to connect an Autopilot to TZ iBoat.

NMEA Gateway Configuration

Usually, the NMEA Gateway creates its own wireless network access point. The iPhone or iPad must be set up to join this Wi-Fi network. If the NMEA Gateway is set to output NMEA 0183 sentences over Wi-Fi using the UDP protocol, you only need to enter the UDP port number in TZ iBoat. If the TCP protocol is used instead, you need to enter the TCP port number and the IP address of the Wi-Fi Gateway in TZ iBoat. If you do not need to send data back to an Autopilot, we recommend using the UDP protocol whenever possible.

The NMEA Gateway can be enabled and setup from the [Initial Setup](#) settings by clicking on “NMEA Gateway Configuration”. At the top of the NMEA Gateway configuration window, you can select the UDP or TCP protocol. When you select UDP, you just need to enter the UDP port number that the gateway is using to send NMEA data over Wi-Fi. When you select TCP, you must enter the TCP port number, but also the IP address of the NMEA Gateway:

TCP/IP

UDP

IP Address

192.168.1.1

Port Number

2000

Selected Wifi

NavLink2-0DFC

Current IP Address

192.168.1.101

Enable Pilot Output

Pause

```

In:$IIROT,0.0,A*26<cr><lf>
In:$SDVHW,,T,249.0,M,2.7,N,5.0,K*63<cr><lf>
In:
$GPRMC,215530.0,A,4403.2546,N,12611.5954,W,2.7,24
9.1,260922,5.9,E,A,S*6C<cr><lf>
In:
$SDMDA,,I,,B,0.0,C,0.0,C,,,,,69.0,T,,M,20.8,N,10.7,M*53<
cr><lf>
In:$WIMWD,69.0,T,,M,20.8,N,10.7,M*47<cr><lf>
In:$WIMWD,,T,,M,18.1,N,9.3,M*68<cr><lf>
In:$IIHDG,249.0,0.0,E,5.9,E*4A<cr><lf>
In:$IIROT,0.0,A*26<cr><lf>

```

After configuring the port number (and the IP address of the gateway in case of TCP communication), you should see NMEA data flowing on your screen.

If you do not see any data scrolling, then make sure that:

- Your device has joined the proper Wi-Fi network (usually the Wi-Fi network created by the Gateway itself). Note that TZ iBoat will display the name of the Wi-Fi network your device is currently connected to next to "Selected Wifi".
- Your device has a good IP address. If you see an IP address starting with 169.254 next to "Current IP address", it usually means that the NMEA Gateway was unable to assign an IP address to your device. Try to disconnect from the Wi-Fi network and try again.
- For TCP connection only: make sure that the IP address you configured corresponds to the IP address of the NMEA Gateway. Note that the IP address of the gateway usually ends with "1" (first device on the network). So, if your device is currently connected to the NMEA Gateway and has its "Current IP Address" set to 192.168.1.101 (like in the example above), the NMEA Gateway IP address will most likely be 192.168.1.1.
- For TCP and UDP connection: make sure that the Port Number is correct. Refer to the NMEA Gateway user guide to learn which port to configure (usually 10110, 2000 or 60001). Note that if you configure a TCP connection, you will see an indication (green square) if the port was successfully opened by TZ iBoat. This indicator is not available when configuring a UDP connection (since it is a "connectionless" protocol).

Sensor Priority, Damping and Offset

When you configure a NMEA Gateway with GPS data, it will have priority over the internal GPS of your device (when applicable). If the external GPS fails, or if the gateway is powered OFF (or disconnected), TZ iBoat will revert back automatically to the internal GPS.



When using an external GPS via a NMEA Gateway, you may find the GPS speed and/or GPS course values to change too often causing the ETA and TTG computation to vary widely. You can smooth the GPS Course and Speed over time (damp) from the [Initial Setup](#) settings under "damping". Increasing the COG & SOG Damping value will raise the COG & SOG averaging time (but will decrease the response time).

If the NMEA Gateway provides wind data, you may also damp and offset Wind Speed and Wind Direction from the same page.

Autopilot Connection (NMEA0183)

Configuration

When a route is activated, TZ iBoat can output autopilot data via a Wi-Fi NMEA Gateway using a TCP connection. Although TZ iBoat only supports the NMEA0183 protocol, if your pilot is connected via NMEA2000, most Wi-Fi to NMEA2000 gateways will support translation of NMEA0183 sentences (sent by TZ iBoat) over to NMEA2000 PGNs.

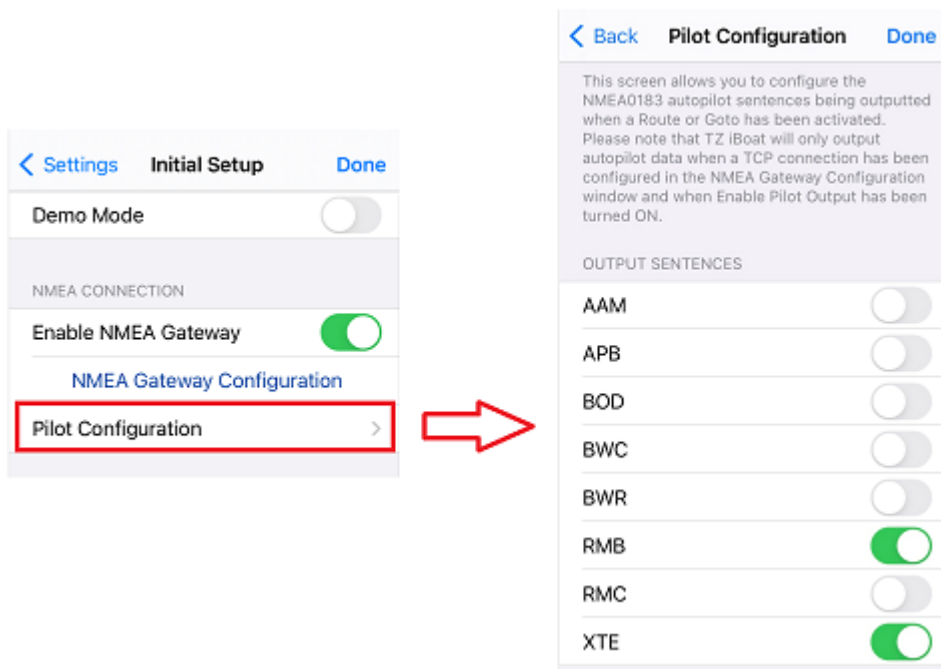
Note that data output from TZ iBoat is only supported with a TCP connection (UDP can only be used to receive data). Make sure that your Wi-Fi NMEA Gateway supports a bidirectional TCP connection in order for TZ iBoat to transmit and receive data.

To enable, the autopilot output, open the [Initial Setup](#) options, make sure to select the TCP protocol from the NMEA Gateway configuration window, and then, turn ON "Enable Pilot Output" :

TCP/IP	UDP
IP Address	192.168.1.1
Port Number	2000
Selected Wifi	NavLink2-0DFC
Current IP Address	192.168.1.101
Enable Pilot Output	<input checked="" type="checkbox"/>

For more information about how to configure a NMEA Gateway in TZ iBoat, check the [External Instruments \(NMEA0183\)](#) chapter.

By default, TZ iBoat will output the following NMEA0183 sentences when a route is activated: \$IIAAM (each time a waypoint is passed), \$IIRMB (once every second) and \$IIXTE (once every second). Those 3 sentences should satisfy most pilot configuration, but if you would like to add or remove NMEA0183 sentences, you can simply select "Pilot Configuration" from the "Initial Setup" Options:



IMPORTANT: If you use an Actisense W2K-1 to translate the NMEA0183 sentences over to NMEA2000 PGNs, it is recommended to add the "BWR" sentence to the output configuration.

Note: TZ iBoat will also output a heartbeat sentence every 5 sec. This sentence is ignored by the autopilot and is only being sent by TZ iBoat to test and maintain the TCP connection.

Using the Autopilot

Once the configuration has been done, you just need to activate a route or Goto in TZ iBoat and then enable the "NAV" mode of your pilot. The pilot will pick up the navigation data and steer your vessel following the active waypoint. Note that when a route is activated, TZ iBoat has been designed to keep running in the background, but to guarantee proper processing of the data output to the pilot, it is better to leave the App running in the foreground with "Prevent Auto-Lock" enabled from the [General](#) settings. This will prevent the device from going automatically in sleep mode and allow TZ iBoat to run continuously.

Note: TZ iBoat goes in "low power mode" automatically after 30 seconds of inactivity and reduces the frame-rate to save power consumption. But, if your device is mounted, it is recommended to connect it to a power source.

Troubleshooting

Connection Issue ("Navigation" mode does not engage on the pilot)

Check the wiring in between the Pilot and the NMEA Gateway

Make sure that you Wi-Fi gateway is properly wired to your autopilot (especially if you are using a NMEA0183 serial connection).



Check the TCP connection

Make sure that TZ iBoat can establish a TCP connection with the NMEA Gateway. Make sure that your device is connected to the Wi-Fi network of the NMEA Gateway, and that there is a green indicator next to the port number.

Check the NMEA0183 Output sentence configuration

The default configuration (AAM, RMB, and XTE) should work with most NMEA Gateway. However, some gateway may need additional sentences to be turned ON.

Test the Connection

On the NavData panel in TZ iBoat, add CTS (Course to Steer), XTE (Cross Track Error), and optionally DTW (distance to waypoint). Configure the pilot to display a "steering page" or a service page with the same information. Note that "CTS" may be referenced as "Bearing", "BPW" (bearing position to waypoint) or "BRG" on the pilot. The "DTW" may be referenced as "RNG", "Range" or "DIST".

Once you have configured the NavData panel in TZ iBoat and can also display that information on the pilot, simply activate a route or create a Goto in TZ iBoat. Look at the pilot screen and make sure that the data matches what is displayed in TZ iBoat. When you have confirmed that the data matches in TZ iBoat and on the pilot (at minimum XTE and CTS), you can perform a sea trial.

Pilot not steering properly

Check Pilot behavior in "Auto Mode"

Every pilot has an "Auto" mode which does not rely on any external Navigation information (unlike the "Nav" or "Navigation" mode which relies on cross track error and bearing to waypoint information sent by a "Navigator" such as TZ iBoat). Testing the pilot in "Auto" mode allows to validate its correct behavior in standalone mode. When engaging the "Auto" mode, the pilot simply takes a snapshot of the heading at the time the user presses the "Auto" button and it simply holds that course. If the pilot is unable to navigate a straight course in Auto mode, it will not be able to navigate a straight course in "Nav" mode either. In that case, adjust the pilot parameters until having a satisfactory "Auto" mode behavior.

Check the Heading Sensor

If the Pilot behaves correctly in "Auto" mode, but has problems following a route in "Nav" mode, then the problem is likely coming from the heading sensor. Understand that when TZ iBoat is sending a bearing to the pilot via the Course to Steer sentence (ex: "go to 273 degree"), the pilot can only rely on its own heading sensor to know where 273 degree is. If the heading sensor is not properly calibrated and sends a wrong value, then TZ iBoat and the Pilot will not agree on where 273 degree is, resulting in an erratic behavior (pilot will seem to follow an alternate course).

To troubleshoot a heading sensor and make sure it is properly calibrated, you can compare the Course Over Ground (COG value sent by the GPS) to the Heading value (HDG sent by the Heading sensor). It is easier to have the heading data configured in TZ iBoat in order to display both COG and Heading data next to each other, but, if it is not practicable (and if you can display the heading value directly on your pilot screen), you can compare manually the COG displayed in TZ iBoat with the Heading value displayed on the Pilot. Perform this comparison on a calm day (low wind, no current, no wave), and steer your boat on a straight course at 6-10Kn. In these conditions, the direction you are going (COG) should match the direction where your boat is pointing at (HDG). In other words, the Heading and COG values displayed in TZ iBoat and on the Pilot should be the same (+/- 1 degree). Repeat this process in various directions (heading North, heading South, heading East and heading West). If the heading and COG values do not match (offset more than 2-3 degrees), then the heading sensor needs to be calibrated.

Pilot not handling correctly the change of waypoint

If the Pilot “overshoots” a Waypoint, make sure that you have setup a Waypoint Switching Radius large enough in TZ iBoat to allow the pilot to start the turn before it actually reaches the Waypoint. The Waypoint Switching Radius can be adjusted from the [Routes](#) Options.

Also, make sure that the counter rudder gain (parameter of the pilot) is set up properly for your boat. This parameter varies with the “inertia” of your boat. Some pilots (like the Furuno Pilots) learn this parameter dynamically and get better after a couple of turns. This information will be found in the pilot manufacturer’s documentation.

Summary

Here what to keep in mind when configuring a pilot with TZ iBoat:

- Make sure that the pilot is correctly connected to the NMEA Gateway
- Make sure that TZ iBoat is connected to the Wi-Fi network of the Wireless Gateway
- Select the correct NMEA0183 output sentence (in most cases, AAM, RMB and XTE will work, but you may want to try to add APB and BWR if you have any issue)
- Activate a route and make sure that XTE and CTS match on TZ iBoat and on the Pilot (display these two information on the pilot and compare with the information displayed in the Route Bar on TZ iBoat)
- Make sure that the heading sensor is properly calibrated. Remember that a heading sensor that is offset by 3 or more degrees will cause the pilot to steer the boat by the same error.

TZ Navigator & Professional

If you have TZ Navigator V4.2 or TZ Professional V4.2 loaded on a PC, you can setup the software to output navigation data on the network (Position, COG/SOG, Heading, Depth, Speed, Wind, Water Temperature and AIS). This setup can be done from the connection wizard (please refer to TZ Navigator/Professional User Guide). Not only your user objects (marks, routes, boundaries) will synchronize automatically with the PC, but TZ iBoat will be able to receive all navigation data available on the PC. There is nothing to configure in TZ iBoat.

As soon as a PC running TZ Navigator or TZ Professional v4.2 is detected on the Wi-Fi network, TZ iBoat will automatically use it as a data source (position received from the PC will take priority over the position received by your device internal GPS). There are multiple options to connect your PC and mobile device (iPhone/iPad) to the same network:

- You could connect the PC and your mobile device to the same Wi-Fi NMEA Gateway or Router.
- You could enable the "Personal Hot-Spot" feature of your mobile device. In this case, your iPhone or iPad would be creating a wireless network that your computer can join.
- You could enable the "Mobile HotSpot" feature of Windows 10 to create a Wi-Fi network from your PC that your mobile device can join.

Note: For more information about our PC Navigation software solution (TZ Navigator and TZ Professional), please refer to <https://mytimezero.com/>

Furuno NavNet TZtouch 2 and TZtouch 3

The Furuno TZtouch 2 and TZtouch 3 MFDs can create their own Wireless Hot Spot. When you connect your device to a Furuno MFD Wi-Fi network, not only your user objects (marks, routes, boundaries) will synchronize automatically with the MFD, but TZ iBoat will be able to receive all navigation data available on the MFD (Position, Course, Speed, Heading, Depth, Wind, AIS).



There is nothing to configure in TZ iBoat. When an MFD is detected on the Wi-Fi network, TZ iBoat will automatically use it as a data source (position received from the MFD will take priority over the position received by your device internal GPS).



In-App Purchase and Subscriptions

Subscriptions

Chart Subscriptions

Nautical charts called "TZ Maps" can be purchased on TZ iBoat by tapping on the "TZ" button located at the top left of your screen and selecting "Store". Each TZ Map area includes Vector charts (or electronic chart) and Raster charts (digital copy of paper charts) on selected areas. Note that chart purchase is a one-year subscription that automatically starts with a 7-day trial allowing you to evaluate the data. After one year, the subscription will be renewed automatically unless auto-renew is turned off at least 24 hours before the end of the current period. Charts are continuously updated during the subscription period.

If you decide to not renew the subscription, you will not be able to download or update the chart anymore (after the subscription period ends). Downloaded charts will remain usable on your device with the latest update done during subscription period, but if you reset your device or want to use a new device, you will have to renew your subscription to be able to download the charts again.

Premium Weather Subscription

In addition to the free weather forecasts (based on the GFS model), it is possible to subscribe to a Premium Weather service that adds high resolution and local weather models as well as near real-time rain radar and marine zone forecasts (text bulletins). The premium weather can be purchased using a monthly subscription that can be cancelled at any time. To purchase the premium weather subscription, tap on the "TZ" button located at the top left of your screen and select "Store".

The premium weather service provides access to a higher resolution global model (ICON Global) and four higher resolution local models (NAM CONUS / Arpege / Arome / ICON Europe):

- The NAM CONUS offers coverage for North America at a resolution of 3 kilometers up to 2.5 days of forecast.
- The Arpege model offers European coverage at a resolution of 10 kilometers and up to 4 days of forecast.
- The Arome model offers coverage of French coasts and bordering countries at a resolution of 1 kilometer and up to 2 days of forecast.
- The ICON Global model offers a worldwide resolution at a 6 kilometers resolution (more than twice the GFS model) up to 5 days of forecast.

The premium weather service also offers access to 3 additional wave models. The Premium Weather service unlocks the following features:

Rain Radar

Unlike traditional weather forecasts that rely on models, the Rain Radar provides real observations. This data comes from an extensive network of weather radars covering a large part of the globe. The Rain Radar overlay displays active precipitation areas on your charts, almost anywhere in the world. By activating the animation with a simple click on the "play" button, you can watch the evolution of precipitation over the last three hours. This feature allows you to accurately anticipate precipitation movements, enabling you to know not only if you will be affected by the rain, but also when the skies will begin to clear.

Marine Bulletins (USA Only)

Important: Marine Bulletins are only available in the USA at this time.

Unlike model forecasts, which require personal interpretation, Marine Bulletins deliver expert interpretations directly to you. These bulletins are crafted by seasoned meteorologists from NOAA who analyze weather patterns and identify potential hazards, ensuring that you receive information that is both precise and actionable. Moreover, Marine Bulletins goes beyond weather predictions: it includes specialized sections for alerts and tropical storms, providing timely warnings that are crucial for planning and response strategies. With Marine Bulletins, you can navigate with confidence, knowing that you have the most accurate and up-to-date weather information at your disposal, analyzed by professionals to enhance your safety and decision-making on the waters.

SportFishing Ocean-O Subscription

In addition to the weather data available in the "Weather Premium" service, you will have access to new information: sea surface temperature (SST), altimetry (SSH), chlorophyll concentration, and ocean currents. To subscribe to the SportFishing Ocean-O service, press the "TZ" button located at the top left of your screen and select "Store".

The SportFishing Ocean-O service provides access to the following oceanographic forecasts:

- **Sea Surface Temperature (SST):** Identify areas where fish gather based on their thermal comfort. Detect thermal fronts, which are natural boundaries rich in marine life.
- **Chlorophyll Concentration:** Visualize phytoplankton zones, at the heart of the food chain. Large predators like tuna are often found there.
- **Altimetry (SSH - Sea Surface Height):** Locate upwelling zones, where nutrients rise from the depths, attracting fish and prey.
- **Ocean Currents:** Analyze the flows that influence fish movements and plan your trips under the best conditions.

Comparison of weather services

Service	Weather (Free)	Premium Weather (Subscription)	SportFishing Ocean-O (Subscription)
Wind	25km	1km	1km
	GFS (0.25° * 0.25°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arôme 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arôme 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)
Wind Gust	25km	1km	1km
	GFS (0.25° * 0.25°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°)

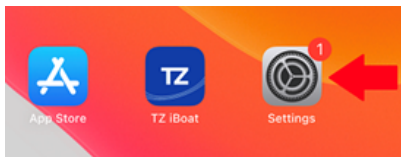


		ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)	ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)
Pressure	50km	50km	50km
	GFS (0.5° * 0.5°)	GFS 50km(0.5° * 0.5°) ICON Global 50km(0.5° * 0.5°) ICON Europe 50km(0.5° * 0.5°) Arome 50km(0.5° * 0.5°) Arpege 50km(0.5° * 0.5°) NAM CONUS 50km(0.5° * 0.5°)	GFS 50km(0.5° * 0.5°) ICON Global 50km(0.5° * 0.5°) ICON Europe 50km(0.5° * 0.5°) Arome 50km(0.5° * 0.5°) Arpege 50km(0.5° * 0.5°) NAM CONUS 50km(0.5° * 0.5°)
Air Temperature	25km	1km	1km
	GFS (0.25° * 0.25°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)
Cloud	25km	1km	1km
	GFS (0.25° * 0.25°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)
Precipitation	25km	1km	1km
	GFS (0.25° * 0.25°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°)

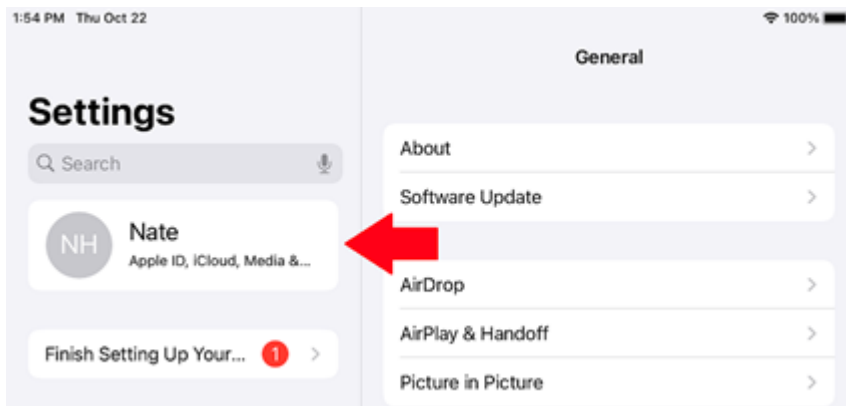
		ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)	ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)
Humidity	25km	1km	1km
	GFS (0.25° * 0.25°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)	GFS 25km(0.25° * 0.25°) ICON Global 13km(0.125° * 0.125°) ICON Europe 6km(0.062° * 0.062°) Arome 1km(0.01° * 0.01°) Arpege 10km(0.1° * 0.1°) NAM CONUS (0.3° * 0.3°)
Wave (Significant)	25km	3km	3km
	GFS (0.25° * 0.25°)	GFS 25km (0.25° * 0.25°) Copernicus Global 9km(0.083° * 0.083°) Arome 3km(0.025° * 0.025°) Arpege 10km(0.1° * 0.1°)	GFS 25km (0.25° * 0.25°) Copernicus Global 9km(0.083° * 0.083°) Arome 3km(0.025° * 0.025°) Arpege 10km(0.1° * 0.1°)
Current	8km	8km	8km
	(0.08° * 0.08°)	(0.08° * 0.08°)	(0.08° * 0.08°)
SST - Satellite	-	-	Very High Resolution: 2Km
SST - Cloud Free	-	-	Very High Resolution: 1Km
Altimetry (SSH)	-	-	High Resolution: 0.08° (8Km)
Chlorophyl	-	-	High Resolution: 0.04° (4Km)

Cancel a Subscription

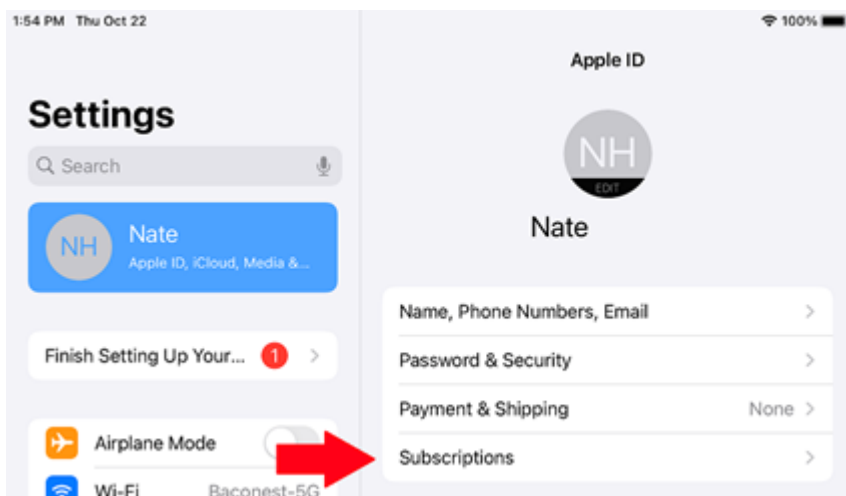
If you need to cancel a subscription (charts or premium weather), you can do so from your device's Settings App. Press the “Home” button and open the Settings App:



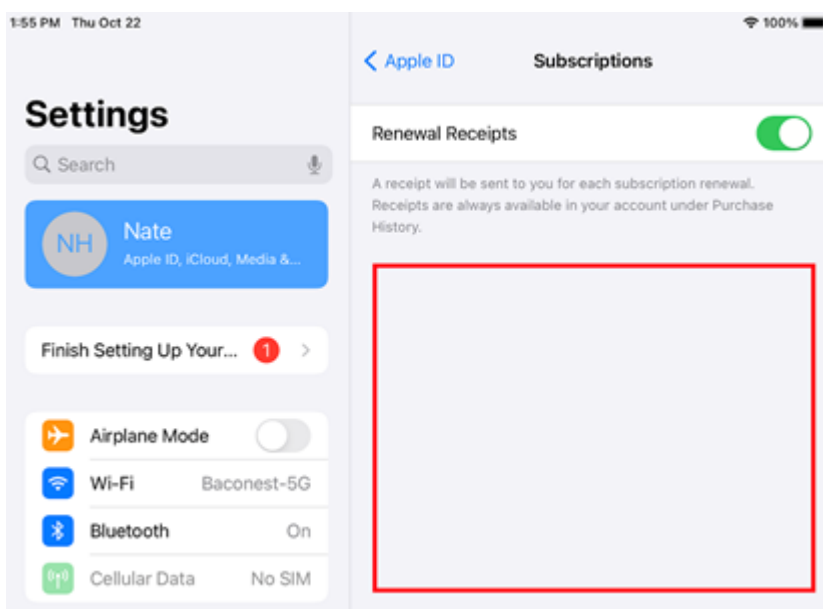
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Note that you will still be able to use the service (chart update or premium weather) until the end of the original subscription period.

Purchases (modules)

TZ iBoat offers three modules: AIS, Radar and the FishFinder (Furuno FCV600/800). These modules are a “one shot” purchase that unlocks specific features in TZ iBoat.

AIS Module

The AIS Module allows to connect TZ iBoat to an AIS Receiver (purchased separately) via Wi-Fi (through a UDP or TCP port). TZ iBoat is compatible with the NMEA0183 protocol (VDM sentences) that is outputted by most AIS receiver. Please refer to the [External Instruments \(NMEA0183\)](#) chapter for more information. TZ iBoat can also display real-time AIS targets over Wi-Fi (NMEA 0183 compatible) and share them with the community.

Radar Module

The Radar Module allows to connect TZ iBoat to a Furuno 1st Watch (DRS4W) Wireless Radar (purchased separately) and display the radar echo directly over the chart (radar overlay). Please refer to the [Furuno 1st Watch](#) chapter for more information.

FCV600/800 Module:

The FCV600/800 module allows to connect TZ iBoat to the [FURUNO “FCV600” or “FCV800”](#) wireless fish finder via Wi-Fi, then make the most of your FishFinder through your iPhone or iPad.

Refund Charges

TZ iBoat does not have the ability to process refunds since all purchases are made through the App Store. To request a refund through Apple, follow the steps below:

1. Go to <https://reportaproblem.apple.com>
2. Login with your Apple ID.
3. Find your TZ iBoat purchase in the list.
4. Click on Report a Problem to request a refund.
5. In the "Choose Problem" drop down, select "Didn't mean to purchase this item"

Apple should process the refund within 48 hours.

Settings

General

Function Gesture: You can set and customize a function gesture that will be triggered when you press and hold two fingers on the screen for 1 second. Functions that can be triggered are Camera (taking or selecting a picture from your library to create a Photo at the current location), Screen Capture (taking a screenshot used to create a Photo at the current location), Event (that will display the Event window to record a Mark at the current location), or MOB Alarm (to trigger the Man Overboard alarm).

Boat Length: Set your vessel length. This information is used to display the boat icon in real scale when zoomed in far enough on the chart.

Boat Width: Set your vessel width. This information is used to display the boat icon in real scale when zoomed in far enough on the chart and by the Route Assist algorithm (to make sure your boat fits in narrow channels).

Boat Height: Set your vessel height. This information is used by the Route Assist algorithm to make sure the clearance under bridges is respected when building an assisted route.

Size of Static Icon: Adjusts the size of the boat icon. Note that if you zoom to a very small range, the vessel icon size will be displayed at its real scale (size) on the chart according to the "Boat Length" parameter.

Prevent Auto-Lock: When enabled, this setting prevents your device from going into sleep mode while TZ iBoat is open. It is useful when your device is mounted on your dash and when you want to have TZ iBoat always turned ON.

Trip Bar

Data 1: Set the first data displayed at the bottom of the screen when the Navigation mode is selected (when recording a Trip).

Data 2: Set the second data displayed at the bottom of the screen when the Navigation mode is selected (when recording a Trip).

Data 3: Set the third data displayed at the bottom of the screen when the Navigation mode is selected (when recording a Trip).

Ship & Trail

Own Ship

COG/SOG Predictor: Selects if the Course Over Ground (COG) predictor varies in length according to speed or is fixed by a distance value.

COG/SOG Predictor Length: Adjusts the Course Over Ground (COG) predictor length when set for distance.

COG/SOG Predictor Time: Increases the time value to make the Course Over Ground (COG) & Speed Over Ground (SOG) predictor line longer. Decreases the time value to make the predictor lines smaller.

Trail

Own Ship Trail Duration: Adjusts the length of the trail (in time) displayed on the chart.

Note: The trail interval is fixed to one second (for maximum accuracy) and it cannot be changed.

Trail Thickness: Adjusts the thickness of the trail.

Alarms

Anchor Watch

Anchor Watch Alarm: Enable the anchor watch alarm. Please refer to the [Anchor Watch](#) chapter for more information.

Alarm Radius: Adjust the radius of the Anchor Watch Alarm

Position Averaging: Allows to average the position used to trigger the Anchor Watch over a specific period of time. This can be useful to avoid false alarms that are due to GPS inaccuracies in poor reception areas. Note that using position averaging may delay the Anchor Watch alarm.

Alarms

Position Lost Alarm: Triggers an alarm when the GPS position is lost.

Route XTE Alarm: Triggers an alarm when a Goto or Route is activated and when the GPS goes outside the Route Cross Track Error corridor (XTE) represented on the chart by a red and green dashed line around the route. Note that the XTE value (corridor width) is adjusted from the [Routes](#) settings.

Depth Alarm: Triggers an alarm when the vessel enters areas shallower than the designated depth value. This alarm only works when a depth sounder is connected to TZ iBoat using a NMEA gateway.

Wind Speed Alarm: Triggers an alarm when the wind speed goes over the designated speed value. This alarm only works when a wind sensor is connected to TZ iBoat using a NMEA gateway.

Low Battery Alarm: Triggers an alarm when your device's battery falls below 10%.

Target

IMPORTANT: The AIS Module needs to be purchased to be able to connect TZ iBoat to an AIS receiver or AIS transceiver and access the target alarms. To purchase the AIS module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

CPA/TCPA Alarm: Triggers and alarm when both the CPA and TCPA values of a target fall below the designated values.

AIS Proximity Alarm: Triggers an alarm when an AIS target becomes closer to the designated distance.

Ignore Slow Target Alarms: Ignore both CPA/TCPA and Proximity alarms if a target is slower than the designated value. This avoids triggering false alarms from targets that are moored or not moving.



Sound

Warning and Alarms Sound: When enabled, all warning and alarm will trigger a sound using the device's "alert volume". Please refer to the [Alarm Sound](#) chapter for more information.

Enunciate Alarm: When enabled, the name of the alarm will be spoken in the device's language just after the alarm sound using the device's "media volume".

Chart Zones

Vector Chart Zone Warning: Selects the type of Chart Areas that will cause a warning when your vessel enters in the area. For more information, please refer to the [Smart Zone](#) chapter.

Routes

Route Icon Position: Selects if the collapsed route icons are located at the first or last waypoint of the route. In TZ iBoat, routes that are not selected automatically collapse to unclutter your screen.

Route Label: Enabling this setting will display the route name just below the route icon (when they are collapsed).

Route Color: Sets the default route color when creating a route. Note that route color can be changed individually after they have been created by tapping on any route and selecting the color from the Pop-Up menu.

Route Thickness: Adjusts the thickness of the selected and active route.

Route Auto-Zoom: when this option is enabled, TZ iBoat will automatically adjust the zoom level when a new waypoint is activated along a route. TZ iBoat will either zoom in or zoom out to show the current position and the next waypoint on screen when switching to a new waypoint.

Note: The Route Auto Zoom will only work if the boat is displayed on the screen (TZ iBoat will not attempt to adjust the zoom level if you are panning on another area).

Waypoint Switching Mode: this setting determines how TZ iBoat switches to the next waypoint automatically when navigating on a route:

1. Circle: in this mode, the next waypoint is automatically switched when your boat icon enters the active waypoint's switching circle.
2. Cross Line (also known as "perpendicular"): in this mode, the next waypoint is automatically switched when your boat crosses an imaginary line that is perpendicular to the current active leg and goes through the waypoint.
3. Circle and Cross line: in this mode, the next waypoint is automatically switched if it enters the switching circle or crosses the line.

Switching Circle Radius: this option sets the radius of the switching circle around the active waypoint.

Intelligent Route Waypoint Centering: when this option is checked, the chart will automatically pan when a route is being built.

Display XTE Lines: when this option is checked, a red and green dash line (respectively port and starboard) will appear on each side of the active leg (when a route is activated).

XTE Value: this setting sets the default value of the route cross track error (used for displaying the XTE lines).

Planning Route Speed: Set the speed that is used when creating a route to compute the Time To Arrival (TTA) displayed in the Route Header (at the top of your screen). Note that when the route is activated, the speed used to compute Time to Go (TTG) and Estimated Time of Arrival (ETA) switches automatically to your real time speed (from your GPS).

Route Assist

Safety Depth: set the safety depth value that is used by the Route Assist algorithm.

Strict Depth Compliance: select this option if you want Route Assist to strictly respect the safety depth.

Use Vector Charts Recommended Route: select this option if you want Route Assist to follow the recommended routes that are provided by the hydrographic offices and included in the charts "crowd-sourced recommended routes" come from user-contributed data.

Use Crowd Source Recommended Route: select this option if you want Route Assist to follow the recommended routes that come from user-contributed data.

Delete All User Objects: Press this button to delete all your user objects (marks, routes, photos, catches and boundaries).

Marks

Mark Label: Enabling this setting will display the marks name just below their icons.

Default Mark Symbol: changes the default mark icon used when creating a mark. Note that marks icon can be changed individually after they have been created by tapping on any mark and selecting the icon from the Pop-Up menu.

Default Mark Color: changes the default mark color used when creating a mark. Note that marks color can be changed individually after they have been created by tapping on any mark and selecting the color from the Pop-Up menu.

Mark Size: Adjusts the size of all marks displayed on screen.

Delete All User Objects: Press this button to delete all your user objects (marks, routes, photos, catches and boundaries).

Plotter

Day/Night Mode: Adjusts the screen's brightness and vector chart color palette (for night or day). When set to Automatic, TZ iBoat will automatically switch modes according to your local sunset and sunrise time. Note that for quicker access, you can also change the mode directly under the Layers button.

Grid Interval: Indicates the grid interval (ranges from very low to very high) that can be turned ON and OFF from the "Layer" menu when selecting "Grid" overlay.

Zoom on Center: Automatically adjusts the zoom level when tapping on the "GPS" button and when changing mode (when switching from North Up to Head Up).

Head Up in 3D: Automatically tilt the screen in 3D (perspective) when the Head Up mode is selected

Navigate in Head Up: Automatically select the Head Up mode when creating a Goto or activating a route. If you prefer to navigate using the North Up mode, disable this setting.

Depth Shading Display

Depth Shading Transparency: Adjusts the depth shading overlay transparency.

Depth Color Shade: Selects the color palette used for the depth shading overlay.

BathyVision

Display Master Contours: Enables or disables displaying the master contour lines on the chart when TZ BathyVision is selected.

Transparencies

PhotoFusion Transparency: Manipulates the overall intensity of PhotoFusion transparency on water (ranges from 0-80)

PhotoFusion Offset: Offsets the depth at which the PhotoFusion will start. This setting is useful in area with large tides.

Weather Transparency: Adjusts the weather transparency when it is displayed in color.

Past Trips Transparency: Adjusts the historical trips transparency on the chart (when Trips are enabled from the layer button).

Community Maps

Display Community Tags: Enables or disables the tag (icons) displayed above TZ Maps community object.

Highlight new object: When enabled, community objects that are newly created or modified will be highlighted on the chart.

Display Proximity Pop-up: When enabled, and when your vessel comes near a community object, a pop-up window will appear asking you to rate this object.

3D Display

3D Alti Exaggeration: Determines the exaggeration of land altitudes displayed while in 3D mode.

Terrain Shading Opacity: Determines the strength of the terrain shading (also known as hill shading) when TZ Maps BathyVision or when the Depth Shading overlay is enabled.

Enable Terrain Shading: Uncheck this option if you do not wish to display terrain shading on the chart.

Vector Chart

The Vector Charts options allow users to configure common settings related to the Vector Chart display. Please refer to the [Adjusting Vector Chart display](#) chapter for a more detailed explanation

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

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

Land Features: Selects which source is used to display objects on land.

Chart Object Size: Adjusts the size of the vector charts object icons (buoys, wrecks...) and text displayed on the screen.

Shallow/Safety/Deep Contour: These parameters are used to color the various depth area of the Vector Chart. The transition between colors is based upon the depth contour lines of the vector chart. Note that if there is no contour line available on the vector chart corresponding to the exact value you selected, the color transition will occur at the next deepest (safer) contour line available.

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).

Weather

Connection Mode: When the connection mode is set to “Online” the weather is streamed directly to your device. This mode is very convenient (you can look at any area and see the weather immediately), but it requires an Internet connection. If you plan to be in an area without Internet connection, you should switch the mode to “Offline” and then download a specific area by clicking on the “Download Offline Weather” button just below.

Global Wave Model (premium weather subscription only): Selects the wave model used for weather.

Display

Wind Particles Trail: Adjusts how long the particles animation are.

Color Shading Palette: Sets the appearance of the weather color palette (when a weather parameter is displayed in color). When set to “Continuous”, the transition in between colors is “smooth” (using a perfect gradient). When set to “Low” the color palette will use discrete colors that may better highlight variation in the underlying data.

Weather Download

Download Method: Set to “By Iridium” when you have an Iridium Go device. Leave it to “Direct Download” when you want to access the Weather server using a regular Internet connection. When you enable the Iridium Go download, new settings appear to enter your Iridium Go username and password.

Radar

IMPORTANT: The Radar Module needs to be purchased to be able to connect TZ iBoat to the Furuno DRS4W 1st Watch Radar and access the Radar settings. To purchase the Radar module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

Auto Rain: Sets the Radar Auto Rain mode ON or OFF

Rain Adjust: When the Auto Rain mode is set to OFF, this slider allows you to adjust the Auto Rain filter

Echo Color: Adjust the color of the Radar Overlay

- Multicolor 1: Red for strong echo / Yellow for medium echo / Dark Green for weak echo
- Green: Monochromatic Green with variable transparency according to echo level
- Yellow: Monochromatic Yellow with variable transparency according to echo level

Radar Overlay Transparency: Adjust the radar overlay transparency on the chart.

Radar Info: When a radar is connected, TZ iBoat retrieves all information concerning the type of radar and displays its model, IP address and firmware version, as well as its status.

Device Info: Gives the Wi-Fi name and the current IP Address.

Note: make sure TZ iBoat has a local network permission enabled to communicate with the Radar.

Targets

IMPORTANT: The AIS Module needs to be purchased to be able to connect TZ iBoat to an AIS receiver or AIS transceiver and access the targets settings. To purchase the AIS module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

Display Target ID: Check this option to display target name on the chart below the target icons.

Target COG/SOG Predictor: Selects if the Course Over Ground (COG) predictor varies in length according to speed or is fixed by a distance value.

COG/SOG Predictor Length: Adjusts the Course Over Ground (COG) predictor length when set for distance.

COG/SOG Predictor Time: Increases the time value to make the Course Over Ground (COG) & Speed Over Ground (SOG) predictor line longer. Decreases the time value to make the predictor lines smaller.

Display CPA/TCPA vector on selected Targets: Enables or disables the CPA/TCPA vector line on selected targets displayed on the chart.

Display CPA/TCPA vector on dangerous Targets: Enables or disables the CPA/TCPA vector line on all dangerous targets displayed on the chart.

Fish Finder

IMPORTANT: The Sounder Module needs to be purchased to be able to connect TZ iBoat to the Furuno FCV600 or FCV800 fish finder. To purchase the Sounder module, click on the “TZ” button located on the top left of your screen, select “Store” and then “Modules”.

Day Background Color: Adjusts the color palette of the Fish Finder in day mode.

Night Background Color: Adjusts the color palette of the Fish Finder in night mode.

Echo Color Level: Displays the Fish Finder echo in 8, 16 or 64 colors.

Color Erase: The color erase allows you to get rid of weak echo on screen. This can help reduce clutter coming from sediment or plankton.

A-Scope Peak Hold: This option allows you to hold the echo return in the A-Scope for a couple of seconds.

Shift: This option adjusts the Sounder Range "offset". When the sea-floor depth exceeds a practical maximum setting, increasing the Range causes the Sounder echo to become too small to view clearly. The Shift function allows to narrow the echo to only a portion of the water column.

Interference Rejection: This setting allows to get rid of interference coming from electrical noise or from other sounders.

Clutter: Increase this setting to remove low intensity “spots” of noise that can appear all over the screen when sediment in the water or noise are picked up by the sounder.

Auto Gain Offset

Gain Offset: This setting allows to strengthen or weaken the gain that is used in auto mode.

ACCU-Fish

ACCU-Fish Symbols: Selects the symbol that are used for the ACCU-Fish function.

Fish Finder Info

Display various information that are useful for troubleshooting.

Units

The Units settings allow you to setup the units that you want to use for various data displayed on screen. Simply select the corresponding unit you would like to use for each data.

Initial Setup

Demo Mode: When enabled, the boat can be moved anywhere on the chart (tap anywhere and select "Move Boat" from the Pop-Up menu). If you activate a route, the boat will follow the route.

NMEA Connection

Enable NMEA Gateway: Enable the connection to a Wireless NMEA Gateway.

NMEA Gateway Configuration: Press this button to configure a the NMEA Gateway parameters. Please refer to the [External Instruments \(NMEA0183\)](#) chapter for more information.

Pilot Configuration: Press this button to access the advanced settings of the autopilot configuration. Note that the Pilot Output must be enabled first under the NMEA Gateway configuration window. Please refer to the [Autopilot Connection](#) chapter for more information.

NavData Maximum Depth: Used to adjust the maximum scale of the depth NavData when displayed using graphic gauge.

Depth Display: Users can choose to display the depth below the waterline or below keel. This requires the user to enter proper values for "Keel Draft" and "Transducer Draft"

Transducer Draft Source: When set to "automatic", TZ iBoat will try to use the offset sent by the depth sounder (inside the NMEA0183 sentence) and revert to the offset set below if it is missing. When set to "hardware", TZ iBoat will only use the offset received by the sounder (causing lack of data if the sounder is not sending the proper offset). When set to "manual", TZ iBoat will only use the offset set below:

Keel Draft: The value for "Keel Draft" is also a positive value (enter the distance in between the water line and the bottom of the Keel).

Transducer Draft: The value for "Transducer Draft" is always a positive value (enter the distance in between the water line and the position of the transducer).



Damping

COG & SOG Damping: This setting can be useful when the GPS sends unreliable COG value (a COG that “jumps all over the place”) to smooth the value in TZ iBoat. Increasing this value will raise the COG & SOG averaging time (but will decrease the response time).

Wind Speed/Direction Damping: This setting smooths the wind data. Increasing this value will raise the Wind averaging time (but will decrease the response time).

Offset

Wind Speed / Direction Offsets: These settings allow to introduce various offset in the wind data received by TZ iBoat.

Sea Surface Temperature Offset: This setting allows you to introduce an offset in the SST received by TZ iBoat.

Internal GPS Info: Displays some internal GPS information as well as the Authorization status.

About

Displays the license agreement, user objects statistics and the version of the App.



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The Application utilizes digital chart data and electronic information from the various marine electronic instrumentations on-board the vessel. You shall comply with and take into consideration the following Nobeltec warning.

Nautical navigation, including but not limited to navigation with 3-dimensional views of the ocean and land elevation topography, is an inherently dangerous undertaking and should only be engaged in by persons trained and experienced in nautical navigation. This application is intended for use only by persons trained in nautical navigation and only as a navigational aid, not as the sole method of navigation.

The navigation data are auxiliary means for navigation and can in no way replace the end user's navigating experience and diligence.

To the extent You have acquired a "one off" license to use the navigation data, You acknowledge that such data are changing rapidly, and that nautical navigation undertaken with the aid of such data increases the inherent danger of such navigation. The data may not contain all nautical navigation data existing worldwide and You should make no assumption otherwise.

Unless otherwise clearly stated, the navigation data should only be used as an aid to navigation. The data is designed to facilitate the use of official government charts, not to replace them. Only official government charts and notices to mariners contain the current information needed for safe navigation.

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The Application may utilize digital chart data containing Marine Zone or Protected Area ("MLPA"). The purpose of the MLPA feature is to help interpret forbidden or protected areas. The zones and designated area boundaries are indicative only. Whilst every care has been taken to illustrate zone and designated area boundaries as accurately as possible, users must refer to the local authorities for precise zone and boundary descriptions. Whilst every care is taken to ensure the accuracy of this product, Nobeltec makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose. By using the MLPA feature, You release and waive any claim against Nobeltec Inc. and Signet S.A.S.

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12. EXPORT COMPLIANCE.

You shall be responsible for Your compliance with any applicable export control restrictions, laws and regulations as may be modified from time to time, imposed by the governments of the U.S. and, if applicable, other countries. You shall not attempt to, or knowingly export or re-export the Application covered under this Agreement to any country, or national thereof, prohibited from obtaining such Application, either directly or indirectly. You shall, at Your sole cost and expense, obtain and maintain in effect all permits, licenses and other consents necessary to conduct Your respective activities hereunder.

13. COLLECTION OF INFORMATION.

Nobeltec may collect information relating to how often You use the Application or the frequency with which certain features of the Application are used. This information, if collected, will be collected anonymously, in a way that does not personally identify You. Nobeltec may use this information to detect broad user trends and to otherwise enhance our applications.

Use of Location-based Services

Nobeltec may provide certain features or services (e.g., Friends, Weather) that rely upon GPS information (when available) (the "Services"). To provide the Services when available, Nobeltec must collect, use, transmit, process and maintain Your location data, including but not limited to the geographic location of Your device and information related to Your MyTIMEZERO account ("Account") and any devices registered thereunder, including but not limited to Your Serial Number, device ID, device name, and device type.

You may withdraw consent to Nobeltec's collection, use, transmission, processing and maintenance of location and Account data at any time by not using the location-based features and turning off the services from the Application. Any location data provided by the Services is not intended to be relied upon in situations where precise location information is needed or where erroneous, inaccurate, time-delayed or incomplete location data may lead to death, personal injury, property or environmental damage. Nobeltec shall use reasonable skill and due care in providing the Services, but Nobeltec does not guaranty the availability, accuracy, completeness, reliability, or timeliness of location data or any other data displayed by the Services. The Services are not intended or suitable for use as an emergency locator system.

Backup

The Services may create automatic backups of Your navigation data (route, waypoints, etc.), when the Application is launched and connected to the Internet. The Application will store Your last backups on Your MyTIMEZERO dedicated private cloud storage account; however, if a device has not backed up to MyTIMEZERO for a period of one hundred and eighty (180) days, Nobeltec reserves the right to delete the backups associated with that device. Nobeltec shall use reasonable skill and due care in providing the Services, but, to the greatest extent permissible by applicable law, Nobeltec does not guarantee or warrant that any content You may store or access through the Services will not be subject to inadvertent damage, corruption, loss, or removal in accordance with the terms of this Agreement, and Nobeltec shall not be responsible should such damage, corruption, loss, or removal occur. It is Your responsibility to maintain appropriate alternate backup of Your information and data.



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14. ASSIGNMENT.

Nobeltec may assign and transfer all its rights and obligations under the Agreement to any third party.

15. GOVERNING LAW AND MANDATORY ARBITRATION.

This Agreement will be governed by the laws of the State of Oregon, without giving effect to its conflicts of rules provisions. Any dispute relating to this Agreement that cannot be resolved by the parties must be resolved exclusively as provided in this Section. The parties will first endeavor to settle any dispute in an amicable manner before resorting to arbitration. Any unresolved dispute will be settled by arbitration administered by the "Arbitration Service of Portland, Inc." in accordance with its Commercial Arbitration Rules. Arbitration will be conducted in Portland, Oregon. One arbitrator will hear the dispute. The arbitrator must have a minimum of five years' experience as a state or federal judge, ten years as a lawyer or an accountant, or any alternate qualifications that the Parties agree upon. Nobeltec will advance to You Your portion of the arbitrator's fee and the administrative costs of the arbitration. However, if the arbitrator finds the claim to be frivolous, You will reimburse Nobeltec for your portion of the arbitrator's fee and administrative costs. Neither party may institute any court proceedings concerning any dispute. The dispute resolution procedure of this Section 15 is the sole remedy, unless otherwise provided elsewhere in this Agreement, for resolving disputes. Notwithstanding the foregoing, the parties may initiate court proceedings to enforce any arbitration award between the parties or for claims for equitable relief in the state and federal courts located in Portland, Oregon, and each party irrevocably consents to the jurisdiction of the state and federal courts located in Portland, Oregon and waives any objection that that venue is an inconvenient forum.

16. ENTIRE AGREEMENT.

This Agreement contains the entire understanding of the parties hereto relating to the subject matter hereof. No waiver or modification of any of the terms hereof by You shall be valid unless agreed to by Nobeltec in writing and signed by Nobeltec and You. No waiver of any breach shall be deemed a waiver of any subsequent breach. If any provision of this Agreement is held to be invalid or unenforceable, the remaining provisions shall not be affected.

17. AMENDMENTS.

Nobeltec reserves the right to change or modify any of the terms and conditions of this Agreement at any time without notice to You. Any changes or modifications to the terms and conditions will be effective on the date the change or modification is made, and will be provided to You with the next Application update for Your acceptance prior to downloading, installing, accessing or using the updated Application.

18. GENERAL.

Failure or neglect by either party to enforce at any time any of the provisions of this Agreement shall not be construed or deemed to be a waiver of that party's rights under this Agreement

If You have any questions concerning this Agreement, including warranty service, You should contact: 16100 NW Cornell Rd., Suite 200, Beaverton, OR 97006 (USA).

You hereby acknowledge that You have read this Agreement, understand it, and agree to be bound by its terms and conditions. You further agree that it is the complete and exclusive statement of the agreement between You and Nobeltec, which supersedes any proposal or prior agreement, oral or written and any other communications between You and Nobeltec relating to the subject matter of this Agreement.

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