

Bulletin New features - TimeZero PRO v5

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Native 64-bits

TIMEZERO v5 is now compatible with 64-bit systems, providing it with significant advantages. First, it enables efficient utilization of RAM, ensuring optimal performance. Additionally, it fully leverages modern 64-bit architecture processors, thereby accelerating the execution of complex tasks. Finally, this update ensures quicker and smoother operations. However, it's important to note that this advancement comes at the cost of compatibility with 32-bit systems.

Improved Licensing Protection

With the new version, TIMEZERO v5 moves from the previous software protection system, which relied on external Crypkey technology, to our proprietary protection system. This new system will provide us with a more robust and, above all, more stable protection mechanism. Many token losses and activation problems were linked to the instability of the Crypkey system.

New TZ Maps Features

- Community Maps
- Smart Zone
- > Dynamic Lights
- Dynamic Moorings
- Smart Search
- > TZ BathyVision

(See special bulletin on TZ MAPS features)

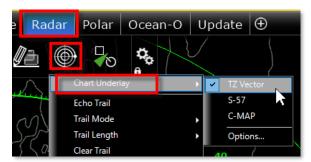


New Radar Chart Underlay mode

A new Chart Underlay mode is available in the Radar workspace. This mode displays a simplified chart underneath the radar echo to provide an image similar to traditional radar.

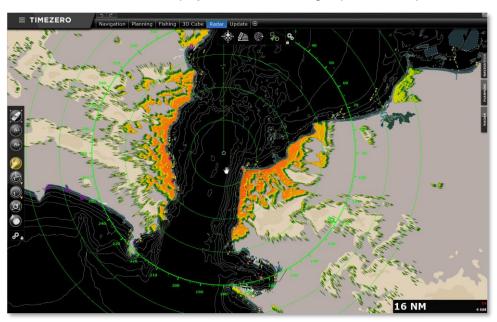
Radar Underlay display

To enable Chart Underlay, select the Radar workspace, click the Radar button on the ribbon, select Chart Underlay and select the chart to display from the currently installed vector chart types:

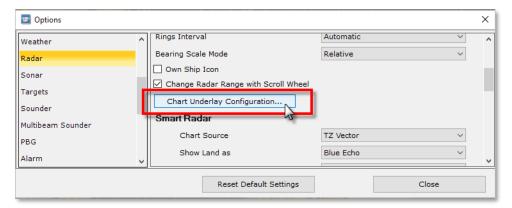


Note: only vector charts can be underlayed

When activated, TIMEZERO displays vector charts using a specific chart preset dedicated to radar display:

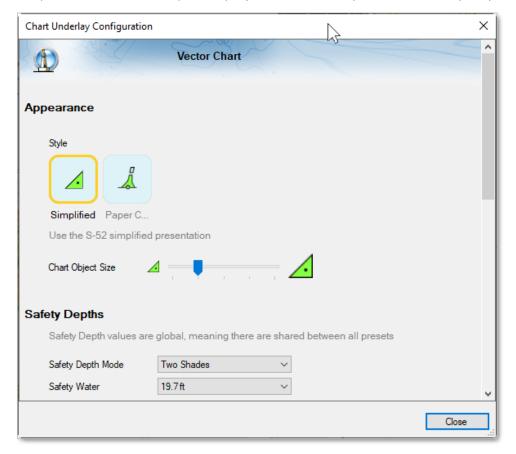


You can configure this specific Vector Chart preset of the Radar Chart Underlay by pressing "Chart Underlay Configuration..." button from the "Radar" Options:

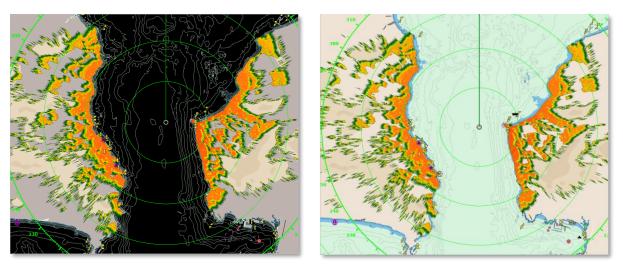




The "Chart Underlay Configuration" dialog box offers exactly the same parameters as the "Vector Chart" options, with the exception of the selection of presets (only one is authorized), the color theme (fixed) and the land elements (deactivated):



By default, vector objects are displayed as lightly as possible to avoid overloading the screen and masking radar echoes:



Note: The color theme automatically switches between the night mode color theme for black and dark blue radar backgrounds and the 'Official S52' color theme for white radar backgrounds.

Tip: You can temporarily hide the chart by holding down CTRL + Space.

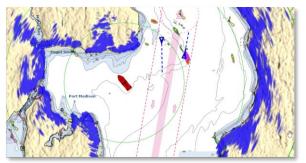


New Smart Radar mode

The Smart Radar mode uses vector chart information and AIS to discriminate radar echoes, allowing you to focus on "unknown objects" to improve situational awareness.

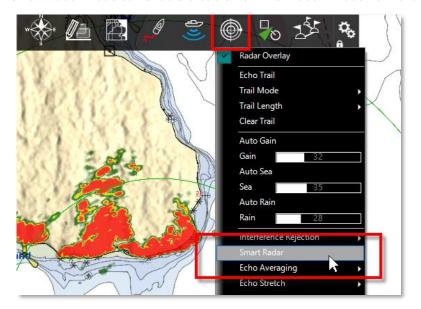
The aim is to improve the discrimination of radar echoes generated by uncharted or unknown objects (targets, uncharted obstructions...) by attenuating or masking (for land) radar echoes caused by land, floating buoys/beacons for example.

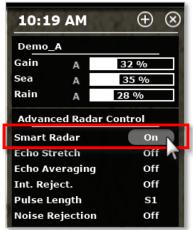




Smart Radar Display

Smart Radar mode can enable/disable from the "Radar" Ribbon or Advanced Radar Control NavData





Smart Radar Options

The radar display can be set from the Smart Radar section of the RADAR options:

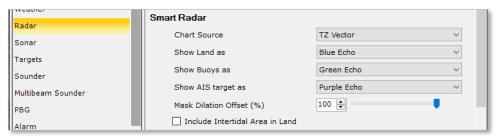


Chart Source

The chart source that will be used to analyze the radar echoes, can be selected from among the vector charts already installed in your TIMEZERO. To do this, select the type of chart from the "Chart Source" drop-down menu:

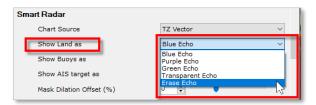




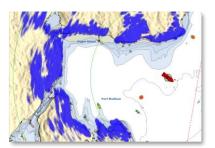
Land Display

To accentuate the distinction between land areas and other objects, you can change the color of the echoes corresponding to the land areas.

From the "Show Land as" drop-down menu, select the representation of the radar echoes on the land areas from the following choices: Blue, Purple, Green, Transparent or Erase:



Blue Echo



Transparent Echo

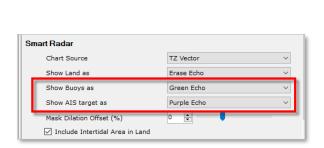


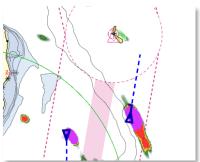
Erase Echo



Buoys & AIS Display

To clearly identify echoes from buoys or AIS targets, it is possible to customize the associated color. Select the color to be applied, Blue, Purple, Green or Transparent Echo from the corresponding drop-down menu:





Mask Dilatation

When the Smart Radar mode is enabled, TIMEZERO generates a "mask" that covers land areas, buoys and AIS targets, which is dilated to take into account the inaccuracy of the radar (the echo is always larger than the underlying object).

This dilation varies according to the radar's range. You can adjust this dilation according to the size of your radar antenna from -50% to 100% using the Mask Dilatation Offset slider:



Note: with a large radar antenna, it is recommended to reduce the Mask Dilation, and inversely to increase it for a small dome.



Intertidal area in Land

By default, the Intertidal Area is included in the "Land" Mask.

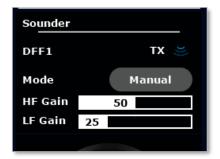


Note: Smart Radar is exclusive with Target Analyzer. When target Analyzer is enabled (either locally or remotely by another TZ/MFD on the LAN), the Smart Radar is de-activated automatically.

Sounder Control NavData

A new "Sounder Control" NavData can now be added from the NavData sidebar.

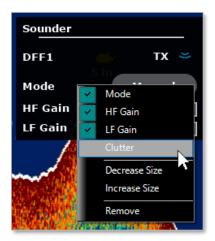




The Sounder Control NavData gives access to basic Sounder Control functions:

- Standby/Transmit switch.
- Button mode: to switch between Manual, Fishing or Cruising mode.
- HF/LF Gain control (Only for Manual mode)

Advanced users can also add Clutter control by right clicking the Sounder NavData



New SeaLevel Network IO compatibility

TimeZero can now be connected to a SeaLevel 110 or SeaLevel 120 Ethernet (4 Inputs / 4 Relay Outputs Digital Interface Adapter). This allows TimeZero to control external devices and/or allows TimeZero to react to external inputs:

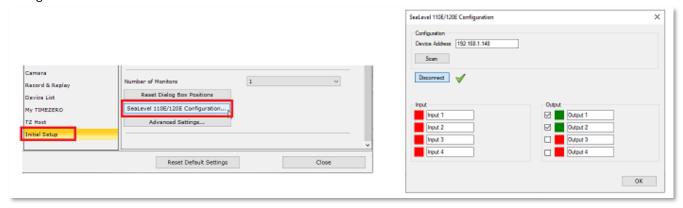




Configuration

The first step is to assign an IP address to the SeaLevel Network IO by following SeaLevel's instructions. Make sure to fix an IP address that is on the same subnet as the computer. After setting the IP address, it is recommended to ping the SeaLevel IP address to make sure the network is properly set up and that there is a good connection in between the computer and the SeaLevel Network IO.

To configure the SeaLevel Network IO in TimeZero, open the Initial Setup Options and click on the "SeaLevel 110E/120E Configuration" button:



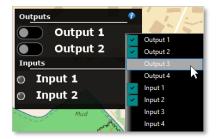
You can either manually enter the IP address of the SeaLevel Network IO, or press the "Scan" button. Then, press on the "Connect" button to connect TimeZero to the SeaLevel Network IO. Once the connection has been established, you will be able to monitor the relay and digital input status (red or green squares), but also test the relay output from the configuration window by using the checkboxes. You can also set up nicknames to both the inputs and outputs (nicknames will be displayed in the NavData).

SeaLevel IO NavData

It is possible to control the SeaLevel I/O directly from the "SeaLevel" IO NavData:



You can right click on this NavData to select which Output(s)/Input(s) you want to display and control.

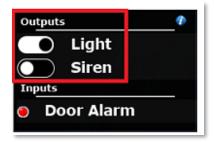




Outputs Control

NavData

It is possible to control the output (turn the relays ON or OFF) directly from the SeaLevel IO NavData:

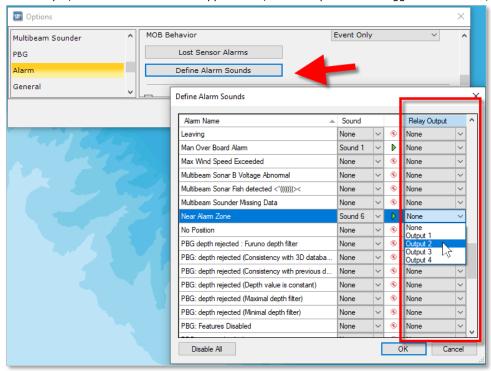


Relay Output Alarm

Relay outputs can be controlled from the Alarm Sounds Manager.

Select the action that will trigger the output from the list of alarms, then from the dialog it is also possible to select a relay to activate.

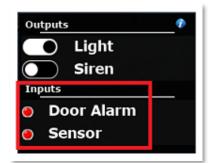
For example, when an alarm zone is approached, it will be possible to trigger a sound and/or a relay output.:



Input Control

NavData

It is possible to monitor the input status directly from the SeaLevel IO NavData:

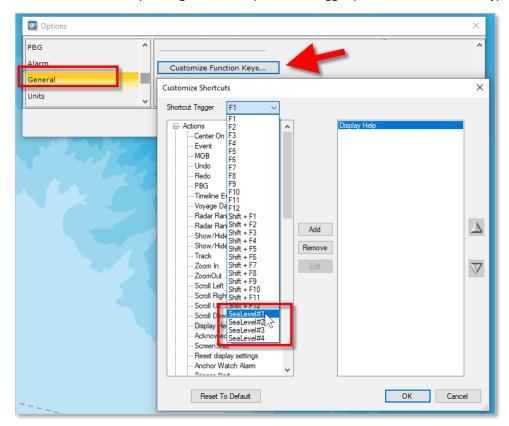




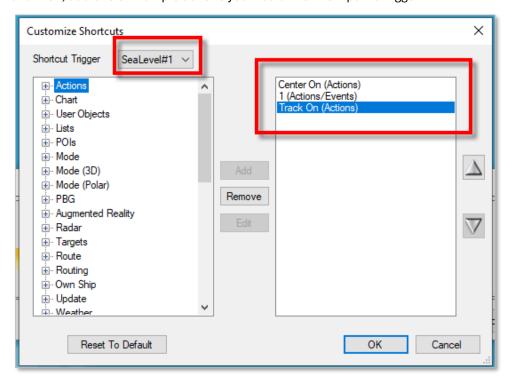
SeaLevel Input

Each SeaLevel input can be configured to trigger one or multiple actions in TimeZero using the powerful shortcuts framework. This can be set up from the General Options by clicking on "Customize Functions Keys...".

First, select the corresponding SeaLevel Input as the trigger (instead of a function key):



and then, add one or multiple actions you would like this input to trigger:



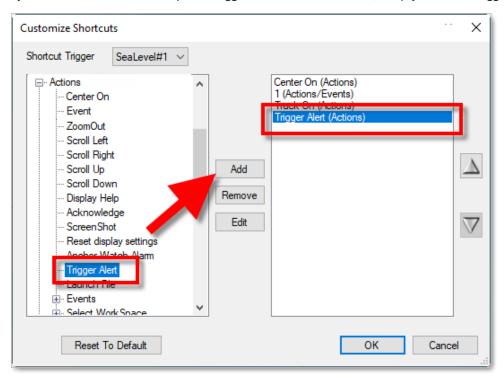
In this example, each time SeaLevel Input 1 is ON, TIMEZERO will center the Boat, add an event (#1), and activate the track.



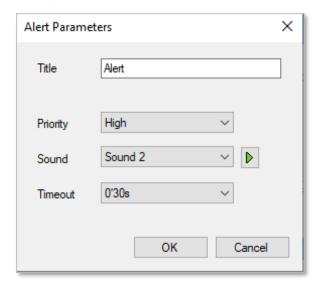
You can configure many actions and combine them (by simply adding multiple to the list) opening many integration possibilities.

SeaLevel input Alarm

If you would like a SeaLevel input to trigger an Alarm in TimeZero, simply Add the "Trigger Alert" action:



You will be able to setup a text (the title of the alarm), a priority (High for Red, Medium for Yellow, and Low for green), a sound, and a Timeout:



Camera Improvements

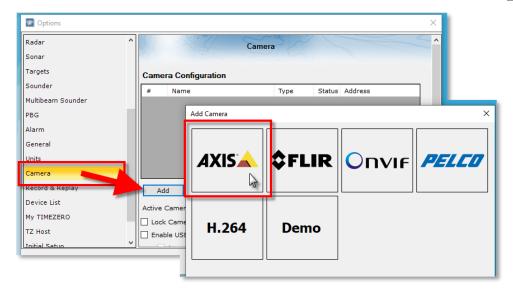
Please note that the Camera Module is now a paying module.

Easier configuration

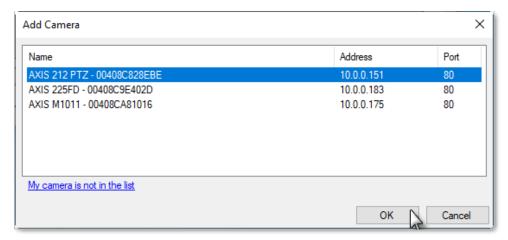
The camera configuration has been greatly simplified. This avoids having to add each existing model individually and, above all, should enable us to be compatible with new models and associated functions in the future.

From the Camera option, all you have just to do is choose the manufacturer:





TIMEZERO will automatically detect the model and capacity:



Note that the camera must be connected and switched on when adding and configuring it. However, if TIMEZERO does not automatically recognize it, you can click on the "My Camera is not in the list" link to force detection.

Support AXIS Bispectral cameras

TIMEZERO is now compatible with AXIS Bispectral cameras, thermal and visual cameras in a single device. Only available with FLIR-with previous TIMEZERO versions.

Support ONVIF protocol

TIMEZERO Professional now supports the ONVIF protocol, however for an ONVIF camera to be compatible with TimeZero, it must support the mandatory features of the ONVIF Profile S protocol. Although the ONVIF Profile S specification is very detailed, some manufacturers may not follow it closely, resulting in unexpected behavior in TimeZero.

IMPORTANT: individual ONVIF Camera would still need to be tested in our office for official support.

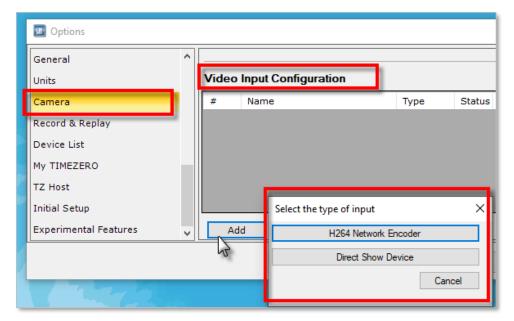
Support AXIS Wiper

Video Input

The Video Input can now be used to bring an external display inside TimeZero as a full or quarter screen display. You can use an H264 to DVI (or VGA) encoder or a USB converter (compatible with DirectShow).



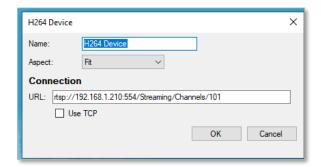
To configure a Video Input simply open the Camera Options and scroll down to the Video Input section, then click on "Add":



H264 Device

If you are using a network video encoder, click on "H264 Network Encoder", make sure it has been set with a fix IP address, and that it can convert the video input into a H264 video stream.

You will need to enter the RTSP path in TimeZero.



Note: You may find the RTSP path in the network encoder documentation or online if you search for your network encoder model number followed by "RTSP Path" or "TSP URL".

Direct Show Device

If you are using a USB Video encoder, click on "Direct Show Device". TimeZero will list all the Direct Show Compatible video encoders for you to choose.



Once at least one video input has been configured, you will be able to create a WorkSpace with a full screen or quarter screen display:

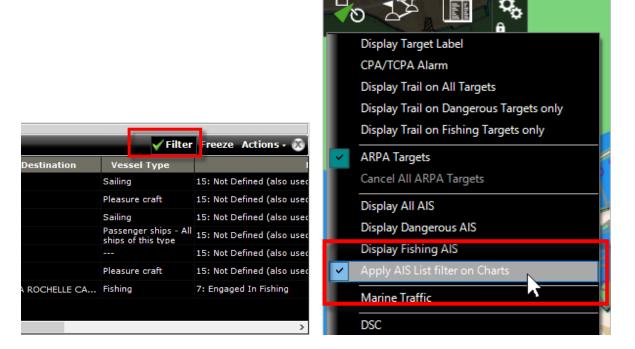




Target improvements:

The AIS list filter can be applied on the chart.

When you choose to display only a specific type of AIS target in your lists, from the filters, it is now possible to apply the same filter to the targets displayed on the chart:

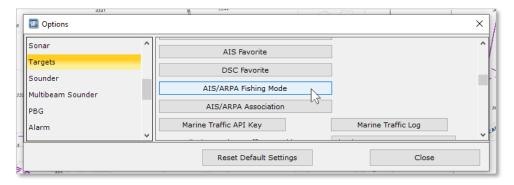


New "Fishing Mode" for AIS and ARPA (based on a speed range):

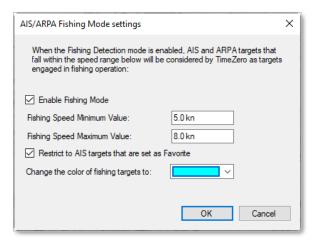
It is possible to quickly identify boats that are actively fishing by selecting speed ranges that correspond to the speeds of boats that are fishing.

To do this, From Targets Options click AIS/ARPA Fishing Mode button:

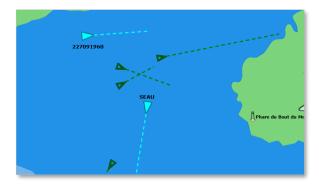




Then you can Enable the Fishing Mode and set Min/Max Fishing speed values.

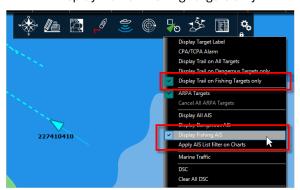


When the mode is activated, the corresponding AIS targets change from "hollow" to "plain". Color can also be-changed.



Specific options are available from the Target menu to:

- Display Fishing AIS Only
- Display Trail on Fishing Targets only

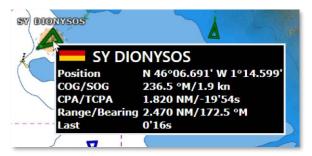


Others improvement

Recall Track on AIS. As with the boat, this allows you to recall the track of an AIS target that had not previously been tracked.



- Increase to up to 5000 AIS targets (previously 1000)
- Increase Target Trail to up to 12H (previously 2H)
- Adding vessel flag to the AIS tooltip



Trips

Trips Introduction

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

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.

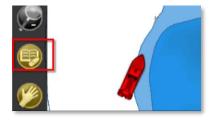


Trips are automatically synchronized via Local network (if you have other compatible TimeZero devices on the same network) and automatically backed up to the TZ Cloud.

Recording a Trip

To start recording a Trip, Click on the "Trip" button from the Toolbar.







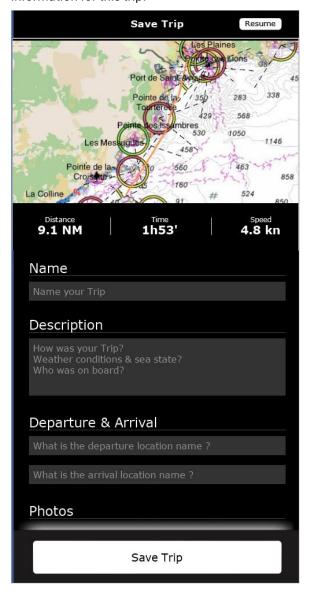
As soon as the TRIP recording is started:

- the TRIP button is displayed overlayed in yellow indicating that recording is in progress.
- The Boat is automatically centered on the chart.

To save or pause the TRIP recording, click the Trip button again:



A "Save Trip" panel will automatically appear on the left, The recording is then automatically paused. You can restart the recording by clicking the "Resume" button or stop it by clicking the "Save Trip" button after you have entered the information for this trip:



TIPS: If you do not enter all the information after finishing the Trip, TIMEZERO 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) from the dedicated Workspace TRIPS.



Once you located the trip you would like to display, just click on it to open its detail:



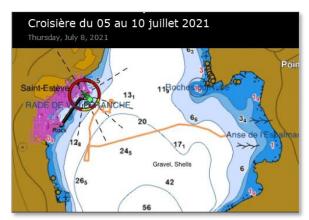
Note that if you have a lot of Trips, you can use the calendar icon located at the top right of the screen to quickly access a specific period:





Trip Overview

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



Trip Statistics

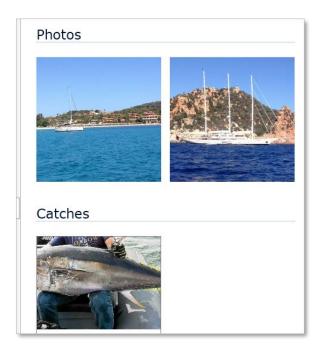
The Trip distance, duration and average speed will be displayed, together with time stamped departure and arrival locations. If you have not given a name to the departure and arrival location after creating the Trip, TIMEZERO will automatically name these points according to your location. You can rename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



Trip Photos and Catches

The photos that you took with TIMEZERO 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 click 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:

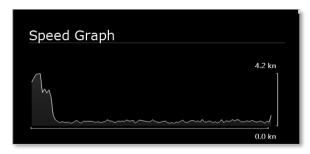




<u>Note</u>: It is not possible to add a Catch after finishing a Trip. Catches are linked to a specific Trip based on their creation date.

Trip Speed Graph

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



Sunrise/Sunset information

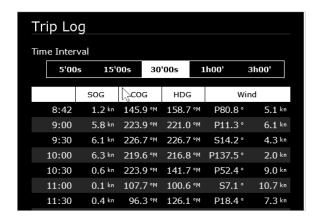
TIMEZERO will display sunrise / sunset time of that day.



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:





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

Display Trips on the Chart

All your trips will be visible on the chart displayed using thin orange lines (to avoid cluttering the screen):

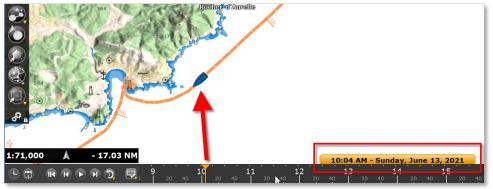
To select a specific Trip and make it more visible on the chart, just click on one of the orange lines. When selected, the Trip will be displayed in bold, and an animation will indicate the direction of the Trip. Time markers will also appear along the trip to indicate the duration of specific points:



<u>Note</u>: 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 in the Planning Workspace, the Timeline appears in "Trip" model (Trip Symbol). The ends and scrolling speed of the Timeline are then adjusted in relation to the duration of the Trip.

Drag it to see the progress of the boat (blue icon) along the route:



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

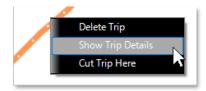




<u>Note</u>: The data that is recorded in the Trip will vary according to the type of instruments that you have connected to TIMEZERO.

Editing a Trip

To edit a Trip, start by displaying the Trip Details screen. You can access the Trip Detail from the Trip list in the TRIPS Workspace, or from right-click on the Trip line, then selecting "Show Trip"

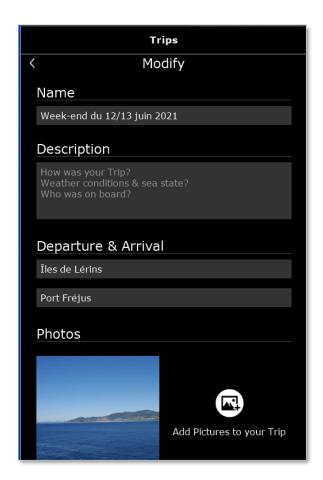


Once the Trip Details is displayed, click on the "..." button located at the top and select "Modify":

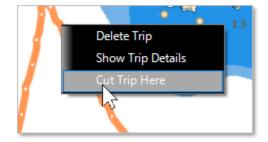


You will be able to edit all the fields of the Trip (Name, Description and Departure/Arrival name). You will also be able to delete a photo by clicking on it or add new photos by clicking the "Add Pictures to your Trip" button.





If you need to adjust the Trip departure or arrival point, load the Trip on the chart by right-clicking on the map overview, select "Cut Trip Here" from the pop-up menu.

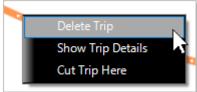


You will have the choice of removing all the points before or after the cut point.

Deleting a Trip

To delete a Trip, start by displaying the Trip Details screen. Once the Trip Details is displayed, click on the "..." button located at the top and select "Delete Trip", or by right-clicking on the map overview, select "Delete Trip" from the pop-up menu.







New Furuno Compatibilities

Compatibility with the new DFF3-UHD Furuno Sounder



Basic compatibility with new Side Scan Fish-Finder mode

Integration of TZ Professional into a Coastal Monitoring system:

Fleet Tracking via TZ Cloud

- > Requires TZ Fleet subscription with an Internet connection (managed on TZ Cloud)
- Restricted to Position, Depth and Wind (no radar or camera)
- User Objects and Text messages can be sent via TZ Cloud
- Supports intermittent Internet connection ("Store & Forward")

Fleet Tracking via TZ Host

- > Requires the new "TZ Host Output" module in TZ Professional
- > Self-Managed with TZ Host (Internet or private WAN can be used)
- Support Camera and Radar control (in addition to Position, Depth and Wind)
- Route can be remotely activated and monitored from TZ Coastal Monitoring Remote
- Designed for "permanent" connection (no "Store & Forward" in case connection to the TZ Host is cut)
- User Objects and Text messages can be sent via TZ Cloud

Radio Direction Finder compatibility

TimeZero is now compatible with the Radio Direction Finder Rhotheta RT-800, RT-300, and RT-500M:



Note: TimeZero is compatible with the \$PRHO,xx,DFSTD and \$PRHO,xx,DFVTS sentences.

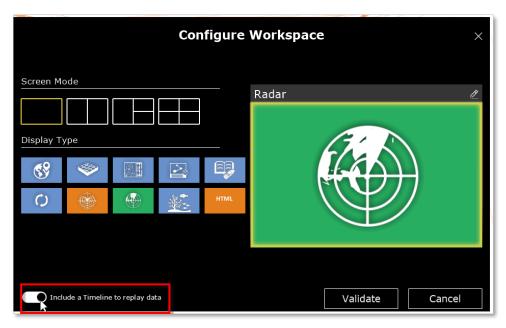
- Ability to display real-time bearing lines with dedicated NavData (showing bearing, frequency, channel, and Signal Level)
- > Handles "ELT-Plb" and "Sarsat" Alarms
- > Transmit all Bearing Lines via the TZ Host or TZ Fleet to combine multiple vessels and automatically triangulate position in case of an "ELT-Plb" or "Sarsat" alarm is triggered (MOB mark automatically created and updated)



Improvements to VDR module

Data Replay improvement:

User can create customized WorkSpaces with timeline (for Radar and combined displays with a timeline to replay all data)



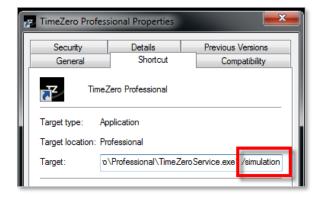
Target Replay improvements:

- > Performance has been improved.
- "Ghost Trail" is displayed automatically when clicking on a replay target.
- Track recall available on replay target
- New Event Log list (to retrieve specific events easily)

Note: Advanced RnP module available for specific project (adds Camera and Audio recording)

New Simulation Mode

By adding the Space + /simulation command to the TIMEZERO Shortcut you can run TIMEZERO in a new Simulation Mode

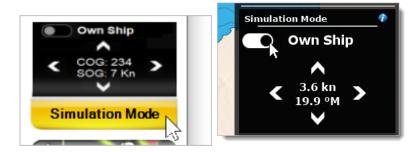


When you start TIMEZERO, the message "simulation mode" appears at the top of the screen:



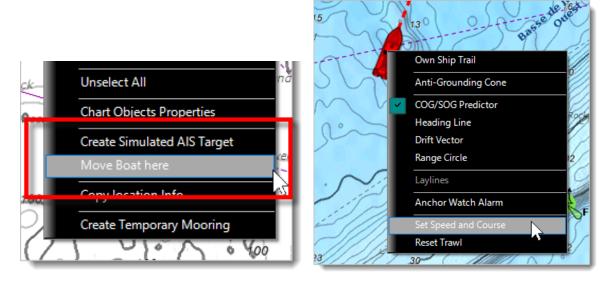
Own Ship Simulation Mode NavData can then be added:





Activating Own Ship allows you to:

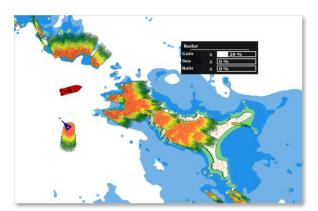
- Move boat at your favorite place by right clicking on the chart.
- Set Speed and Course by right clicking on the boat icon.



- Create AIS Simulation and adjust speed/bearing from cursor)



- Start a Radar Simulation using 3D Altimetry (MM3D or TZ MAPS)



Note: RADAR Control NAVDATA can be used as with the true RADAR source.



New OEM module capability

Interface Customization

The OEM module allows you to personalize the interface of the TIMEZERO application, aligning it with your brand identity. You have the flexibility to customize various elements, such as the opening splash screen and the Software Logo displayed.

- Logo Customization
- Splash Screen Customization

Advanced features

- > HTML Workspace
- PELCO-D Compatibility
- WMS Layer
- GeoTIFF files import
- External commands
- Tactical Target

(Ask for specific documentation for more information on OEM features)

Misc. (smaller features):

- Improvements to the Connection Wizard Auto mode (new "Append Mode") and a "dealer way" to restore previous configuration.
- USA Only: New NOAA S57 direct download and update (ECS regulation)
- Automatic Weather Download Scheduler (operator does not need to remember to download weather data manually)
- Rudder NavData (from NMEA0183 RSA sentence or NMEA2000 PGN 127245)
- Better Multi-Touch screen support (gesture works on multiple monitors)
- New option to prevent Radar Range change using Mouse Wheel
- Accu-Fish improvements: control visibility per WorkSpace, Min and Max filter, Speed Filter
- Day/Dusk/Night improvements (time offset)
- NavNet Sensor Version available directly in the Device List
- TZD & TZX Native import (via double clic on file)
- AIS Weather Station report improvements
- Improvements on Divider that can latch perpendicularly to Routes.
- New Shortcuts allowing to select Tools (can be used with Function Keys or QuickAccess NavData)
- Adding a new Manufacturer field on Fishing Buoys (can be used to sort in the list, filter on the chart or change the color).
- Access to Remote Support and TZ Report directly from the Support menu
- Possible to create a Route from a Line
- Ability to export select boundary from the list.
- Enunciate Alarm in TZ Pro

REGRESSIONS:

- No longer compatible with Koden radar
- New modules required for Radar and Camera
- Replaying Fleet Target on TZ Professional will require the VDR module.
- The Target Anchor Watch is no longer available on TZ Professional (renamed "Target Watch" and only available on TZ Coastal Monitoring with the Rule management).
- Marport will not work for about 1-2 months.
- The "Note" tab on AIS has been deprecated (only a simple textual comment can be attached to a target). It is still possible to attach a picture to an AIS target (but it no longer uses the "Note" tab).