INTRODUCTION

The SEA.AI software is fully compatible with the TimeZero (TZ) navigation platform. This integration allows TimeZero to display and control the SEA.AI Sentry camera seamlessly. It also enables the retrieval and visualization of targets detected by the Sentry camera directly within the TimeZero user interface.

This document provides detailed guidance on integrating SEA.AI software with TZ Professional, focusing on three key aspects:

1. SEA.AI Application
2. SEA.AI RTSP streams
3. SEA.AI TTM and TLL messages

REQUIREMENTS

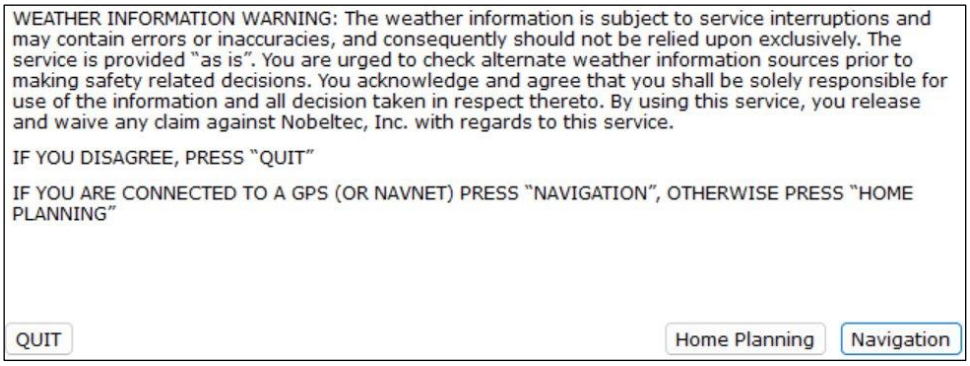
The following are the minimal requirements:

1. SEA.AI Sentry system
2. Sentry Software (version 3.4 or higher)
3. TimeZero Professional (version 5.1 or higher)
4. TimeZero OEM module*
5. TimeZero Camera and Augmented Reality module
6. SEA.AI Sentry computer and TimeZero computer on the same LAN

STEP-BY-STEP INSRUCTIONS

1. TimeZero Start-up

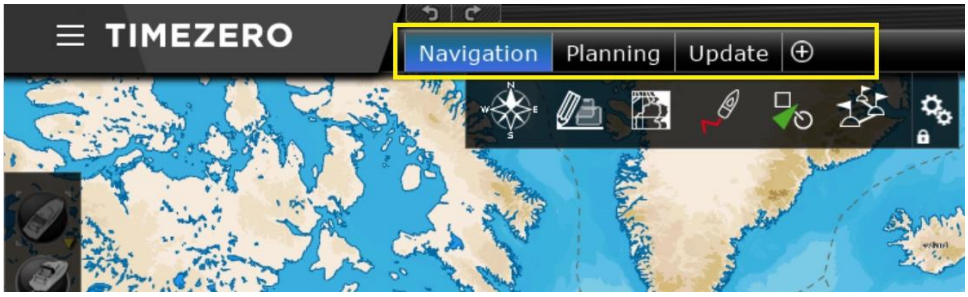
   TimeZero can be used in two modes: Home Planning and Navigation. Please choose Navigation. To learn about the difference, please refer to TimeZero's User Manual.



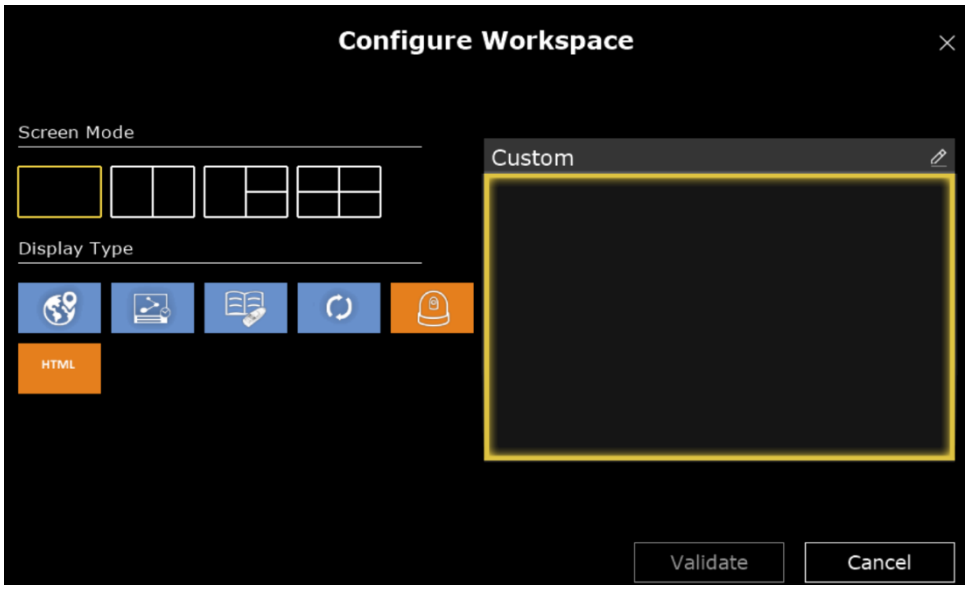
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2. SEA.AI App Integration
   You can use the SEA.AI application within the TZ navigation software as if the SEA.AI application were used standalone.

   a. In the TZ Workspace (yellow highlight) select plus sign (Image below):

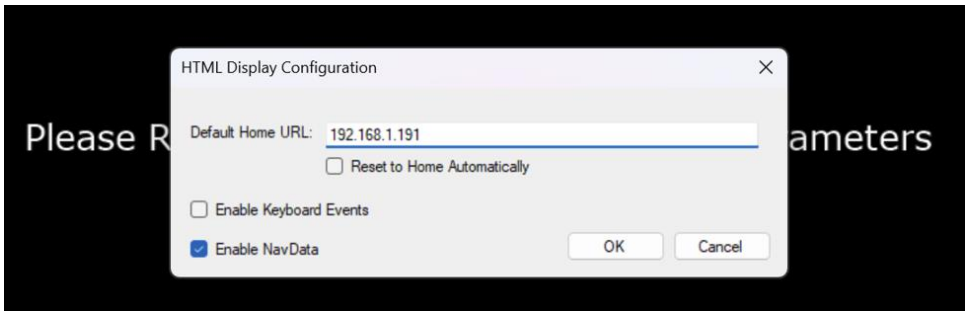


   b. This opens a TZ Configuration Workspace (Image below):



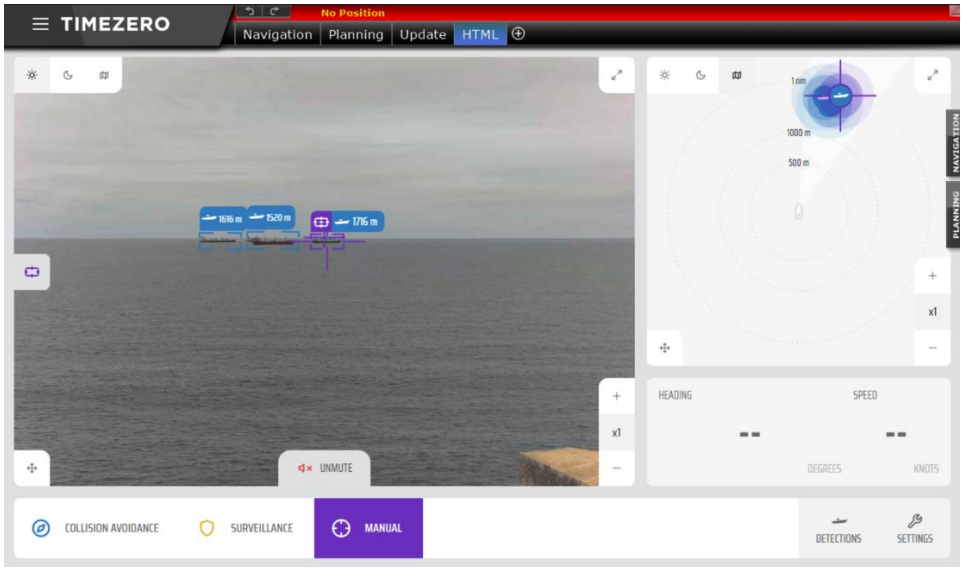
   c. Under Screen Mode select Single View; under Display Type select HTML window and click Validate
   d. A new window appears with the message" "Please Right Click to configure URL and parameters".
   e. Right clicking and selecting Configure, opens an HTML Display Configuration window (Image below). Under the Default home URL, please type in the IP address of the Sentry system and select OK.

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192.168.1.191 is the default address of the Sentry camera. Please enter the IP address assigned to the system.

f. A new tab named HTML will appear in the TZ Workspace, displaying SEA.AI Application in full (Image below).



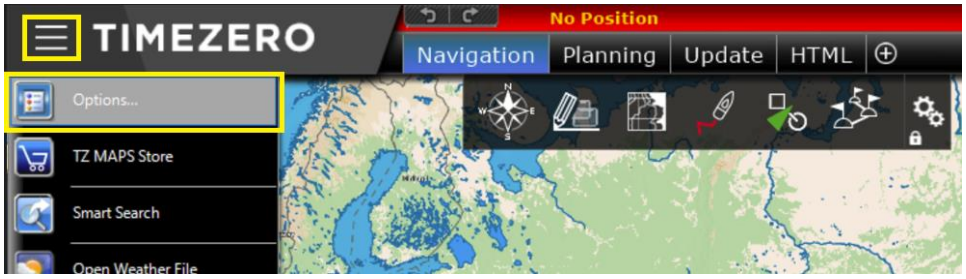
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3. SEA.AI RTSP streams integration

Live stream connection using RTSP (Real-time Streaming Protocol) using H.264 encoding, any camera can be connected using the RTSP link from the Sentry system (See table below).

RTSP link	Camera	FOV (Horizontal)
rtsp://192.168.1.191:8555/twfov	Thermal Wide Field of View	32.0°
rtsp://192.168.1.191:8555/tnfov	Thermal Narrow Field of View	8.0°
rtsp://192.168.1.191:8555/rgbwfov	RGB Wide Field of View	39.2°
rtsp://192.168.1.191:8555/rgbnfov	RGB Narrow Field of View	9.3°

a. Under the TimeZero Main Menu (yellow highlight) select Options (Image below).



b. This opens a window named Options. Please select Camera and click Add (Image below).

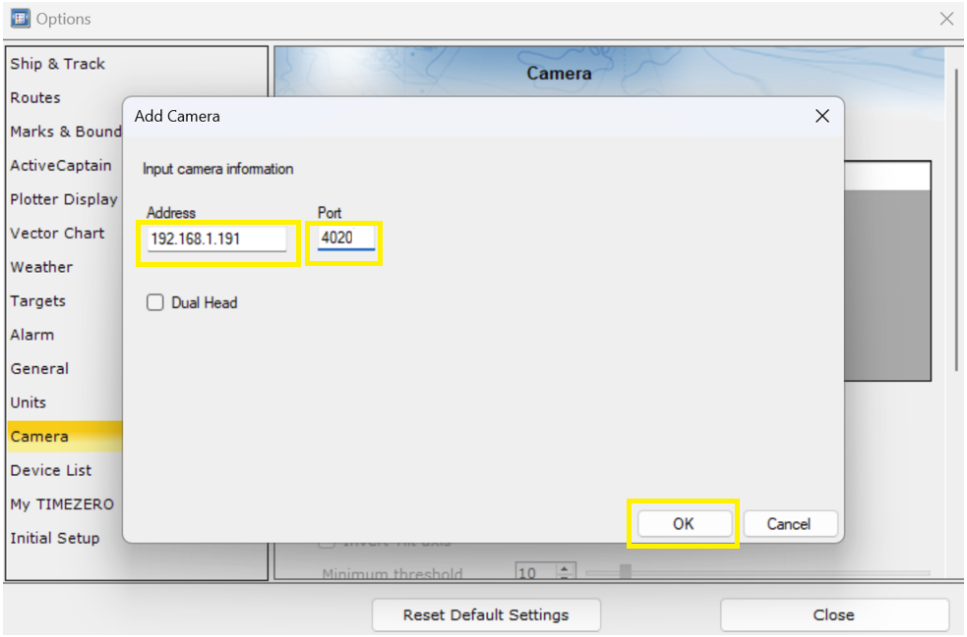


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c. A new window pops up (Image below). Please select PELCO.

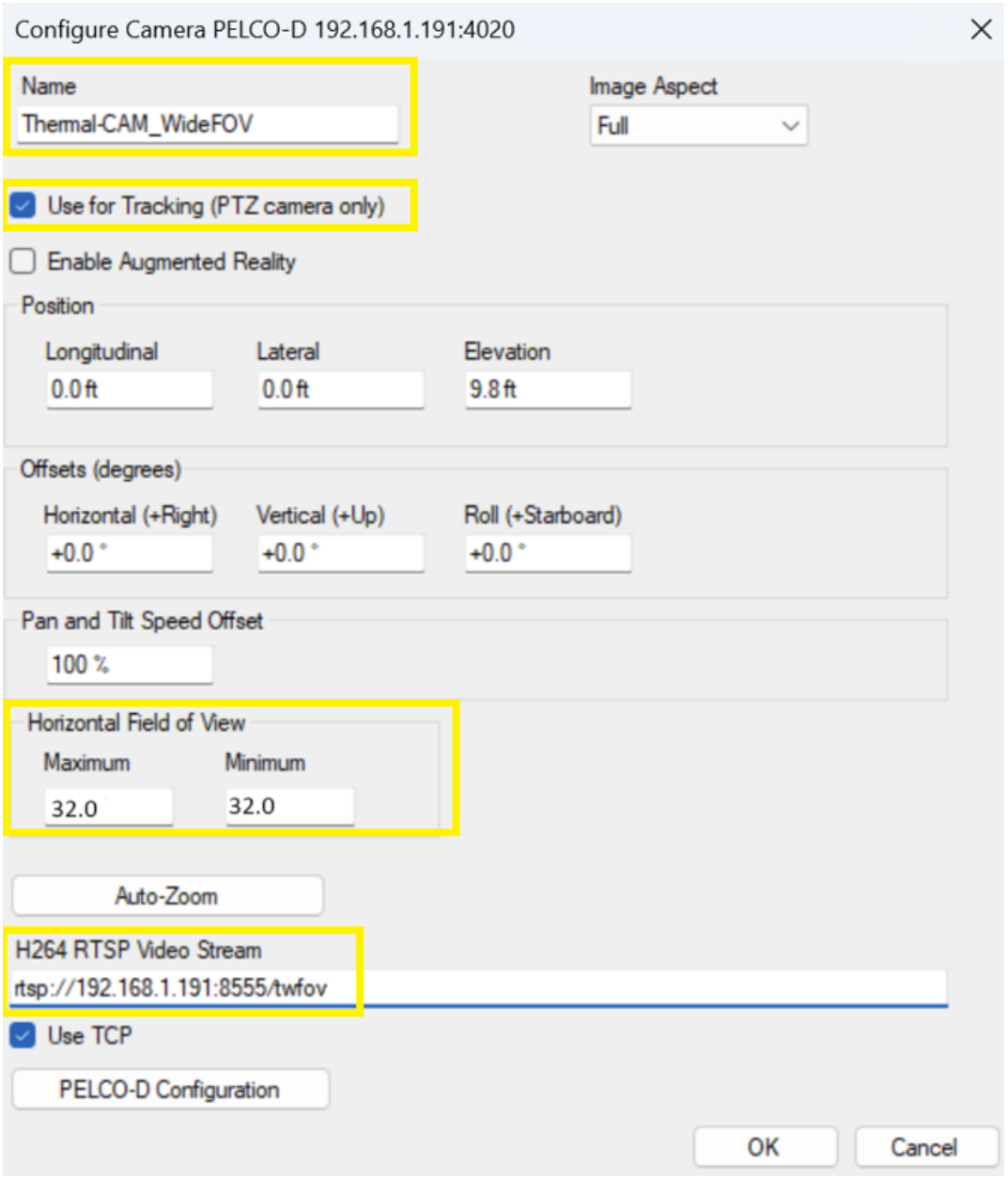


d. Enter the IP address of the Sentry system along with port 4020 and click OK (Image below).



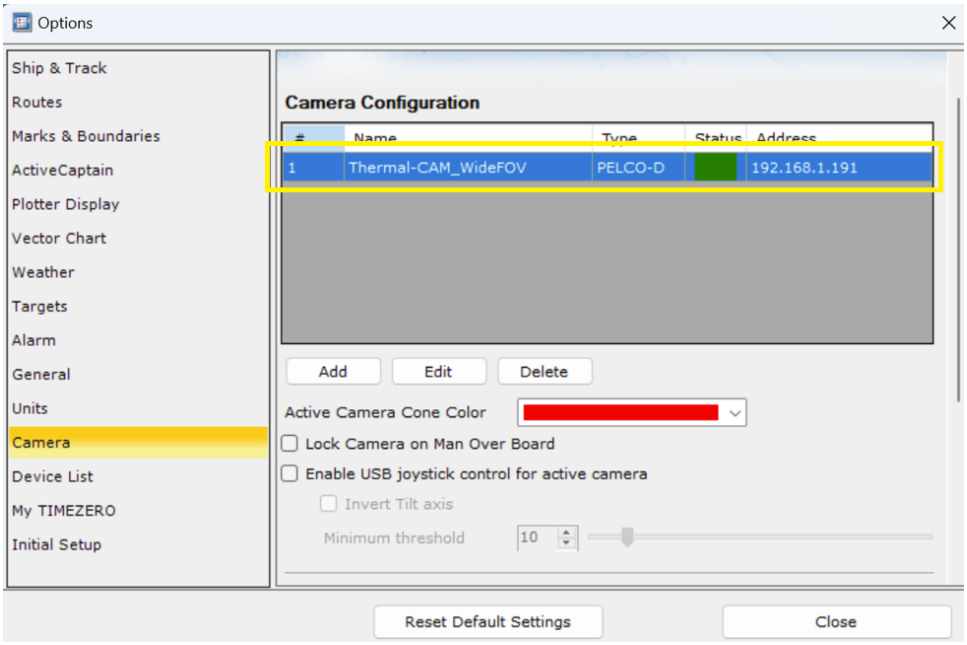
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e. This brings a new window: Configure Camera PELCO-D (Image below).



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f. Selecting OK in the above window will add a camera (Image below).
Note the green Status bar which indicates the successful addition of the camera.
Click Close to finish the setup.



g. A new tab named Camera will appear in the TZ Workspace, displaying one of the four available cameras from the table under section 3 of this guide.



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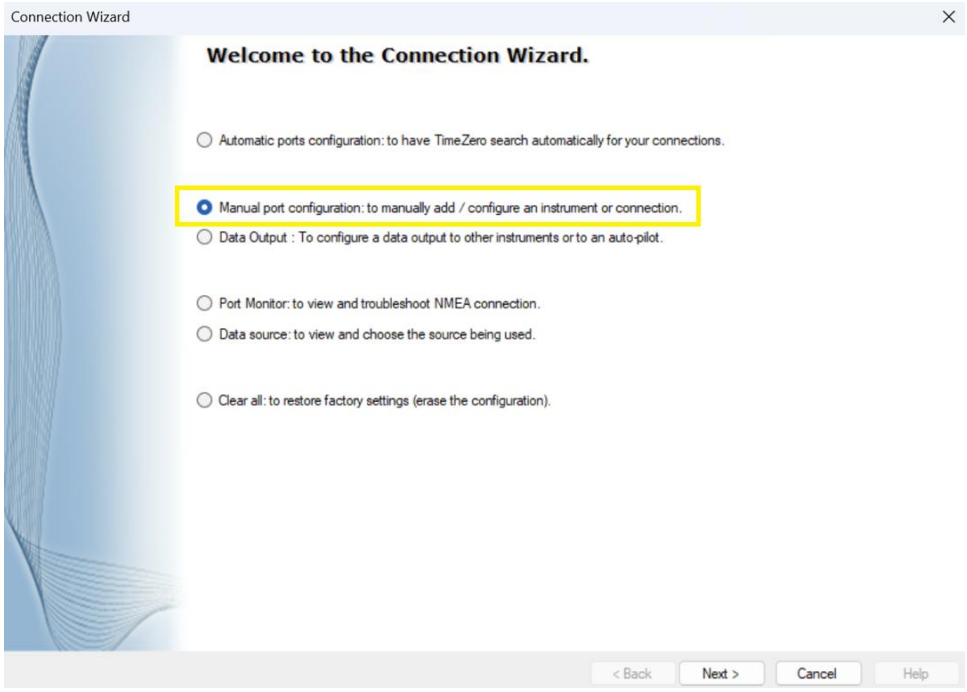
4. Add TTM and TLL messages

   SEA.AI Sentry can provide object detection and target information via TTM and TLL messages to be displayed within Time Zero navigation platform.
   NOTE: TZ Professional supports both TTM and TTL messages.

   a. Under TimeZero Main Menu (yellow highlight), select Connection Wizard (Image below).

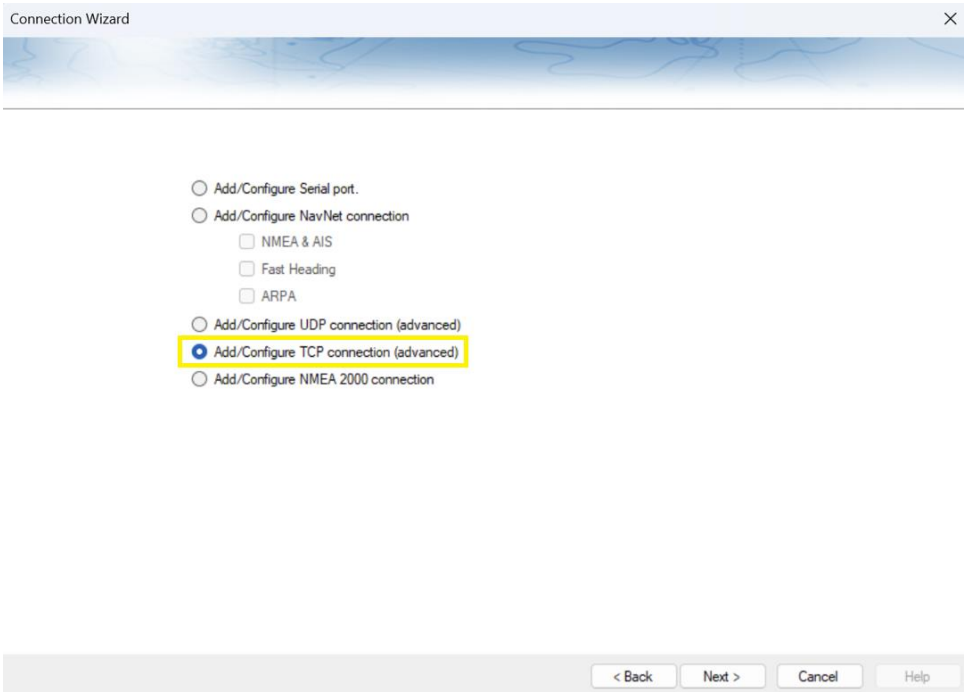


   b. A new window pops up: check off Manual port configuration (Image below).

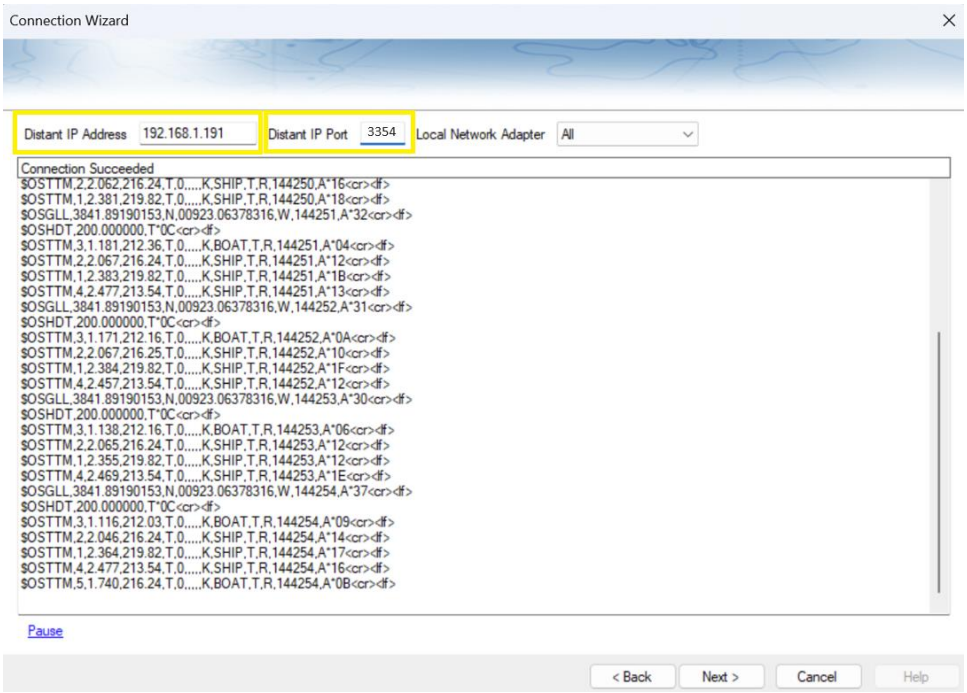


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c. Select Next and check off Add/Configure TCP connection (Image below).

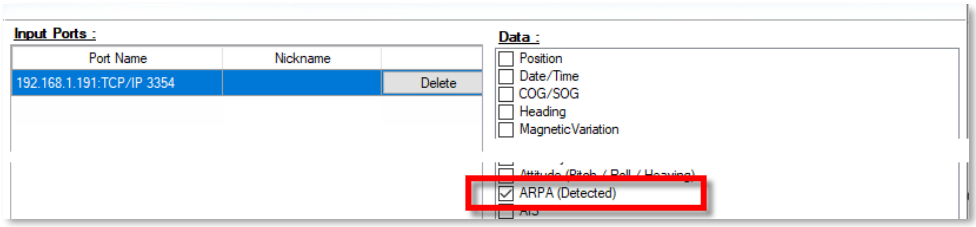


d. Click Next and Fill out Distant IP Address and Distant IP Port (Image below). IP address is the Sentry's IP address, and Distant IP port must be 3354. NEMA0183 sentences will start to be displayed.



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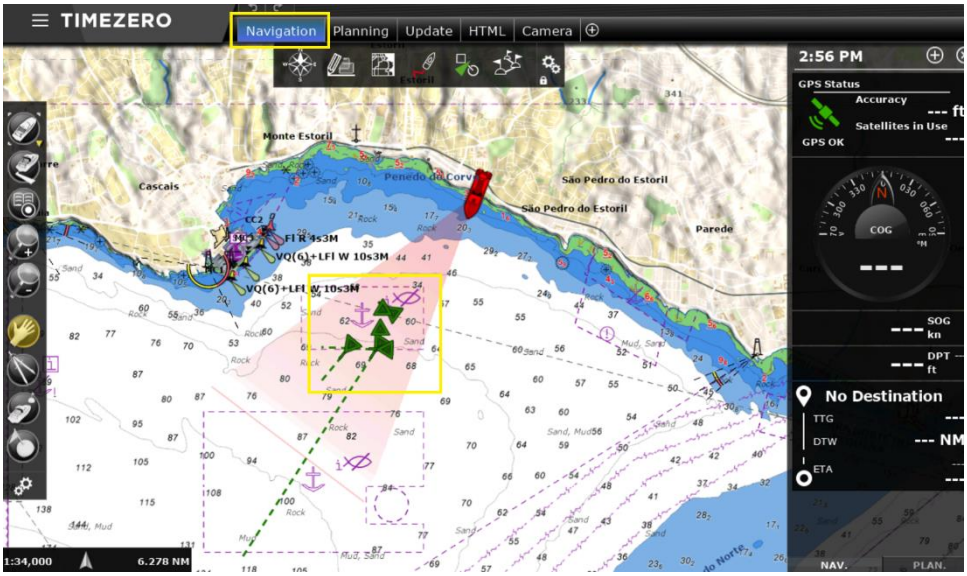
e. On the following page of the window, a port you just added will be displayed (Image below):



On the right-hand side, ARPA (Detected) box should be checked off automatically.

f. Clicking Next will complete the setup.

g. In the TZ Workspace select Navigation. Zooming in on the boat location will show the SEA.AI detections (green triangles) (Image below).



5. The setup is now COMPLETED, and you can use TimeZero Navigation software to access SEA.AI Sentry Application via HTML tab, to access one of the four cameras via the Camera tab, and to see objects detected in the chart.

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