seatrac

SeaTrac NavPoint

Software Manual

(for version 1.0)

P/N: BP00919.1

UM-140-P00919-01

Contents

1. Introduction

SeaTrac NavPoint is a software application for Microsoft Windows operating systems which allows SeaTrac Beacon owners to accurately track, monitor and manage multiple beacons.

2. Installing SeaTrac NavPoint

SeaTrac NavPoint is a standalone installation and is present on the installer CD shipped with each SeaTrac acoustic beacon. Alternately, the latest version of SeaTrac NavPoint can also be downloaded from the Blueprint Subsea website by visiting…

www.blueprintsubsea.com/seatrac/support.php

To install SeaTrac NavPoint…

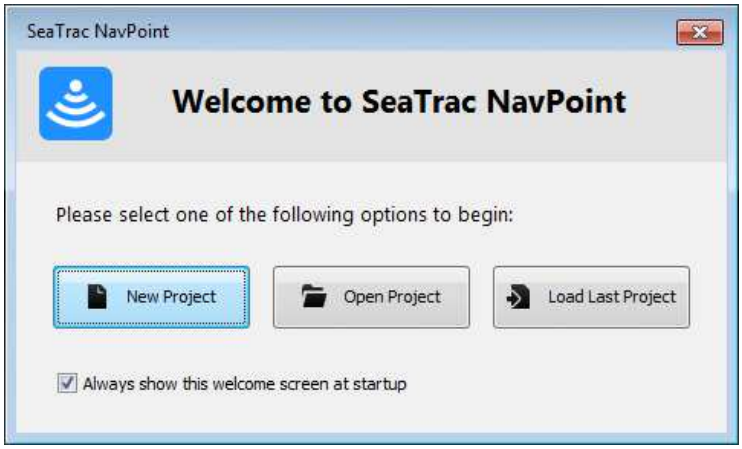
- First, either run the setup program from the software CD shipped with the SeaTrac beacon, or open an internet browser then download and run the latest version of the "SeaTracNavPointSetup.exe" software installer from the above link.
- When the installer runs, it may prompt you to uninstall any previous versions of the software that have already been installed.
- Follow the installation wizard prompts to choose where the software will be installed and which computer users will have access to it.
- When the installation completes, a Start Menu folder titled "SeaTrac NavPoint" will be created containing a link to run the "SeaTrac NavPoint" application.

2.1. Checking for Updates

Once installed, you can periodically use the "Check For Updates" link in the "SeaTrac NavPoint" Start Menu folder to download the latest software release as it becomes available.

3. Starting the Application

When the SeaTrac NavPoint application starts, you will initially be presented with the Welcome screen as shown below:



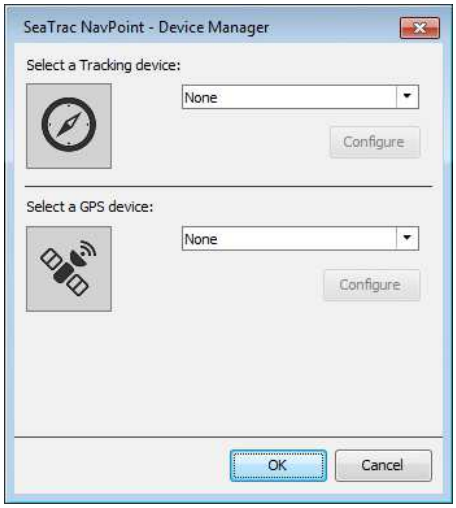
The following options are available from the Welcome screen:

- New Project — This button creates a fresh, blank project from scratch.
- Open Project — This button prompts you to select a previously saved SeaTrac NavPoint project.
- Load Last Project — This button loads the last used project.

3.1. Creating a New Project

After selecting New Project, you will then be prompted for the hardware devices which will be used in this new project.

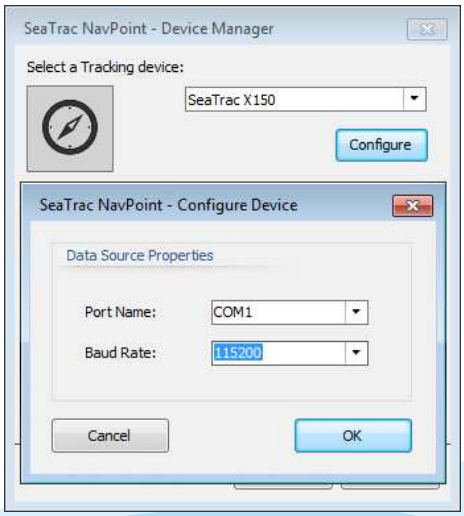
Here is a screenshot of the device selection screen:



3.1.1. Configuring the Hardware

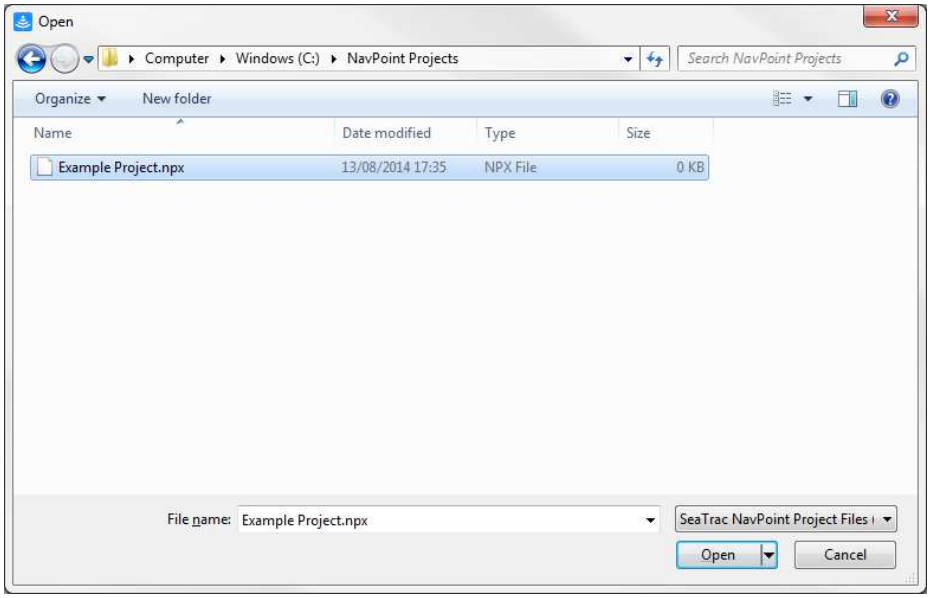
Each device can be configured by clicking the "Configure" button against the hardware device. This allows you to set the Serial Port name and Baud Rate of the target hardware devices.

The following screenshot shows an example of configuring a **SeaTrac X150** USBL beacon, with the Serial Port name and Baud Rate set up correctly:



3.2. Opening an Existing Project

You can open a previously saved project by selecting the "Open Existing Project" button. You are then presented with a file selection window which prompts for the location of the previously saved SeaTrac NavPoint project.



After selecting a valid SeaTrac NavPoint project file, click the "Open" button to load the file. All displays, hardware and beacons will be configured at the time the project was saved.

You will then be presented with the Main Display.

3.3. Loading the Last Project

Clicking the "Load Last Project" button immediately loads the last used project into SeaTrac NavPoint with all displays, hardware and beacons configured as per the original project.

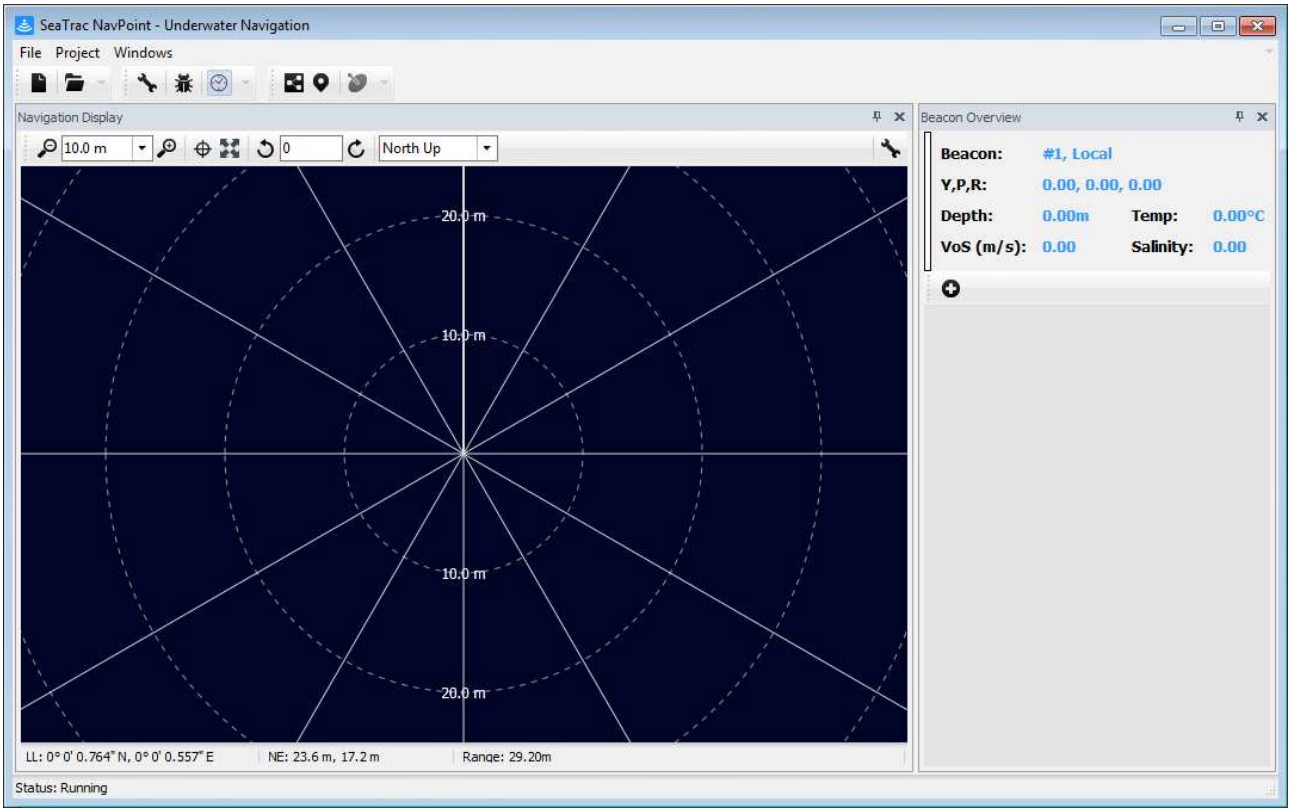
You will then be presented with the Main Display.

This option may be unavailable if no previous projects have been saved.

4. Main Display

Once the hardware devices have been configured, the main navigation display is then shown together with a sidebar containing the local SeaTrac Beacon's current state together with any tracked Beacon's states.

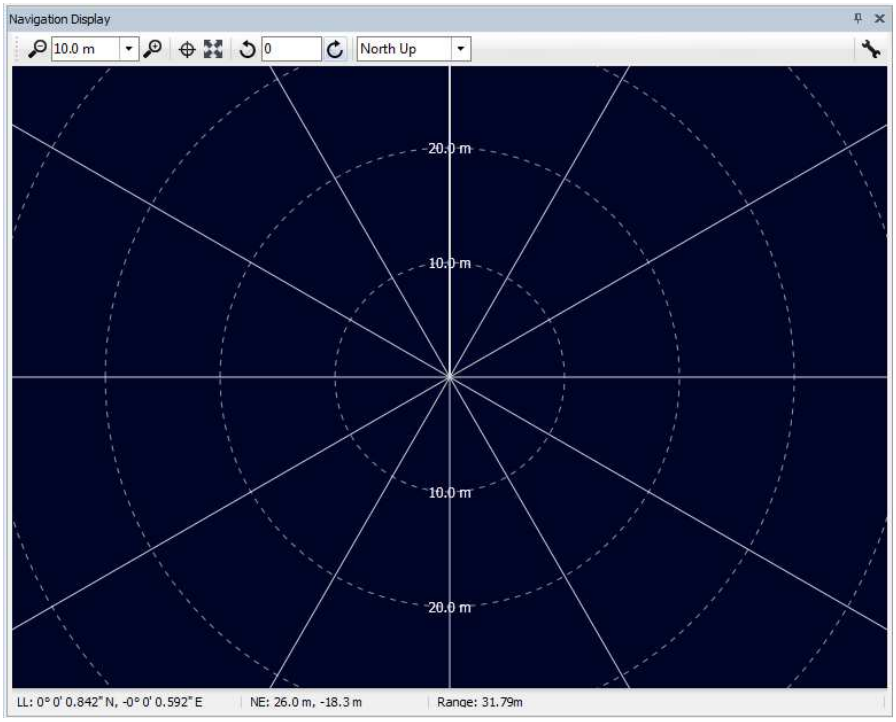
Here is a screenshot of the main display:



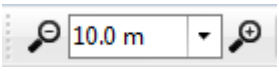
The Main Display comprises of several sub-windows. These are as follows:

4.1. Navigation Display

The Navigation Display provides a polar display showing the locations of any SeaTrac Beacons relative to the centre of the grid.



The toolbar located towards the top of the display allows you to configure the view port. The following controls are available:



"Zoom In", "Zoom Level" and "Zoom Out" allow you to zoom in or out of the display and to also set the scale of the grid.

"Centre View" allows you to re-centre the grid back to its default origin.

"Zoom to Fit" forces the display to zoom to a level which allows all SeaTrac Beacons to be visible on-screen at once.

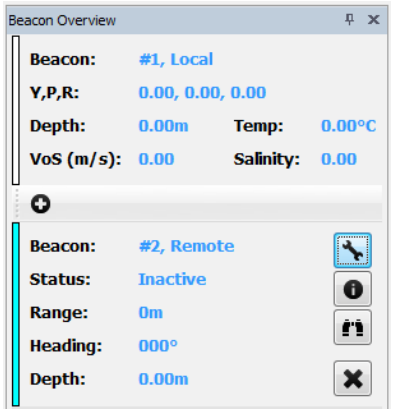
"Rotate Left", "Rotational Offset" and "Rotate Right" allow you to specify an additional rotational offset which is applied to the grid.

"View Mode" allows you to specify "North Up" where North is always represented as straight up or "Platform Up" where the front of the platform is always pointing straight up.

4.2. Beacon Manager

The Beacon Manager side-bar allows you to view the current status of any SeaTrac Beacons tracked by the SeaTrac NavPoint application as well as the current status of the local beacon.

Local beacon information is located at the top of the Beacon Manager window. All remote Beacons display their information beneath the local beacon.



4.2.1. Local Beacon

The local SeaTrac Beacon provides the following status information:

Beacon This indicates the ID of the local beacon

Y, P, R This represents the Yaw, Pitch and Roll angles of the local SeaTrac Beacon

Depth This is the depth of the local Beacon as measured by the on-board depth sensor

Temp This is the temperature measure by the local Beacon

VoS This is the Velocity of Sound value being used by the local SeaTrac Beacon and is measure in metres-per-second.

Salinity This is the Salinity value used by the local SeaTrac Beacon and is measured in PPT (parts per thousand).

4.2.2. Remote Beacons

Each remote SeaTrac beacon provides the following status information:

Beacon This indicates the ID of the remote beacon and a name if one has been assigned.

Status Shows the current state of the Beacon. Any new beacon defaults to "Inactive" until it responds to a request for information. A Beacon who successfully responds to a query will display "OK" as its status and any Beacons which fail to respond will show the error code as their status.

Range This is the range from the local SeaTrac Beacon to the remote SeaTrac Beacon

Heading This is the magnetic heading of the remote Beacon

Depth This is the depth of the remote Beacon as measured by the on-board depth sensor

Several control buttons are assigned to each remote SeaTrac beacon.

The setup button allows you to configure the name of the Beacon and also the colour representing the Beacon on the Navigation Display

The HUD button toggles the visibility of the Beacon's "heads-up display" on the Navigation Display.

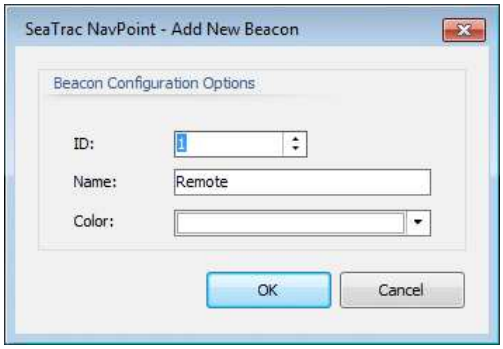
The toggle heading button allows you to turn on or off the transmission of the **Heading** status of the remote SeaTrac beacon.

The delete button removes the selected SeaTrac beacon from the manager and thus stops it from being tracked by the SeaTrac NavPoint application.

4.3. Adding a Remote Beacon

To add a remote SeaTrac Beacon, first locate the "Add New Beacon" button from within the Beacon Manager display:

After clicking the "Add New Beacon" button, you will be presented with the following screen:



This screen allows you to specify the ID of the remote SeaTrac Beacon, any name which you can identify the Beacon by and a colour which will be used to represent the Beacon on the Navigation Display.

Clicking "OK" will add the new SeaTrac Beacon to the Beacon Manager display.

5. Beacon Tracking

Once you have added a number of remote SeaTrac Beacons to the Beacon Manager, the SeaTrac NavPoint will automatically begin the tracking process.

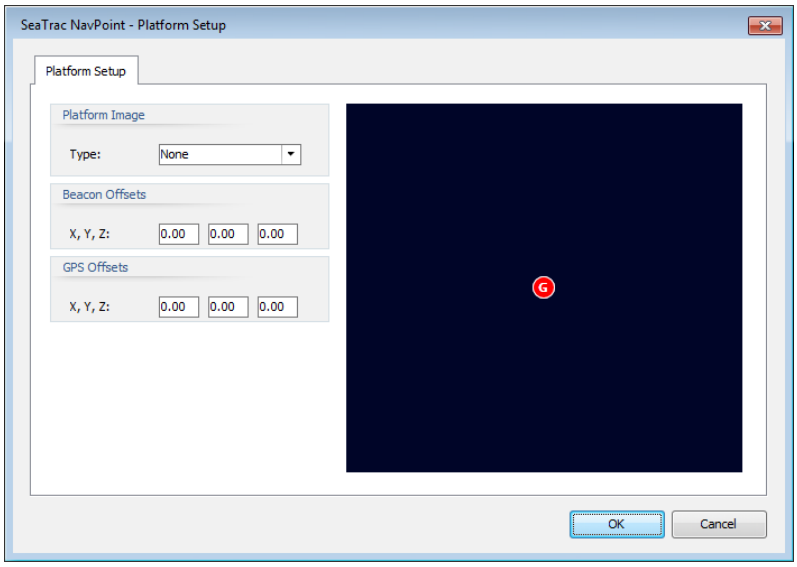
The NavPoint software polls each of the SeaTrac Beacon in turn, requesting the positional and status information. The Navigation Display and Beacon Manager displays are updated to reflect the latest state of the remote Beacon.

Once each remote Beacon has been queried, the process begins again with the first beacon in the list.

6. Platform Setup

The Navigation Display can also be configured to display a simple platform image representing your vessel or platform. To access the Platform Setup window, select the "Project" menu from within SeaTrac NavPoint and then select "Platform Setup".

You will then be presented with the following screen:



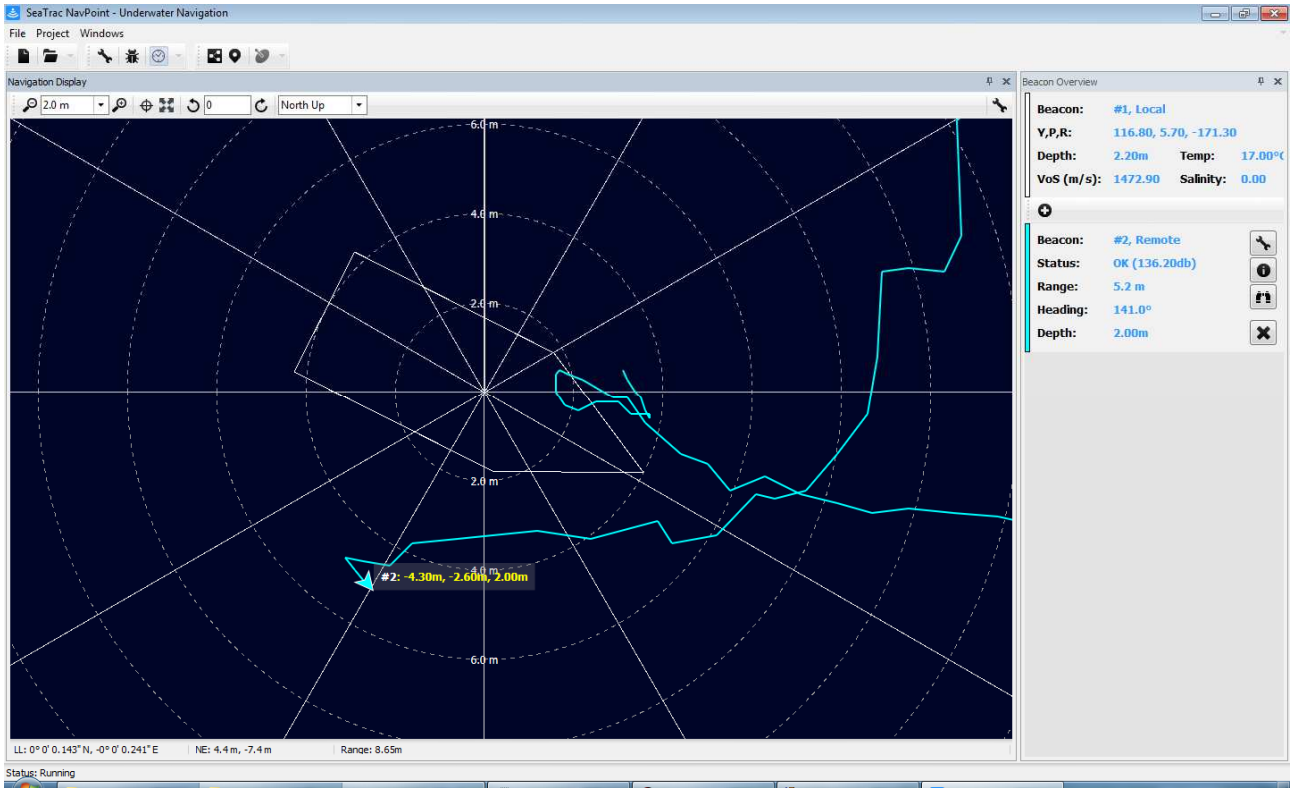
From here, you can specify the following platform parameters:

Type:	The type of platform to be displayed. At present, only **None** and **Simple** options are available.
Beacon Offsets:	The X, Y and Z offsets of the Beacon relative to the centre of the platform
GPS Offsets:	The X, Y and Z offsets of the GPS device (if applicable) relative to the centre of the platform

If **Simple** type is selected, you can then specify two more platform parameters

Length:	The length of the overall platform
Beam:	The width of the overall platform

The following screenshot shows a Navigation Display with a simple platform configured together with a single remote SeaTrac Beacon:



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