



## TowPro User Guide

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## TowPro – Advanced Tow Protection

TowPro Advanced Tow Protection is the new best practice solution for safer towing, endorsed by insurers and yacht management companies. TowPro is designed to prepare and protect you from unnecessary risk while towing, helping you prevent loss or damage to the vessel ('tender') you are towing and reduce insurance claims.

TowPro ensures that bridge crew aware of issues BEFORE an incident occurs, to help prevent losses in the first place:

- *'Eyes in the boat'*: continuous live safety information from the tender: water levels in the bilges, how much battery is left, and more
- *'Bridge alerts'*: instant alerts when safety indicators exceed acceptable levels, so that the bridge crew can immediately investigate and take care of problems

If the tender should go adrift, TowPro will automatically activate broadcast of safety tracking information, to help recovery AFTER the loss, including both:

- *AIS*: broadcasts public position reports via VHF so tender is seen locally by the returning yacht and any other nearby boats
- *Iridium satellite tracking*: sends position reports to the Emergency Tracking website so that tender can be found if it had to be abandoned

## Monitoring Mode – Continuous Tender Protection

In response to extensive consultation with existing users and new customers alike an additional functionality has been included whereby the Tender can be monitored for the usual parameters even off Tow.

- Local geofence can be activated from the Yacht, acting as an anti-drift detection system while at anchor or in the Marina and the Tender is unattended.
- Existing bridge alerts will remain 'live' and the Tender bilges etc. can be continuously monitored while at anchor or in the Marina and the Tender is unattended.

## Section 1 - Start Towing with TowPro

### 1.1 - Quick Start Guide to Towing

*This guide assumes you already have your TowPro system installed and configured on both tender and yacht.*

- On the latest installation manual, it is recommended the Tender system is all powered from a switchable breaker as opposed to a fuse.
- We will assume the TowPro Processor and DataTraQ-T is installed on the tender and the tender and Yacht MMSIs are programmed into the TowPro processor.
- We will assume the Yacht AIS is on.
- If the above conditions are met, the TowPro Processor on the Tender will display "TowPro Live" (green banner). However, what can happen, it will then say (after about 90 seconds) " No VHF " (yellow banner).
- However, once towing is started, the Yacht AIS broadcasts go from every 3 minutes to 10-20 seconds and then the TowPro resets automatically and goes back to TowPro Live and monitors the Tow correctly.
- So, when using TowPro, before commencing a Tow, turn on the TowPro first. Ensure you are in Tow Mode and not Monitoring Mode (blue banner). After you have connected your lines and done the other preparation for towing, check the The TowPro Processor displays "Tow Pro Live" or "No VHF" Depending on the movement of the yacht, this may take up to 3 minutes after first turn on. From this moment on ensure the tender does not go beyond the geofence limit (default set to 250m, so stay within 200m allowing for GPS error).
- Then you are ready to physically commence towing. Once underway, on the yacht, press the diamond symbol button on the yacht display. Then press "Activate Tow". Then swipe right to return to the front screen. You should see, "Tow Connected" and all sensor and position data from the tender.

#### **If the tender goes adrift:**

**Bridge:** The Bridge Display will automatically go red, trigger an audible alarm, and will trigger the yacht's alarm management system (if connected).

**Tender:** The TowPro Processor will automatically activate the tender's COLREG lights, start broadcasting an AIS position, and send hourly position reports to the emergency tracking website via Iridium.

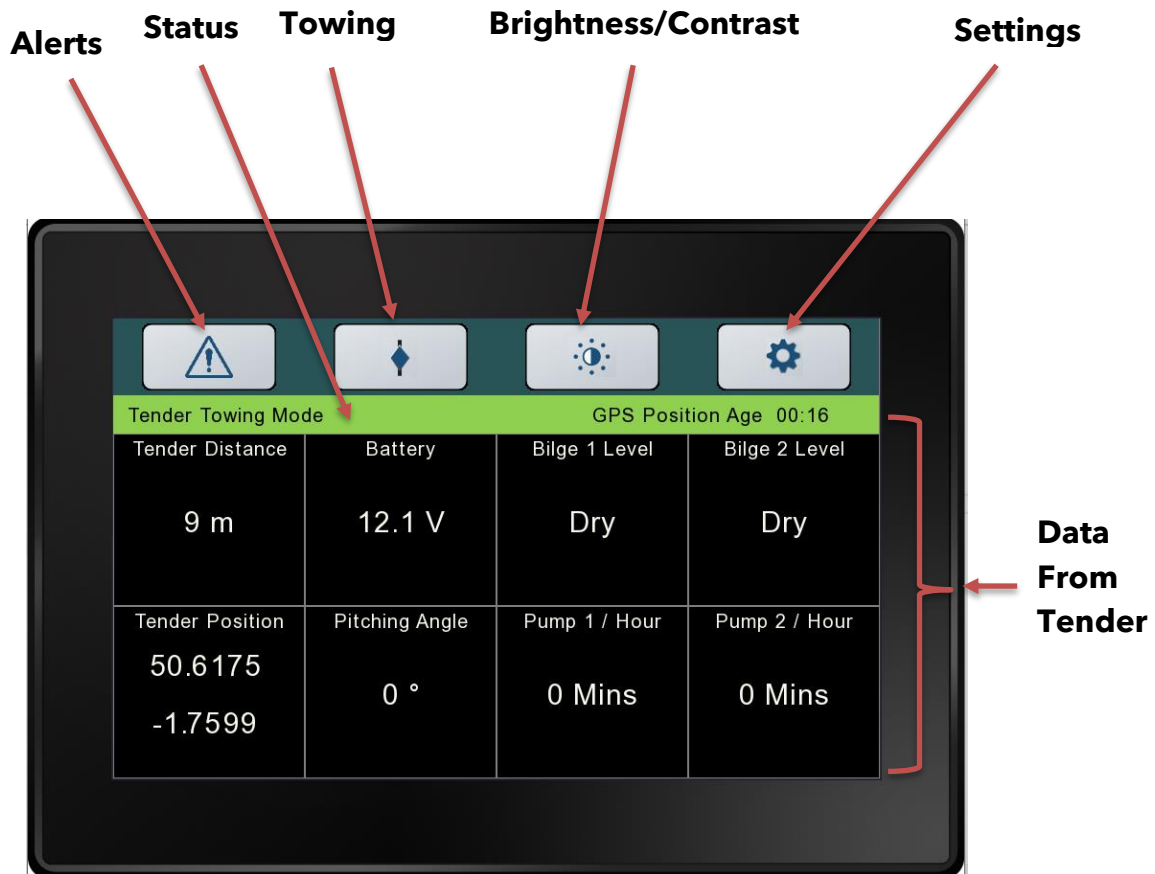
**Emergency Tracking Website:** If you have the Iridium Emergency Tracking Service, you can find your tender's location using the web tracker (4.1).

## Section 2 - Using the Bridge Display

### 2.1 - Main Display

This is the standard display screen, which the Bridge Display will usually show. It shows the status of the system, how long since the last update from the tender, and a set of tiles showing safety indicators. You can:

- Swipe left or right on the touch screen to switch between layouts (see Tiles)
- Swipe right at any stage in the operations menu or an indicator plot returns to the main display



**Figure 2.1 TowPro Yacht display in use**

**Status:** Displays the current status of the TowPro system, including GPS Position age which is the last time it received the tender position.

**Towing:** Tap to access the Operations menu (2.4). This menu is used to control TowPro operations during towing

**Settings:** Tap to access the Config menu (see Installer Manual). This menu is used to configure the system initially and should not be accessed by normal users.

**Alerts:** Short cut to setting the alerts, used when toggling local geofencing of the Tender.

**Tiles:** Display safety information about the tender. Two default layouts are provided (swipe left or right to swap between them), and users can change which indicators are displayed and their orientation in the Config menu (see Installer Manual)

## 2.2 - Normal Usage

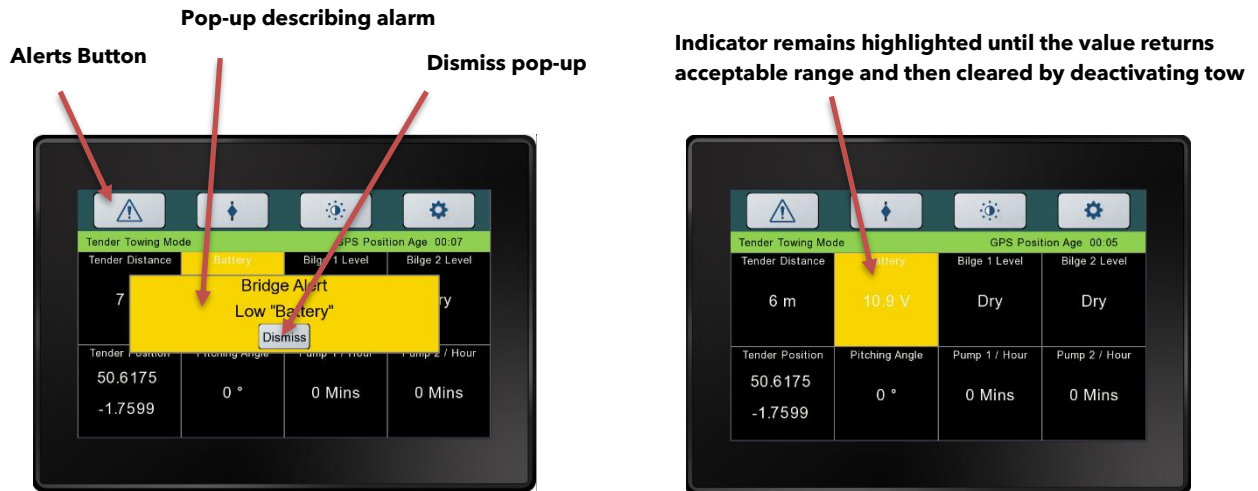
During normal usage, the system will be in one of three modes:

**Monitoring Mode:** Used when not towing, status bar blue. Indicators will continue to display tender information if it is available, and bridge alerts will still be triggered. This is physically selected on the TowPro processor and probably in this mode the TowPro will be left the majority of time.

**Ready:** The system will automatically move from Monitoring to Ready if Towing Mode has been selected on the Tender, and indicates that the system is ready to start tow protection. The status bar will turn orange. The system must be in Ready mode to start towing.

**Tow Connected:** Used while towing, and indicates that the tender is still within towing range. The status bar will turn green. Bridge alerts may appear as pop-ups. Two alarm conditions can be triggered which are explained below: Data Lost (2.5), and Tender Adrift (2.6).

## 2.3 - Bridge Alerts



**Figure 2.2 TowPro Yacht display in use**

Bridge alerts are user-configured alerts which are triggered when some safety indicator moves into a dangerous range. They trigger an audible alarm, and may trigger the yacht's alarm management system if connected, as well as providing a pop-up and highlighting the indicator in question on the Bridge Display (*left*).


The pop-up can be dismissed, which also cancels the audible alarm and alarm management system, but the indicator will remain highlighted until the indicator is back in the alert's safe range (*right*).

These can be set via the Alerts button (see figure 2.2).

### Common Set Alerts

- 1) Bilge Level. This can be set to alert if a bilge sensor is triggered.
- 2) Pump time. This can be set to alert if a pump runs for a certain time.
- 3) Voltage. This can be set to alert if the battery that the Tender TowPro system is powered off drops below a certain level.
- 4) Tender Distance. This can be used as geofence that can be set from the yacht. If in monitoring mode this can be used as an anti-drift alarm, particularly when at anchor or in a marina.

## 2.4 - Operations Menu

The Operations menu can be accessed by tapping its icon  in the top right of the display (2.1). To leave the menu and return to the normal display, swipe right.

**Activate / Deactivate Tow:** Tap to start or stop towing, changing which mode the system is in (2.2). Remember that the system must already be in Ready mode in order to start towing.

**Light:** Tap to adjust the brightness of the display. A menu will appear: tap + to increase brightness, - to decrease brightness, and × to dismiss the menu.

**Zero Trim:** Tap to zero the trim sensor when the tender is sat at the correct angle of trim on the wake. This option should be set each time you tow.



**Figure 2.3 Operations menu, standby and activate tow**

## 2.5 - Data Lost Alarm

The Data Lost alarm is triggered when the system has not received an update from the tender after a certain period while towing. The default is 90s, but this can be adjusted in Config (see System Configuration Guide).



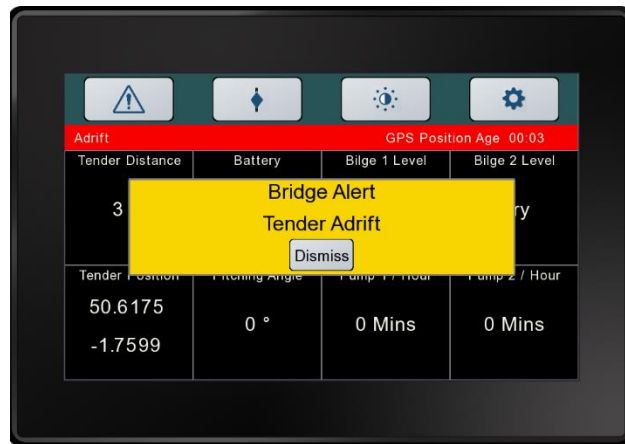
**Figure 2.4 Data Lost alert, all data wiped after a data loss**

When the alarm goes off, a pop-up will appear and the system will sound an audible alarm (*left*). If connected, the yacht’s alarm management system will also be triggered. When the pop-up is dismissed, the audible alarm will be silenced. The status bar will remain highlighted yellow and the status will continue to read “Data Lost” (*right*). If tender updates resume, the system will return to Tow Connected mode. If the tow is stopped (2.4), the system will return to standby mode (2.2).

## 2.6 - Tender Adrift Alarm

The Tender Adrift alarm is triggered when the tender passes outside a specified distance from the yacht while towing, configured on the tender’s TowPro Processor (see Installer Manual).





**Figure 2.6 TowPro Yacht display in use showing tender adrift alert**

When the alarm is triggered, a pop-up will appear, and the system will sound an audible alarm (*left*). If connected, the yacht's alarm management system will also be triggered. When the pop-up is dismissed, the audible alarm will be silenced. The status bar will remain highlighted red and the status will continue to read "Tender Adrift" (*right*).

The TowPro Processor on the Tender will enter adrift mode. The Bridge Display can be deactivated to standby via the Operations menu (2.4). If you have the Iridium Emergency Tracking Service, you can find your tender's location using the web tracker (4.1). The TowPro processor will leave adrift mode automatically once it reenters the set towing distance and clear its own alert.

## Section 3 - Using the Tender Display

### 3.1 - "TowPro Ready" Indicator Light

TowPro is designed so that the tender Processor can be installed out of sight. A remote "TowPro ready" indicator light is either green or red as follows:

- **Red:** The Processor does not have a GPS fix, and is not ready to tow
- **Green:** The Processor has a GPS fix and is ready to tow

Note that when the Processor is starting up, it may take several minutes to acquire a GPS fix. If the "TowPro ready" indicator light is still red after that period, check the display (3.2) to identify the problem.

### 3.2 - Processor Display



**Figure 3.1 TowPro Tender display in use and in Towing Mode and Monitoring Mode**

The Processor display can be used to get further information about TowPro's status, but is not needed for normal usage. It indicates the Processor's status, as well as the tender's current distance from the yacht.

**Tow Readiness Status:** This bar will initially be grey and read "TowPro Waiting" when the system starts up and is waiting for a GPS fix. When the system is ready to tow, the bar will go green with the message reading "TowPro Live". If the tender has gone adrift, it is red and reads "Tender Adrift".

**GPS OK:** This reports that the system has had a valid GPS message in the last 2 seconds.

**VHF OK:** This reports that the system has had a valid AIS message from the Yacht within the last 30 seconds.

**Current Tow Length:** This displays the current tow length from tender to yacht, if the system is ready.

**Brightness Control:** Press this button to open brightness controls.

**Settings:** Press this button to adjust settings (MMSI, position timeout, tow length etc.).

**Mode:** Toggles the tender system between Monitoring mode (blue banner) and Towing Mode (green banner).

### 3.3 - After Going Adrift

The tender system will reset once it returns to within the radius of the towing length.

**You must ensure that the tender system does not remain in adrift state once recovered.**

The TowPro Processor will keep broadcasting emergency messages until restarted.

### 3.4 - Monitoring Mode

Select Monitoring mode by pressing the mode button (blue banner appears). All alarm conditions will still operate. The only difference is that the tender adrift (and subsequent Iridium broadcasts) are disabled. This mode can be selected when the tender is in use.

### 3.5 - Towing Mode

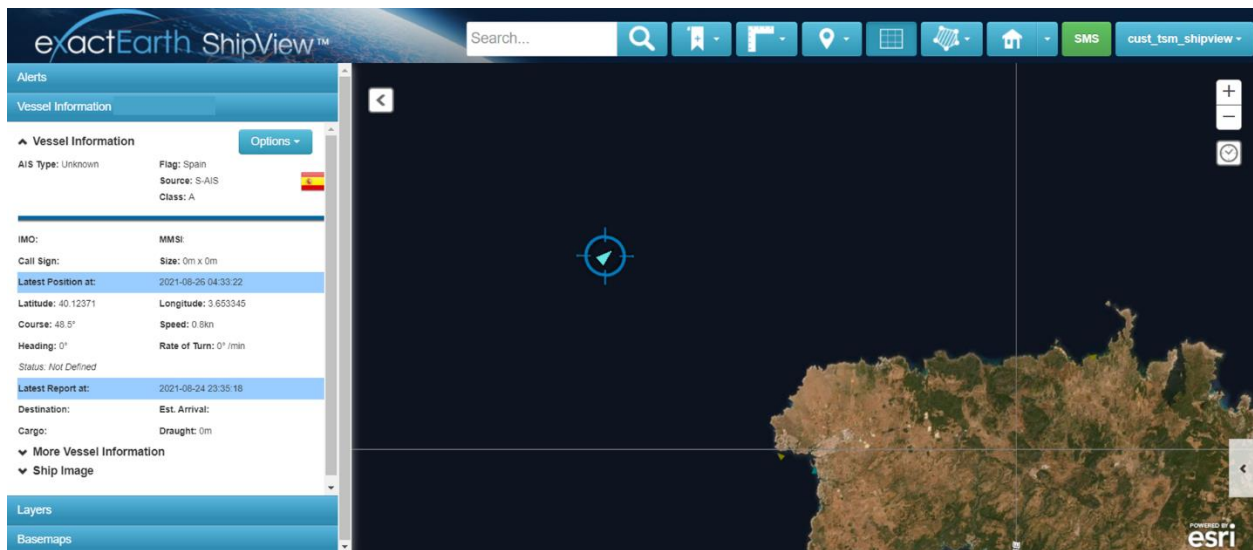
Select Towing mode by pressing the mode button (green banner appears). All alarm conditions will operate including tender adrift (and subsequent Iridium broadcasts) if the tender travels beyond selected tow length (default 250m). If the tender re enters this length, tender adrift alert is re-set automatically.

## Section 4 – Using the Emergency Tracking Service

### 4.1 - Tracking using ExactEarth website

If you have the TowPro Emergency Tracking Service, the tender automatically sends position updates to your personalised account on the tracking website provided by our partners at ExactEarth. In normal conditions, a daily report will be sent at midnight UTC (if TowPro is switched on), and this will automatically switch to send hourly reports if the tender goes adrift. These position updates can be viewed on the ExactEarth website, allowing you to pinpoint, locate, and safely recover your tender after it has gone adrift.

Log into ExactEarth’s ShipView web portal here: <https://shipview.exactearth.com/>  
Your username and password will have been provided with your TowPro system when purchased.



**Figure 4.1 TowPro Tender display in use and in Towing Mode**

Once you have logged in, you will be presented with a chart view, with vessel information in the window on the left. The “Vessel Information” section displays the exact reported position (along with timestamp) of your tender’s last update. This position can be entered into your chart plotter, or other mapping system, and allow you to pinpoint and locate your tender.

In addition, the most recent position is overlaid on a satellite image in the main window.

**Please note that position updates are sent daily during normal usage, at UTC 00:00, and hourly if the tender is adrift.** While "fair use" of the system is covered by your Service charge, if any tender repeatedly and erroneously "goes adrift" (eg. navigating away from the yacht after towing is complete, without having switched off the tender Processor), **you may be responsible for the tracking costs.**