

WinFrog Device Group:	ROV
Device Name/Model:	NSCADA Data Logger
Device Manufacturer:	<p>Perry Slingsby Systems - USA 821 Jupiter Park Drive Jupiter, Florida 33458-8946 Tel: +1.561.743.7000; Fax: +1.561.743.1313 www.perrytritech.com</p> <p>Perry Slingsby Systems - UK Ings Lane, Kirkbymoorside York, England YO62 6EZ Tel: +44 1751 431751; Fax: +44 1751 431388</p>
Device Data String(s) Output to WinFrog:	Heading, Depth, Altitude, Burial Depth
WinFrog Data String(s) Output to Device:	\$NORCLOG: shipHeading, shipLatDeg, shipLatMin, shipLatCode, shipLonDeg, shipLonMin, shipLonCode, rovLatDeg, rovLatMin, rovLatCode, rovLonDeg, rovLonMin, rovLonCode, ROVkp
WinFrog .raw Data Record Type(s):	ROV Data: 496, Heading: 410 Heading Output: 910 Bottom Depth: 411 Bottom Depth Output: 911

DEVICE DESCRIPTION:

The NSCADA Data Logger is manufactured by Perry Trittech for use on sub sea vehicles such as trenchers, plows and ROV's. It outputs the relevant ship and ROV data to the DATALOGGER and the relevant ROV data to the WinFrog system. See Output descriptions above for more details on data output.

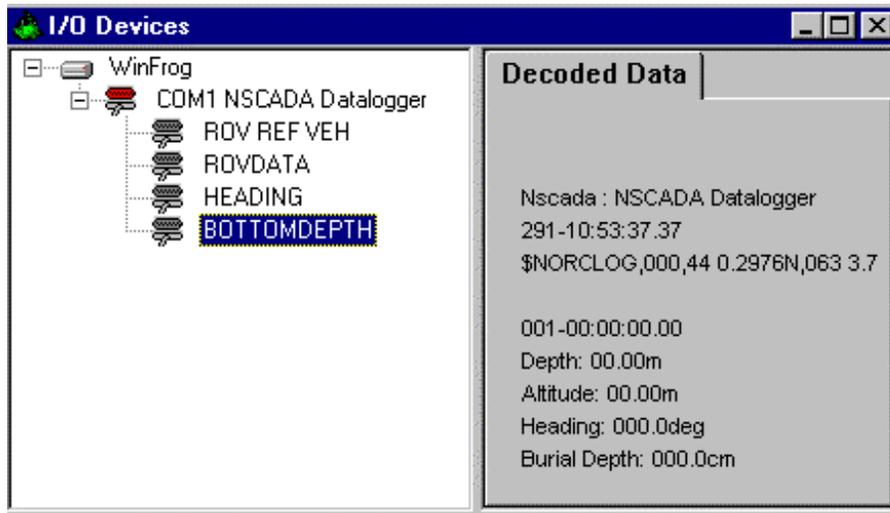
DEVICE CONFIGURATION INSTRUCTIONS:

Baud Rate: 9600
Data Bits: 8
Stop Bits: 1
Parity : None

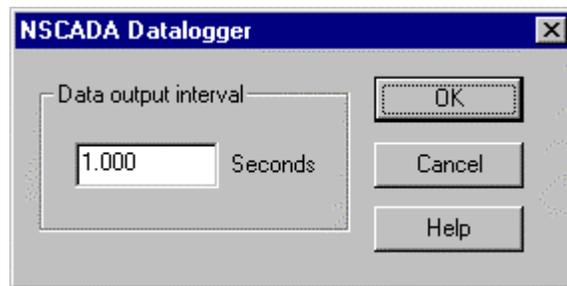
WINFROG I/O DEVICES > CONFIG OPTIONS:

The NSCADA Datalogger is added to WinFrog from the ROV device types. The **ROV REF VEH**, **ROV DATA**, **HEADING** and **BOTTOMDEPTH** sub-devices are added to the system when the device is initiated.

The Depth, Altitude, Heading and Burial Depth are available in the Decoded Data of the I/O Device Window.



By highlighting the NSCADA device in the I/O Device window, right-clicking and selecting Configure Device, the Data output interval for the NSCADA Datalogger can be changed, from the default value of 1 second to the appropriate interval.

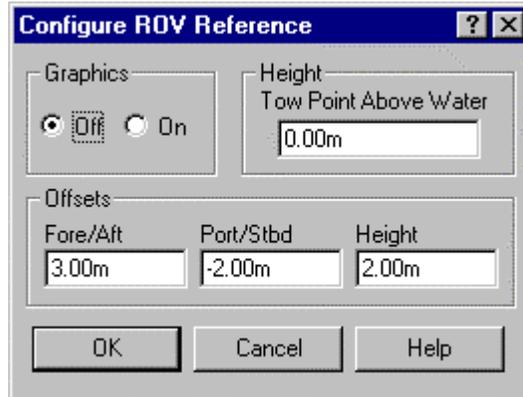


The NSCADA Datalogger can be positioned on the sub-sea vehicle using either a Towed Vehicle device, or acoustics. Refer to documentation on the Towed Vehicle, USBL or LBL device used for positioning the sub-sea vehicle.

WINFROG VEHICLE TEXT WINDOW > CONFIGURE VEHICLE DEVICES > DEVICE > EDIT OPTIONS:

The **ROV REF VEH** sub-device is added to the master vessel or ship. The **ROV DATA**, **HEADING** and **BOTTOMDEPTH** sub-devices can be added to the sub-sea vehicle. This will permit logging of the raw data files, and will supply Ship and ROV position data, as well as the KP value, to the Datalogger. All of the sub-devices can be edited from the Configure Vehicle-Devices dialog box.

1. Configuration of the ROV REF VEH.



Graphics:

Turning on the Graphics will display the device name and a square at the location of the 'ROV', within the Graphics and Bird's Eye windows.

Tow Point Height:

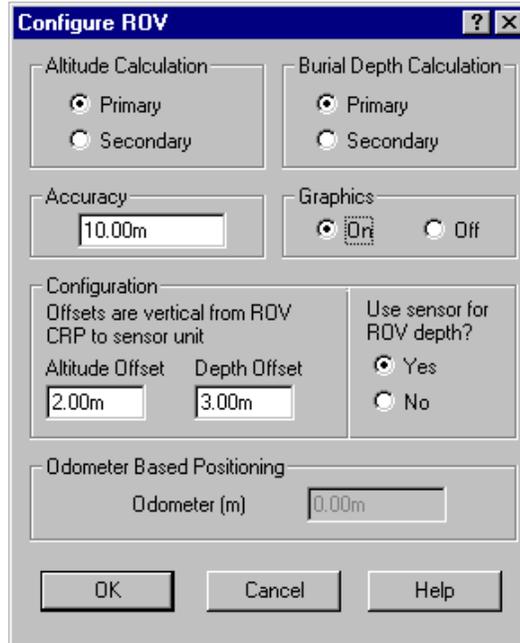
The height of the tow point above water is added for layback calculations only if a towed vehicle model is used.

Offsets:

The X,Y,Z Offsets are applied from CRP to the Scanning Head Location. These values are set similar to values that would be applied to any device offset within WinFrog.

Note: It is advised to use the waterline as the vertical CRP reference when sub-sea positioning devices are employed.

2. Configuration of the ROVDATA.



Altitude Calculation/Burial Depth Calculation:

The altitude and burial depth calculations should be set to Primary if either is being used for real-time positioning of the ROV or towed vehicle.

Accuracy:

A realistic accuracy of the positioning system utilized should be input. Changing of the default value should be performed with caution, as this will affect the kalman-filtered position of the vehicle.

Graphics:

Turning on the Graphics will display the device name and a square at the location of the hydrophone, within the Graphics and Bird's Eye windows.

Configuration:

Vertical offsets of the altitude and depth sensors, relative to the CRP, can be input here. The Altitude Offset is the vertical distance (positive up) from the ROV's CRP to the acoustic beacon tracking the seafloor. The Depth Offset would be the vertical distance from the ROV's CRP to the sensor that provides depth information of the ROV. The water column depth would be the sum of the depth reading, the two offsets, and the altitude value.

ROV depth:

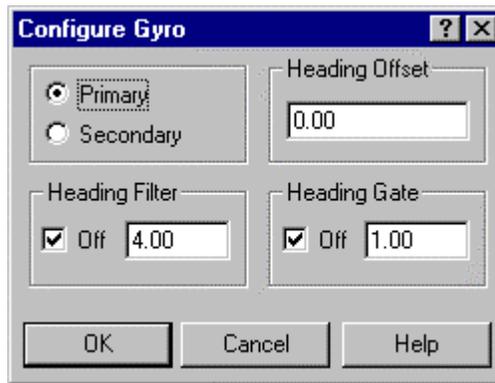
The real-time depth of the ROV can be determined from the NSCADA Datalogger depth value or a separate depth (pressure) sensor, if one is installed on the ROV.

Odometer Based Positioning:

The odometer based positioning option is not used for this device.

3. Configuration of Heading

The configuration of the Heading is accomplished using the Configure Gyro Window. The NSCADA Datalogger supplies a heading value for the ROV. You may wish to set this device to secondary, where the heading will be available for post processing, but not for real-time display.



Heading Offset:

If the gyro is reading low, a positive offset (correction) should be applied.

Heading Filter:

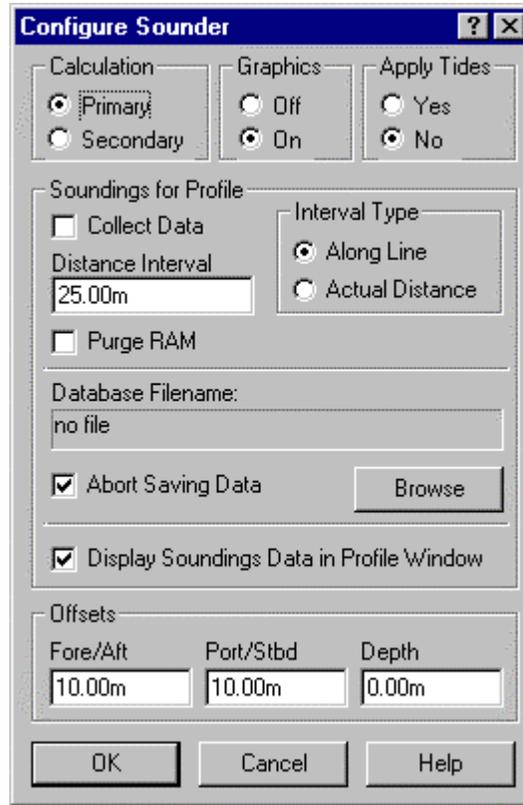
This value operates similar to the velocity filter in the Configure Vehicle-Devices dialog box. When 'on', the vehicles' heading value takes previous heading fixes into account – the number input in the Heading Filter Box - for a 'smoothed' heading display for the vessel.

Heading Gate:

When initiated, any heading deviations observed that are greater than the value input, will be disregarded.

4. Configure Bottomdepth

Editing the BOTTOMDEPTH sub-device in the Configure Vehicle – Devices dialog box brings up the Configure Sounder dialog box.



Calculation:

Set the type of calculation to primary or secondary using the calculation radio buttons. A primary sounder will record data in the vehicles' raw data files (i.e. raw data type 300, 350, 351), where the secondary sounder setup will not. In either case the raw data will still be recorded under the 411 data type.

Graphics:

If the Graphics is turned on, a labeled square will show the raw (unfiltered) location of the sounder, in the Graphics and/or Bird's Eye windows.

Apply Tides:

If the On radio button is selected, WinFrog will apply tidal corrections to the observed depth data to enable the display and recording of chart datum referenced depths. Tide data can be received from an interfaced real time depth sensor or from tide prediction files containing time and tide height data. Note that the tide device or file must also be added to the vehicle's device list. Refer to documentation on the Tide device for more information.

Note: The Ribbit processing program uses the same tide format as WinFrog.

Soundings for Profile:

This section permits the collection of data for database logging separate from WinFrog and Ribbit. This database can then be used for numerous applications including real time display within the Profile Window, or data collection for later display in the Profile Window.

Data will be collected, at the Distance Interval stated, when the 'Collect Data' checkbox is selected. The interval can be either Along Line, or at the Actual Distance (from last fix).

The data is stored in the RAM memory of the computer. Any data collected which will not be required at later time, can be deleted by selecting the Purge RAM checkbox, and exiting the window by clicking the OK button.

A Database Filename can be chosen and the filename is displayed in this window. The Abort Saving Data checkbox can be selected if a problem occurs, and you want to stop saving the data at that instance.

The Display Soundings Data in Profile Window checkbox can be selected if you want the data to be displayed in the Profile Window, in real time.

Offsets:

The offsets for the individual transducer are input here. The standard Fore/Aft, Port/Starboard offset signage is used. The depth value is positive down. Rule of thumb suggests that the water line be used for the vertical datum.

Note: Presently the sounder offsets should be left out unless the Altitude and Depth sensors are in the same X, Y location. Post-processing the data, with an attitude (pitch and roll) sensor present on the ROV will provide more accurate water depths should the ROV be tilted.

CONFIGURATION DETAILS:

Refer to system documentation on the installation and hook up of this unit. Interfacing to this unit should only be performed by experienced personnel.