WinFrog Device Group:	**GYRO**
Device Name/Model:	**PVP II D&H**
Device Manufacturer:	
Device Data String(s) Output to WinFrog:	See Telegram Specifications section below
WinFrog Data String(s) Output to Device:	N/A
WinFrog Data Item(s) and their RAW record:	ELEVATION 372 HEADING 910

DEVICE CONFIGURATION INSTRUCTIONS

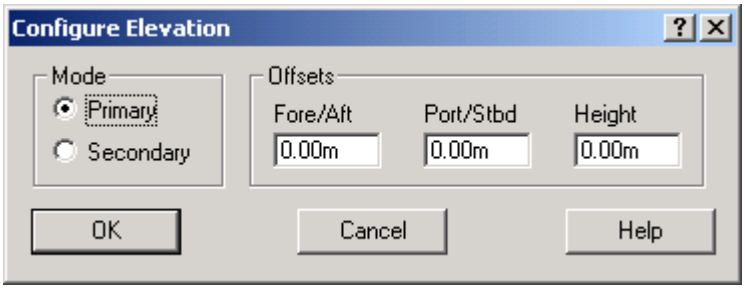
WINFROG I/O DEVICES > EDIT I/O:
Serial
Configurable Parameters

WINFROG I/O DEVICES > CONFIGURE DEVICE:
No configuration is required at the I/O Device window level.

WINFROG VEHICLE > CONFIGURE VEHICLE DEVICES > DEVICE DATA ITEM > EDIT:
Adding the PVP II D&H device creates 2 data items: ELEVATION and HEADING. Once the data items have been added to the vehicle, they must be edited to suit the application.

Data item: GYRO, PVP II D&H, ELEVATION

If the device is added to a vehicle, the following configuration dialog is available under the **CONFIGURE VEHICLE DEVICES > EDIT**:

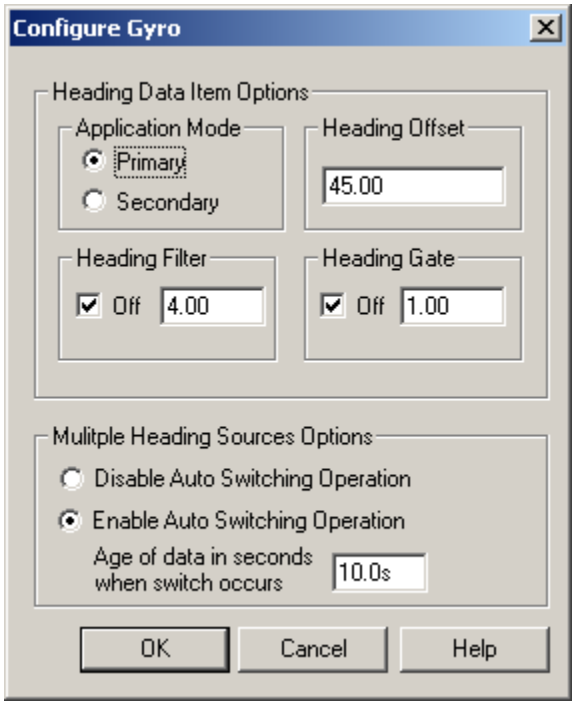


On this dialog you can specify if the PVP II D&H device is to be used for measuring the depth, as well as recording depth data in the raw files, by selecting the device as Primary. If Secondary is selected, then the depth measured from the device will be recorded in the raw files but will not be used for real time depth measurement.

The offsets are applied similar to all offsets in WinFrog. Offsets are measured from the Common Reference Point (CRP) of the vessel to the device. Forward and starboard offsets are entered as positive values, aft and port offsets are entered as negative values.

Data item: GYRO, PVP II D&H, HEADING

The Heading data item must also be edited once it is added to a vehicle's device list. Highlight the **HEADING** data item in the vehicle's device list, then select the **Edit** button. The **Configure Gyro** dialog box appears as seen below.



Heading Data Item Options:
Application Mode (Primary/Secondary):
Set the type of calculation to Primary or Secondary by selecting the appropriate radio button. Devices set to Primary are used to provide the vehicle heading information. Devices set to Secondary are simply monitored, and are not used in the vehicle's calculations.

Note that WinFrog supports automatic switching from a designated Primary to a Secondary in the case that data from the Primary fails (see Multiple Heading Sources Options).

Heading Offset:
A correction value (as determined from a gyro calibration) can be input in the Heading Offset box. This value is added to the heading value from the Device to provide a corrected heading for the vehicle. Note that positive or negative values can be entered.

Heading Filter/Heading Gate:
The Heading Filter is used to "smooth" heading values used by the vehicle. The value entered in the Heading Filter indicates the number of headings that will be used to predict the next heading value. The larger the value entered, the "heavier" the filter will be – i.e. the slower the vehicle's heading will respond to changes.

The heading gate defines a tolerance value to limit the use of anomalies in gyro readings. If the next observed gyro value received falls outside the specified range of predicted values (i.e. plus or minus the entered value), the value will not be used.

Multiple Heading Sources Options:
WinFrog supports automatic switching from a designated Primary source to an alternate Secondary source in the event that the Primary fails. The first Secondary source to receive data after the Primary has failed becomes the alternate Primary providing the heading for the vehicle. When the designated Primary is detected as active again, the alternate Primary source reverts to Secondary and the designated Primary provides the heading data to the vehicle.

If an alternate Secondary fails and there are additional Secondary sources, it in turn is detected by the first of the remaining operational Secondary sources to receive data after the failure at which time this Secondary becomes the alternate Primary.

Note that this option is only available if more than 1 HEADING source is associated with the respective vehicle. Changes made to the Auto Switching options for any one of the HEADING data items are automatically assigned to the others upon exiting this dialog with OK. If the Auto Switching option is enabled and the respective HEADING source has been set to Primary, all others are automatically set to Secondary. The exception to this is when configuring a WinFrog Controlled Remote (WinFrog with a Remote module) from a Controller. In this case, changes made to one HEADING source are not automatically made to other HEADING sources. The operator must explicitly make them for each HEADING source.

This option is not available in the WinFrog Remote package.

Disable/Enable Auto Switching Operation:
Select the mode you wish to operate WinFrog.

Age of data in seconds when switch occurs:
Enter the age of data that is permitted before the source is considered to have failed.

TELGRAM SPECIFICATION:

The input strings are:

FORMAT (comma delimited ASCII):

Field	Item
1	$PVPYP
2	heading

FORMAT (comma delimited ASCII)

Field	Item
1	$PVPHC
2	depth (feet)