

WinFrog Device Group:	GYRO
Device Name/Model:	WHOI DIGITIZER
Device Manufacturer:	Woods Hole Oceanographic Institute Information Office Co-op Building, MS #16 Woods Hole, MA 02543 E-mail: information@whoi.edu Fax: 508-457-2180 Phone: 508-289-2252
Device Data String(s) Output to WinFrog:	ASCII Heading
WinFrog Data String(s) Output to Device:	Nil
WinFrog.raw Data Record Type(s):	Type 910 (Type 410 if data repeated 15 times)

DEVICE DESCRIPTION:

The Woods Hole Oceanographic Institute (WHOI) is an organization “dedicated to research and higher education at the frontiers of ocean science. Its primary mission is to develop and effectively communicate a fundamental understanding of the processes and characteristics governing how the oceans function and how they interact with Earth as a whole”.

The WHOI DIGITIZER device is a gyro repeater manufactured by the Woods Hole Oceanographic Institute. This unit converts their vessel's gyrocompass analogue data output to a proprietary format RS232 serial data string.

DEVICE CONFIGURATION INSTRUCTIONS:

Baud Rate: 4800
Data Bits: 8
Stop Bits: 1
Parity: None

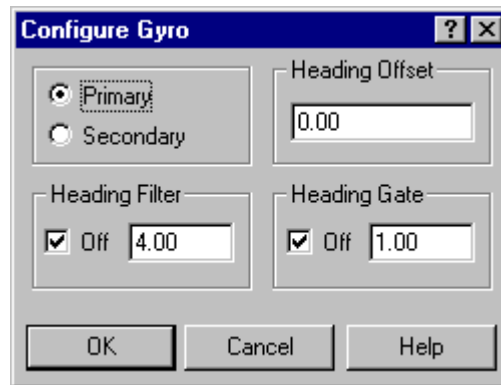
WINFROG I/O DEVICES > CONFIG OPTIONS:

The WHOI DIGITIZER device is added to WinFrog from the Gyro device category. Adding the WHOI DIGITIZER device to WinFrog creates a Heading data item.

When adding the WHOI DIGITIZER Gyro to WinFrog, the communication parameters must be set to match the communication settings in the gyro being used. No other configuration is required at the “generic” I/O device level.

WINFROG VEHICLE - DEVICE > EDIT OPTIONS:

Once the WHOI DIGITIZER (gyro) device has been added to a vehicle's device list, it must be edited to suit the application. To edit the device, in the vehicle's device list highlight the GYRO, WHOI Digitizer, Heading data item, then click the Edit button. The Configure Gyro dialog box appears as seen below.



Calculation (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.

In the case of Primary device failure, WinFrog will not automatically use the Secondary device(s). You must manually change a Secondary device to Primary status in order for it to be used in the vehicle's calculations.

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 data being received from the WHOI digitizer 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.

CONFIGURATION DETAILS:

Contact the Woods Hole Oceanographic Institute for information on configuring the WHOI DIGITIZER.