

WinFrog Device Group:	GYRO
Device Name/Model:	SIM SURLINE HEADING
Device Manufacturer:	
Device Data String(s) Output to WinFrog:	Heading of currently tracked survey line segment.
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 SIM SURLINE HEADING device is a simulated heading device whereby the (True) azimuth of the current segment of the currently tracked survey line is designated as the vessels' heading.

DEVICE CONFIGURATION INSTRUCTIONS:

No configuration required as the device is simulated.

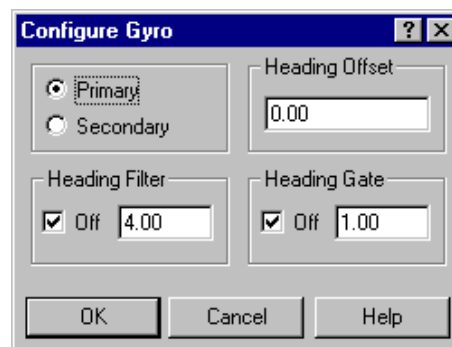
WINFROG I/O DEVICES > CONFIG OPTIONS:

The SIM SURLINE HEADING device is added to WinFrog from the Gyro device category. Adding the SIM SURLINE HEADING device to WinFrog creates a SimGyroAuto heading data item.

The SimGyroAuto device is assigned to COM0 and therefore no communication parameter configuration is required.

WINFROG VEHICLE - DEVICES > EDIT OPTIONS:

Once the SimGyroAuto device has been added to a vehicle's device list, it must be edited to suit the application. In the vehicle's device list, highlight the SimGyroAuto device and 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 azimuth of the currently tracked line segment 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:

As the device is simulated, no configuration is required. You must however, be tracking a survey line in order for this device to "work" correctly. To track a survey line, you must first be viewing the correct vehicle's data in the Vehicle Text window. Now, with the mouse pointer within the limits of the Vehicle Text window, right-click and select the Setup Line Tracking option. Select the appropriate survey line (as found in the drop down menu) and direction (Forward or Reverse). The default Segment Control option (Auto, Find First Segment) instructs WinFrog to track the line segment that is nearest to the currently tracked vessel offset.

Alternatively, setting up Automatic Eventing for data collection can also be used to enable survey line tracking. See the WinFrog User's Guide for more details on Eventing in WinFrog.

Once survey line tracking has been enabled, WinFrog will utilize the true bearing of the currently tracked segment as the vehicle's heading.