

WinFrog Device Group:	GPS
Device Name/Model:	MANUAL GPS
Device Manufacturer:	
Device Data String(s) Output to WinFrog:	NONE
WinFrog Data String(s) Output to Device:	NONE
WinFrog Data Item(s) and their RAW record:	POSITION 303

DEVICE DESCRIPTION:

The Manual GPS device is a simulated GPS device whereby the position of the vessel can be entered manually in either geographic (Latitude and Longitude) or grid (Northing and Easting) coordinates.

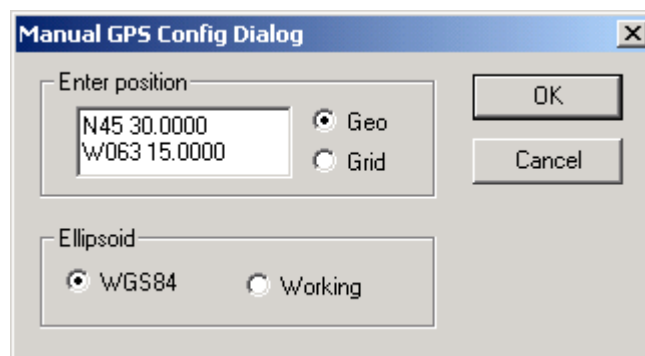
DEVICE CONFIGURATION INSTRUCTIONS

WINFROG I/O DEVICES > EDIT I/O:

This is a simulation device and is assigned com port 0.

WINFROG I/O DEVICES > CONFIGURE DEVICE:

This device must be configured at the I/O Device window level. In the I/O Devices window, click the device name to select it, then right-click and select Configure Device. The Manual GPS Config Dialog window appears, as seen below.



Here you can enter the vessel's position in either geographic lat/long or grid Northing/Easting coordinates. You can also select the Ellipsoid as either WGS84 or the working Ellipsoid as defined in the Configure/Geodetics option (See Chapter 3 of the WinFrog User's Guide for more details on Ellipsoidal parameters).

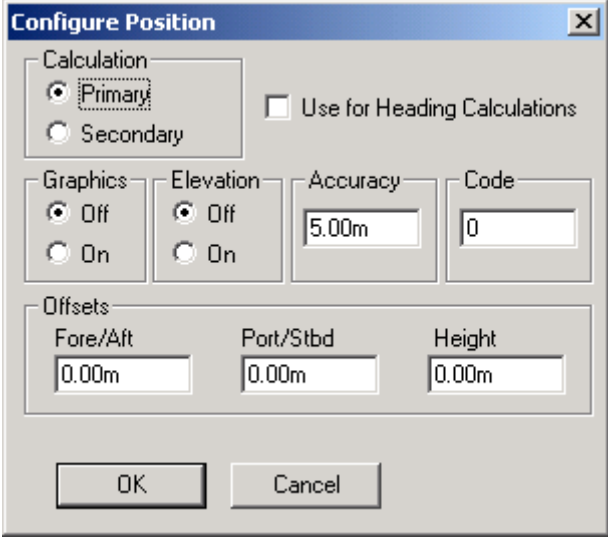
WINFROG VEHICLE > CONFIGURE VEHICLE DEVICES > DEVICE DATA ITEM > EDIT:

Adding the Manual GPS device creates the POSITION data item. Once the data item has been added to the vehicle, it must be edited to suit the application.

Data item: GPS, ManualGps, POSITION

Highlight the GPS, Manual GPS, POSITION data item in the vehicle's device list and click the Edit button. The Configure Position dialog box appears as seen below.

Note that this is a simulated device. Simply entering a desired position for the vessel in the appropriate dialog boxes operates this device. The following sections are included, for informational purposes and typically apply to real time devices.

The image shows a 'Configure Position' dialog box with a blue title bar and a close button. It contains several sections: 'Calculation' with radio buttons for 'Primary' (selected) and 'Secondary', and a checkbox for 'Use for Heading Calculations'; 'Graphics' with radio buttons for 'Off' (selected) and 'On'; 'Elevation' with radio buttons for 'Off' (selected) and 'On'; 'Accuracy' with a text field containing '5.00m'; 'Code' with a text field containing '0'; and 'Offsets' with three text fields: 'Fore/Aft' (0.00m), 'Port/Stbd' (0.00m), and 'Height' (0.00m). At the bottom are 'OK' and 'Cancel' buttons.

Calculation:

Set the Calculation selection to Primary or Secondary. Devices set to Primary calculation are used to provide a vessel position. Note that more than one Primary positioning device can be added to a vehicle's device list; data from these devices will be combined in a weighted mean solution. (See the paragraph on Accuracy below for more on the weighting of Primary calculation device data).

If the Calculation type is set to Secondary, WinFrog will simply monitor the device's data. WinFrog will not use the position data from the device in the final solution of the vehicles' position.

Note: In the case of Primary device failure, WinFrog will not automatically use the Secondary devices for the vessel's position computation. Instead, the vehicle's positioning will go to dead reckoning (if dead reckoning is turned on). You must manually change a Secondary device to Primary in order for the data to be utilized.

Use For Heading Calculations:

Select this checkbox if the device is to be used in conjunction with another GPS device for determination of the heading of the vessel. The vessel's heading will be derived by the inverse of the GPS antenna coordinates.

Graphics:

Select the On radio button to display a labeled square showing the raw (offset but unfiltered) location of the GPS antenna in the Graphics and Bird's Eye windows. This provides a means of comparing raw device and filtered vehicle positions.

Elevation:

Setting the Elevation option to "On" will result in the elevation determined by the GPS to be used as the elevation of the vessel's CRP, referencing the GPS (WGS84) Ellipsoid. The height of the antenna above (below) the CRP must be entered. The sounder data recorded in WinFrog's .RAW data files will not be affected.

This option is meant only for those applications where there is no fixed vertical reference (i.e. mean sea level), such as on a river. For acceptable results, this option requires the use of high accuracy "RTK" GPS data.

Accuracy:

The Accuracy value entered provides WinFrog with the expected accuracy of the position from this device. This value is used in the weighting of this device compared to other positioning devices that may be added to the vehicle's device list. The smaller the value entered, the more accurate it is considered to be, and hence the more weight that will be applied to the device's data.

The Accuracy parameter can be changed from the suggested values. Changes should be made with caution, however, as they will affect the final filtered position of the vehicle.

Code:

This field is used when the GPS data is being received by a remote GPS receiver connected via telemetry link. If this is the case, set the Code to coincide with the code parameters associated with the GPS unit being used. For all other applications, the Code entry must be set to 0.

Offsets:

Offsets are required to associate the GPS antenna position with the vessel's Common Reference Point (CRP). The offsets are applied *from* CRP (of the vehicle) *to* the GPS antenna location.

Forward Offsets are entered as positive values.

Aft Offsets are entered as negative values.

Starboard Offsets are entered as positive values.

Port Offsets are entered as negative values.

Height Offsets are positive upwards. (It is suggested that the vessel's Height origin should be at the water line.

TELEGRAM SPECIFICATION:

None – simulated device.