

WinFrog Device Group:	INS
Device Name/Model:	NMEA INS (this is a modified NMEA String)
Device Manufacturer:	
Device Data String(s) Output to WinFrog:	"Position,Heading,Speed Log,Bottomdepth" \$P001,time,N/S,lat,lon,E/W,GPSstatus,COG, HDG,vel(fore/aft),depth. See CONFIGURATION DETAILS below for units.
WinFrog Data String(s) Output to Device:	Nil
WinFrog .raw Data Record Type(s):	303 GPS Data 910 – Heading Data 402 – Speed Log Data

DEVICE DESCRIPTION:

Despite the name, the NMEA INS device's data string **is not** of standard NMEA format. WinFrog's NMEA INS "device" accepts data unique to a device created by Fugro in Houston, Texas. This "device" combines data from other Position, Heading, Speed Log, and Bottom depth devices to create a single comprehensive "device" data string.

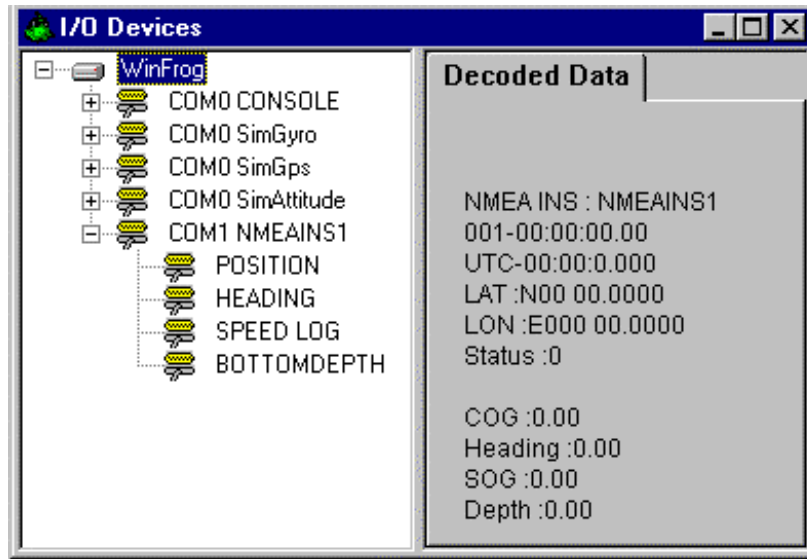
DEVICE CONFIGURATION INSTRUCTIONS:

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

Standard RS-232C serial communication.

WINFROG I/O DEVICES > CONFIG OPTIONS:

The NMEA INS device is added to WinFrog from the INS device category. Adding the NMEA INS device to WinFrog creates Position, Heading, Speed Log, and Bottomdepth data items that can be added to a vehicle's device list, as seen below.



The NMEA INS device does not require any configuration at the “generic” I/O Devices window level.

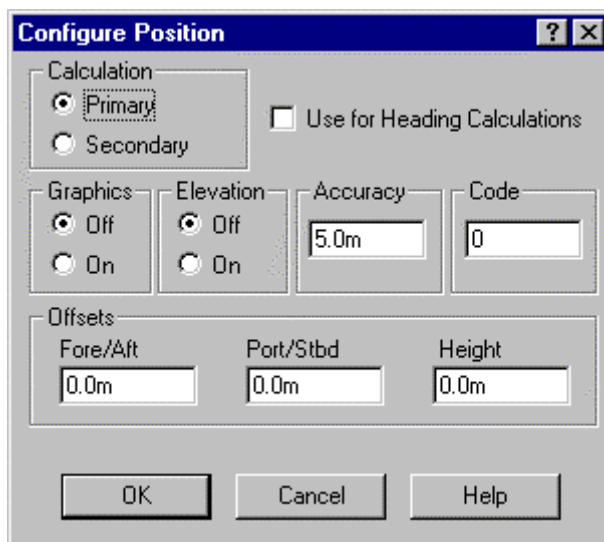
WINFROG VEHICLE TEXT WINDOW > CONFIGURE VEHICLE DEVICES > DEVICES > EDIT OPTIONS:

As mentioned above, the NMEA INS device consists of several different data items including Position, Heading, Speed log, and Bottomdepth. These data items can be treated as individual devices and added to the same or different vehicle’s device lists, as required.

As per any device, once a data item has been added to a vehicle’s device list, it must be edited to suit the application. In the vehicle’s Configure Vehicle-Devices dialog box, highlight the desired data item and click the Edit button. The following paragraphs detail configuration of these data items.

1. Configuration of the NMEA INS1 POSITION data item.

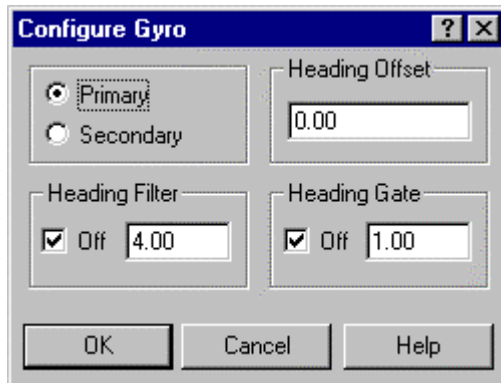
The NMEA INS’ s Position data item is configured similarly to a standard positioning sensor using the Configure Position dialog box, as seen below.



See documentation on the NMEA GPS device for further details on the Configure Position dialog box.

2. Configuration of NMEAINS1 HEADING data item.

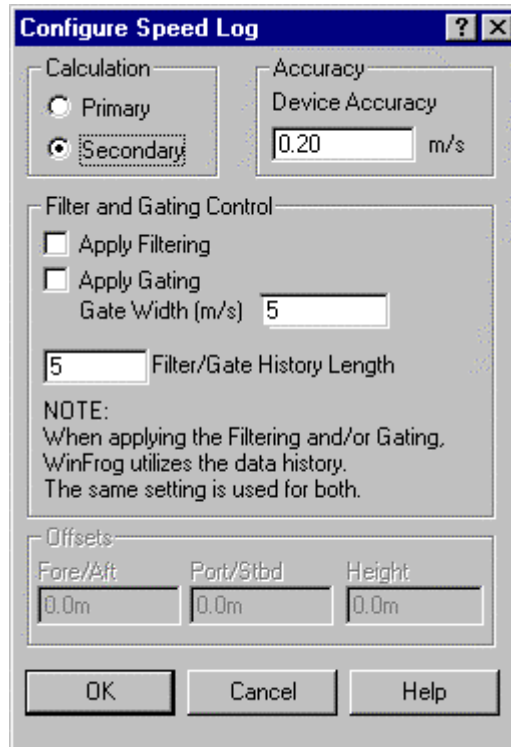
The NMEA INS' s Heading data item is configured similarly to a standard heading sensor using the Configure Gyro dialog box, as seen below.



See documentation on the NMEA Gyro device for further details on the Configure Gyro dialog box.

3. Configuration of NMEAINS1 SPEED LOG data item:

The configuration of the NMEA INS' s Speed Log data item is similar to the configuration of a standard speed log sensor. The configuration is undertaken using the Configure Speed Log dialog box, as seen below.



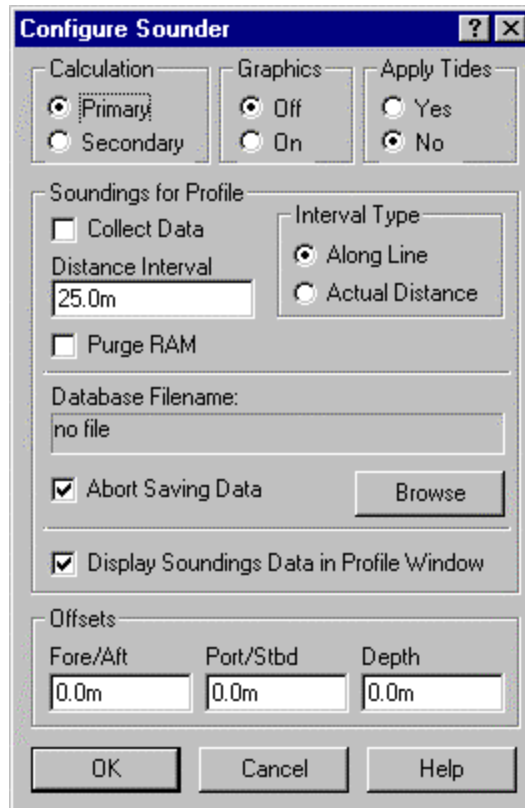
Note that by default the Speed Log Calculation mode is set to Secondary status. This ensures that data from the speed log is not unwittingly applied to vehicle calculations before the device is first configured correctly.

See documentation on the NMEA Speed Log device for further details on the Configure Speed Log dialog box.

Note: The input string for this device is very different from the NMEA Speed Log Device

4. Configuration of NMEAINS1 BOTTOMDEPTH data item:

The NMEA INS' s Bottom Depth data item is configured similarly to a standard depth sensor using the Configure Sounder dialog box, as seen below.



See documentation on the NMEA Sounder device for further details on the Configure Sounder dialog box.

Note: The input string for this device is very different from that of a standard NMEA Sounder device.

CONFIGURATION DETAILS:

Output String:

The NMEA INS data string is unique to this device. The format contents of this data string is shown below:

\$P001,time,N/S,lat,lon,E/W,GPSstatus,COG,HDG,vel(fore/aft),depth.

\$P001,hhmmss.s,ddmm.mm,N/S,ddmm.mm,E/W,n,d.dd,d.dd,x.x,x.x

