WinFrog Device Group:	GPS
Device Name/Model:	**NMEA 0183 AIS** Automatic Identification System
Device Manufacturer:	Any AIS system sending NMEA 0183 AIS messages
Device Data String(s) Output to WinFrog:	NMEA 0183 !AIVDM or !AIVDO See the NMEA 0183 Standard (v3.01) for details.
WinFrog Data String(s) Output to Device:	None
WinFrog Data Item(s) and their RAW record:	NMEA AIS 319

DEVICE DESCRIPTION:
This device receives AIS position data from an AIS system that outputs NMEA 0183 telegrams and plots them in the Graphics window. Only message type 1, 2, 3 and 5 are decoded for !AIVDM (other vessels) and !AIVDO (own vessel). Configuration of data to be displayed in the Graphics window is done on the Misc tab of the graphics configuration dialog. This includes color, maximum range in which to display an AIS vehicle and the mode of display.

There is also a mouse fly over display. If the mouse is within a certain distance of an AIS positioned vehicle, the name (if it has been received) and MMSI (Maritime Mobile Service Identity) number will be displayed on the status bar at the bottom of the main WinFrog window.

The data decode pane of the I/O Device window displays the information of those vessels received. Up to a maximum of 100 vessels may be received. The data is displayed as received and decoded; some values have defaults if they are unavailable, such as heading. If the heading is displayed as 511 then no heading is available and the vessel will be displayed in the Graphics window with a heading of 0.
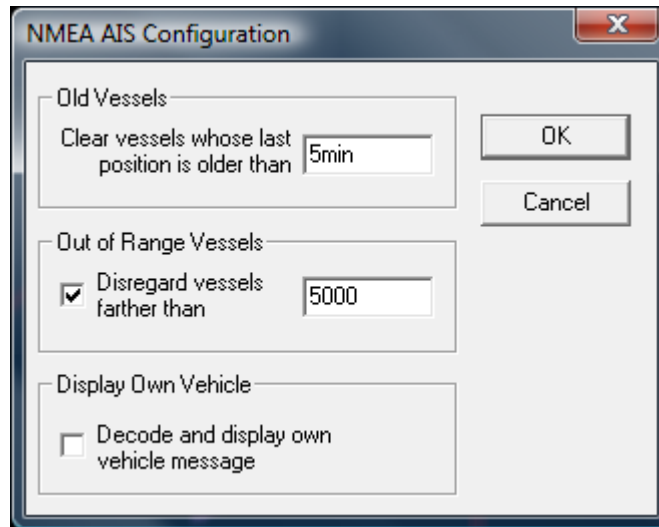

DEVICE CONFIGURATION INSTRUCTIONS

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

WINFROG I/O DEVICES > CONFIGURE DEVICE:

The dialog below allows the operator to decode and display one's own vessel data, set a time out, and limit the number of vessels tracked by distance.

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

You must add the NMEA AIS data item to one vehicle (only one). If you have more than one AIS device attached to WinFrog you must add each NMEA AIS data item from each device to one vehicle.

The minimum time out time is 5 minutes.

To limit the number of vessels tracked by distance, check the **Out of Range Vessels** checkbox and enter a distance. The distance will be from the vehicle the NMEA AIS data item is added to. The minimum distance is 100m or equivalent.

Note: This feature rejects a vessel's data altogether if it is farther away than the specified distance. In the Graphics window, using the **Misc** tab of the configuration dialog, you can limit what is displayed by distance, however this doesn't affect the data for those vehicles not displayed.

Data item: GPS, NMEA AIS, NMEA AIS

There is no configuration required for this data item.

TELGRAM SPECIFICATION:

This telegram contains 7 fields with encapsulated encoding of the vessel data and a check sum.
 e.g.

!AIVDM,1,1,,B,35PMCv0Oh5I2pPj?skdocVtf0000,0*13

Field:
1. Header
2. Total number of sentences to transfer the message (1-9)
3. This message number (1-9)
4. Sequential identifier to link multiple messages as there may be interleaving
5. AIS channel
6. Encapsulated data (payload) see NMEA 0183 manual for encoding and decoding
7. Fill bits
8. * and check sum