WinFrog Device Group:	RHO/THETA
Device Name/Model:	NMEA Radar
Device Manufacturer:	Any radar sending NMEA TLL or TTM messages
Device Data String(s)	NMEA TLL and NMEA TTM messages
Output to WinFrog:	See the NMEA 0183 Standard (v3.01) for details.
WinFrog Data String(s) Output to Device:	None
WinFrog Data Item(s) and their	NMEARADAR 440 (TLL)
RAW record:	441 (TTM)

DEVICE DESCRIPTION:

This device receives radar target position data from the radar system and plots them in the Graphics window. The input data can be either the NMEA TLL telegram that contains the latitude and longitude of the target or the NMEA TTM telegram that contains the range and bearing to the target. Configuration of data to be displayed in the Graphics window is done via the NMEADATA configuration dialog that is accessed through the vehicle's Vehicle-Devices dialog. The color and shape used in the Graphics window may be selected from the Misc tab of the graphics configuration dialog.

The NMA sentences received can also be output along with other NMEA data for the vehicle that the NMEARADAR data item is attached. See the NMEA output document.

DEVICE CONFIGURATION INSTRUCTIONS

WINFROG I/O DEVICES > EDIT I/O:

Serial

Configurable Parameters

WINFROG I/O DEVICES > CONFIGURE DEVICE:

No configuration is available at the I/O Device window level.

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

Add the NMEARADAR data item to the vehicle that the radar system is installed on. This will enable the radar targets to be displayed in the Graphics window and the radar data to be recorded in the raw data files.

Data item: RHO/THETA, NMEA Radar, NMEARADAR

The NMEARADAR configuration dialog allows for the customization of the data that is displayed in the Graphics window and the input of the offsets of the radar system.

Configure NMEA Radar		
Graphics Window Display ✓ Display Radar Sensor ✓ Display Target Labels ✓ Display Query Targets ✓ Display Lost Targets 5.0 min		
☑ Display Snail Trail 5 Snail trail length		
Display Vector 2.0 Vector Length Scalar		
Fore/Aft Port/Stbd Up/Down -10.00m 10.00m 0.00m		
OK Cancel Help		

Use the checkboxes to enable or disable the display of the radar sensor location on the vehicle, target labels next to the radar target, targets with a *Query* status, and targets with a *Lost* status. The target time out value determines the maximum age of the target data that is displayed. If new data for a target has not been received in the time period entered the target will be removed from the display. The snail trail is similar to that for a vehicle. The vector is an arrow drawn in the direction that the target is traveling and a length proportional to the speed. The scalar can be used to adjust the length of the arrow. Note these last two checkboxes only apply to targets that were sent to WinFrog with the \$--TML sentence.

Enter the offsets from the CRP to the radar systems location on the vehicle. These values are used when NMEA TTM data telegrams are received. The target position that is computed based on the targets range and bearing will be referenced to this offset position.

TELGRAM SPECIFICATION:

TLL - Target Latitude and Longitude

Target number, name, position and time tag for use in systems tracking targets.



Target number, 00 to 99

Notes:

1) Target status: L = Lost, tracked target has been lost

Q = Query, target in the process of acquisition

- T = Tracking
- Reference Target: set to "R" if target is a reference used to determined own-ship position or velocity, null otherwise.