

WinFrog Device Group:	Profiler
Device Name/Model:	Imagenex
Device Manufacturer:	Imagenex Technology Corp. #209 - 1875 Broadway Street Port Coquitlam, BC Canada V3C 5W2 Tel: (604) 944-8248 Fax: (604) 944-8249 email: imagenex@npsnet.com
Device Data String(s) Output to WinFrog:	See Telegram Specification Section below.
WinFrog Data String(s) Output to Device:	See Telegram Specification Section below.
WinFrog Data Item(s) and their RAW record:	PROFILE 1916 and 1917

DEVICE DESCRIPTION:

This driver is designed to read data from an Imagenex profiler. These profilers are typically used to collect bathymetry data within a given swath that can be used to create bathymetry charts and bottom profiles. The data collected from the Imagenex unit can be displayed, in real time, in a Profile window. Refer to chapter 8 of the WinFrog User’s Guide for more details on displaying real time data in a Profile window.

DEVICE CONFIGURATION INSTRUCTIONS

WINFROG I/O DEVICES > EDIT I/O:

Serial
Configurable Parameters

WINFROG I/O DEVICES > CONFIGURE DEVICE:

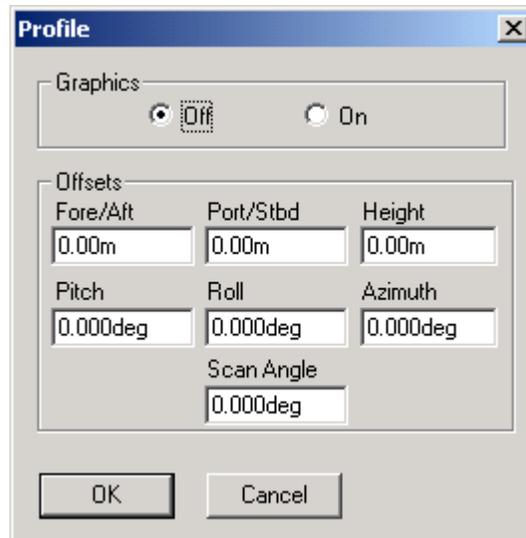
No configuration is required at the I/O Device window level.

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

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

Data item: PROFILER, Imagenex, PROFILE

Highlight the PROFILE data item and click the Edit button to open the Profile dialog box as seen below.



The X,Y,Z Offsets are applied from CRP to the Scanning Head Location. These values are set similar to values that would be applied to any device offset within WinFrog. Other items under the Offsets section are as follows:

Pitch: Enter the inclination of the fore/aft axis mounting error of the Scanning Head. Positive pitch is applied when the transducer end of the head is tilted up, or back in the case of a vertically mounted head. This value should be measured relative to the Imagenex.

Roll: Enter in the inclination of the port/starboard axis mounting error of the Scanning Head. Positive roll is applied when the left side of the head is tilted up, or back in the case of a vertically mounted head. This value should be measured relative to the Imagenex.

Azimuth: Enter the observed scan angle relative to the bow of the vessel. This angle should be the same as entered in the Imagenex Controller, if the Profiling Head is oriented in line with the bow of the vessel. A positive azimuth is clockwise, with 0° referenced to a mark on the Profiling Head.

Scan Angle: This is the sector angle of coverage centered on the perpendicular to the profiling head transducer. This angle should be equal to or less than the scan angle as entered into the Imagenex Controller.

TELGRAM SPECIFICATION:

Data recorded in the 1916 record;

Field	Data
1	Code
2	Operator assigned Device Name
3	Time
4	Profiler Model (0=generic, 1=Tritech DHSS)
5	Number of heads in use
6	Number of ranges per head logged in scan
7	Last scan head
8	The velocity of sound in water as decoded from the profiler
9	The velocity of sound in water used in real time processing
10	Heading
11	Pitch
12	Roll
13	Next scan number
14	Processed ranges (raw data = 0, processed data = 1)

Data recorded in the 1917 record;

Field	Data
1	Code
2	Operator assigned Device Name
3	GPS Time (PC time the scan data was received by WinFrog)
4	Scan Time (the scan time output by the profiler)
5	Data index
6	Scan direction
7	Duration of scan
8	Scan start angle (degrees)
9	Scan angle interval (degrees)
10	Orientation of the head
11	Head setup (as assigned by the operator)
12	Fore/aft offset for the head
13	Port/starboard offset for the head
14	Vertical offset for the head
15	Azimuth correction/offset
16	Pitch correction/offset
17	Roll correction/offset
18	Angle offset (for generic profilers only)
19	Northing of the head computed in realtime
20	Easting of the head computed in realtime
21	Depth of head computed in realtime
22	Raw data (in microseconds if travel time, in meters if distance)