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| WinFrog Device Group: | Sounder |
| Device Name/Model: | Odom Digitrace |
| Device Manufacturer: | Odom Hydrographic Systems Inc. 8178 G.S.R.I. Ave., Bldg. B Baton Rouge, Louisiana, 70820-7405 USA Tel: (225) 769-3051 Fax:(225) 766-5122 http://www.odomhydrographic.com |
| Device Data String(s) Output to WinFrog: | Depth |
| WinFrog Data String(s) Output to Device: | Event |
| WinFrog .raw Data Record Type(s): | Depth: Type 411 For 411: depth, status & dtime are repeated 15 times |

DEVICE DESCRIPTION:

The Odom DIGITRACE is a device that converts the analog signals from an echo sounder to digital serial format. The DIGITRACE can be installed inside most widely used analog echo sounders such as Raytheon 719 series, Raysound SDH-13, ATLAS DESO 10 and 20, and Ross echo sounders. The digitized data can be output to interfaced computer systems using either the RS-232 serial protocol or an optional BCD parallel format. The DIGITRACE is equipped with a display/control panel that can be mounted above or behind the sounder's chart window in the case, maintaining the one-piece design of the echo sounder.



Odom DIGITRACE

The **DIGITRACE** also provides a display of depth on a backlighted, four digit, LCD. The **DIGITRACE** allows for the direct input of transducer draft and sound velocity value for echo sounder calibration by traditional bar check or from a sound velocity probe such as

the Odom **DIGIBAR**. The **DIGITRACE** also incorporates a “blanking feature,” which may be used to reject unwanted returns in the upper-water column.

The DIGITRACE does not require an external power supply.

DEVICE CONFIGURATION INSTRUCTIONS:

Baud Rate: 9600

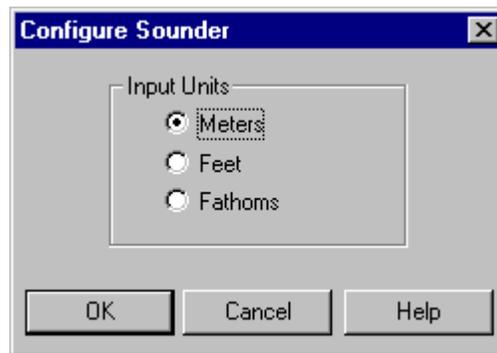
Data Bits: 8

Stop Bits: 1

Parity: None

WINFROG I/O DEVICES > CONFIG OPTIONS:

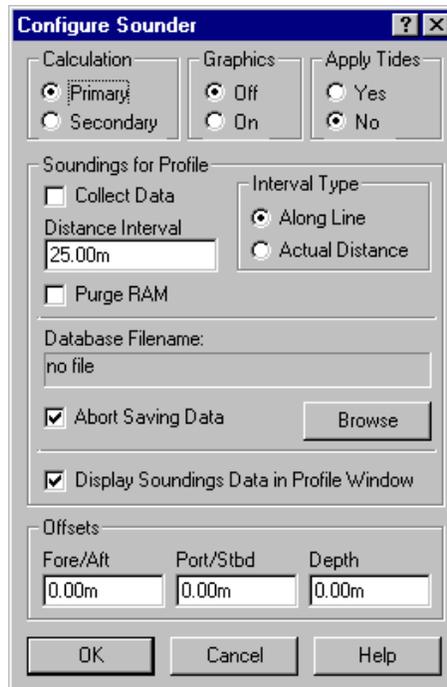
The DIGITRACE is added to WinFrog from the **SOUNDER** device category. The unit must be configured at this level to ensure that WinFrog accepts the depth data in the correct units. Select meters, feet, or fathoms as per the DIGITRACE setup.



Adding the ODOM DIGITRACE device to WinFrog creates the **SOUNDER, ODOM DIGITRACE, BOTTOMDEPTH** data item.

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

Once the DIGITRACE is added to a vehicle’s device list, it must be configured to suit the application. In the vehicle’s Configure Vehicle Devices dialog box, highlight the **SOUNDER, ODOM DIGITRACE, BOTTOMDEPTH** device and click the Edit button. The Configure Sounder dialog box appears, as seen below.



Calculation:

Set the type of calculation to Primary or Secondary using the appropriate radio button. WinFrog will only utilize (i.e. display and record) data from a Primary sounder device. If there is more than one Primary sounder attached to a vehicle's device list, WinFrog will not mean the data (as is done with positional devices), but rather alternate between the devices. Data from a Secondary status sounder will simply be monitored.

Graphics:

If the On radio button is selected, a labeled square representing the location of the sounder will be displayed in the Graphics and/or Bird's Eye windows.

Apply Tides:

If the Yes radio button is selected, WinFrog will apply tidal corrections to the observed water depths. Depths displayed in the Vehicle Text window and recorded in automatic event (i.e. .DAT, .SRC, and .RCV) and type 351 raw files will refer to the datum corrected depths. Note that type 411 raw data records will remain truly raw and will not reflect the tide correction.

The tide information can be supplied by a real time telemetry system or by predicted tide files. Either way, the tide "device" must also be attached to the same vehicle's device list. For more information, refer to documentation on Tide devices.

Soundings for Profile:

This section permits the collection of sounding data to an .MDB database file for display in WinFrog's Profile window. This collection is completely separate from automatic event or raw data collection.

Collect Data

Select this checkbox to enable the collection of data to an .MDB database file.

Interval Type

Select to utilize either Along Line or Actual Distance (i.e. between successive position updates) calculations for data collection intervals. Selecting Along Line requires that you also enable survey line tracking.

Distance Interval

Specify the distance interval at which the data will be collected.

Purge RAM

Sounding data is stored in the RAM memory of the computer. Any data collected which will not be required at later time can be deleted by selecting the Purge RAM checkbox, then clicking the OK button to exit the dialog box.

Database filename

Click the Browse button to define where and to what filename the .MDB file will be written. The file name and location is displayed in this field.

Abort Saving Data

Select this checkbox to abort saving data to the .MDB file. In other words, to save data to the .MDB file, ensure that this box is NOT selected.

Display Soundings Data in Profile Window

Select this checkbox to enable the display of this data in WinFrog's Profile Window.

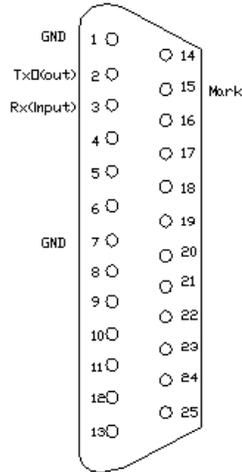
Offsets

This section allows for entry of Offset values as measured from the vessel's Common Reference Point (CRP). Note that the Fore/Aft and Port/Stbd offsets are used for "cosmetic" visual purposes only; an echo sounder is not a positioning device, and hence its horizontal offsets have no application. If the echo sounder's position is to be recorded correctly, you must create and enable a vehicle Tracking Offset for that specific location. The offsets entered here can simply be used as a means of graphically confirming that the Tracking Offset values have been entered correctly. The Depth Offset is applied; the entered value will be added to the received sounder data. Depths displayed in the Vehicle Text window and recorded in automatic event (i.e. .DAT, .SRC, and .RCV) and type 351 raw files will refer to the corrected depths. Note that type 411 raw data records will remain truly raw and will not reflect the depth offset correction.

CONFIGURATION DETAILS:

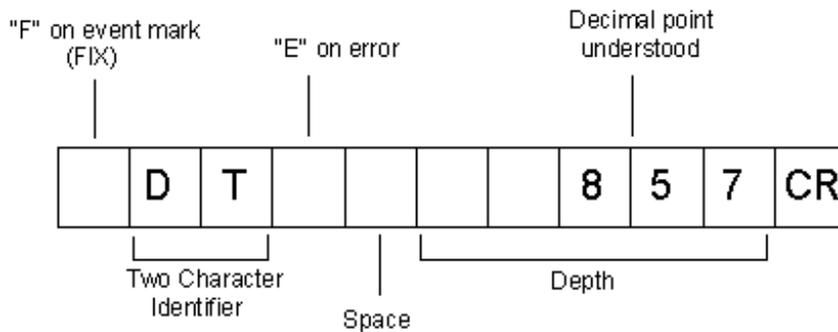
When the Digitrace is in Depth mode, Depth information is output after each sounding cycle.

A Fix mark line will be generated on the sounder's paper chart via input of any ASCII character serial input on pin 3 of the Digitrace's DB 25 connector.



Digitrace DB-25S Connector

The Digitrace's standard ASCII output data string contains 11 characters, with a data repetition rate that is determined by the sounder to which it is attached. The data string contents are as follows:



Standard ASCII Data String (RS-232 Output)

Specifications:

| | |
|--------------------------------|---|
| Depth Range | 2 ft. (.60m) to sounder limit |
| Velocity of Sound Range | 4600/5200 ft./sec. (1300 to 1700m m/sec) |
| Accuracy | 0.1 ft. (.1m) Displayed (.1% of total depth), optional cm resolution (max depth 99.99 meters) |
| Display | 4 digits, Backlighted LCD, 0.43 in. (1.1cm) high |
| Computer Output | RS232C, 9600 BAUD, (optional BCD parallel) |
| Environmental | -20° to +55° C |

Dimensions

- Control/Display Unit 6.75in. w x 1.75ft. h x 0.80in. d
(17.0 cm w x 4.4 cm x 2.0 cm d)
- Electronics Unit 10.80in. w x 3.80in. h x 1.40in. d
(27.4 cm w x 9.7 cm h x 3.6 cm d)

Weight

- Control/Display Unit 10.9 oz (.30kg)
- Electronics Unit 18.7 oz (.53kg)