

WinFrog Device Group:	Sounder
Device Name/Model:	Bathy 2000
Device Manufacturer:	Ocean Data Equipment Corporation 88 Royal Little Dr Providence, RI 02904 USA Tel: (401) 454-1810 Fax: (401) 454-1806 E-mail: sales@oceandata.com
Device Data String(s) Output to WinFrog:	sddddddduu,q,?,hhhhh s= Low frequency Status (V=good, 0=bad) d= Depth (for high or low frequency) u= Units (me or ft), q= High frequency Status, ?= not used, h= Heave (cm.)
WinFrog Data String(s) Output to Device:	Standard NMEA GGA lat./long. Data string
WinFrog .raw Data Record Type(s):	Depth: Type 411 and/or 911 For 411: depth, status & dtime

DEVICE DESCRIPTION:

The Bathy 2000P is a portable Chirp Sub-Bottom Profiler, which can be utilized for both bathymetric and high-resolution sub-bottom data collection. The unit is capable of single/dual channel operation, and can be supplied with a transducer array or an optional tow fish. The B2000P can also accept real time pitch/roll/heave from an interfaced VRU, outputting attitude corrected depth data. The B2000P can also accept NMEA format GGA messages. (WinFrog outputs this to data to the B2000P, but does not in turn receive this data back from the B2000P data string).

Refer to the Configuration Details section below for further specifications on the B2000P.

Adding the Bathy2000 device to a vehicle's Device list adds the BOTTOMDEPTH Data Item. WinFrog will accept the High Frequency Depth if the status is good, else the Low Frequency Depth will be used (again only if the status is good).



Bathy 2000

DEVICE CONFIGURATION INSTRUCTIONS:

Baud Rate: Configurable

Data Bits: Configurable

Stop Bits: Configurable

Parity: Configurable

Suggested Parameters: 9600-8-N-1

WINFROG I/O DEVICES > CONFIG OPTIONS:

The Bathy 2000 is added to WinFrog from the SOUNDER device category. There is no configuration available in the I/O Devices window.

WINFROG VEHICLE DEVICE > EDIT OPTIONS:

The (single frequency) BOTTOMDEPTH data item is provided for adding the depth data to a vehicle. The configuration for this data type, once it is added to a vehicle, is as follows:

Calculation:

Set the type of calculation to Primary for real time operations. Only Primary sounder device data will be used / recorded by WinFrog. Secondary sounder data is simply monitored.

Graphics:

Turn the Graphics **on** to plot a labeled square at the entered offset location in the Graphics and/or Bird's Eye window.

Apply Tides:

If the **on** radio button is selected, WinFrog will correct observed water depths by time correlating attached real time or predicted tide file elevation data. Note that the tide data item must also be added to the vehicle's device list.

Refer to the WinFrog User's Guide for further information on displaying real time tide reduced water depths.

Soundings for Profile:

This sub-window permits the collection of sounding data to a .mdb database file for display in the Profile Window.

Select the **Collect Data** button to begin data collection, at the **specified Distance Interval**. The interval can be either **Along Line** or at the **Actual Distance** (as calculated from last fix).

Upon clicking of the **OK** button, WinFrog will begin storing depth data in the computer's RAM memory. Click the **Purge RAM** button to clear the RAM of any prior collected data. This will be enacted once you click **OK** to exit this dialog box.

Sounder data must be written to a .mdb database file before it can be displayed in the Profile Display. De-select the **Abort Saving Data** button, then select the **Browse** button to create a .mdb file in the desired location.

Check the **Display Soundings Data in Profile Window** option so that the data can be displayed in the Profile Window in real time.

Offsets:

Enter the offsets for the B2000P transducer using WinFrog standard Fore/Aft, Port/Starboard offsets from the CRP. Note that the Depth value is entered as a positive value downward. Ensure that the vertical offset entered must match the type of data coming from the sounder (i.e. if the data being output by the B2000P is as measured from below the transducer (aka DBT data), enter the depth of the transducer below the water level).

CONFIGURATION DETAILS:

External Interfaces:

The Bathy 2000 has eight RS-232 Interface ports:

- Remote Digital Depth Indicator
- NMEA 0183 Navigation Input
- Heave Compensation
- Data Logger-External Event Mark/Ext. Annotation
- External Sound Velocity
- Remote Depth Input
- Status Message Output
- One Spare Port

Other external interfaces:

- Sonar Sync (TTL)
- External VGA Monitor

Specifications:

Measuring Ranges:	0.5-11000 metres (Frequency Dependant)
Depth Accuracy:	+/- 10cm to 100m; +/-0.3% to 6000m (manufacturers)
Operating Frequency:	3.5/12 – 12/200 kHz
Power Requirements:	110 /220VAC(220VAC with Linear Power Transmitter)
Sound Velocity Setting:	1400-1600 m/s, resolution 1 m/s
Pulse repetition Frequency:	1-20 pulses/sec
Sub-Bottom Resolution:	8cm.
Sub-Bottom Penetration:	100 to 200m (typical)

Acoustic Specifications:

Transmit frequency:	3KHz to 11KHz Chirp Bandwidth 6 Transducer array available for tow fish 2KW Transmit Power (optional 5-10KW)
Pulse width Manual or Automatic:	0.2ms to 25.0ms