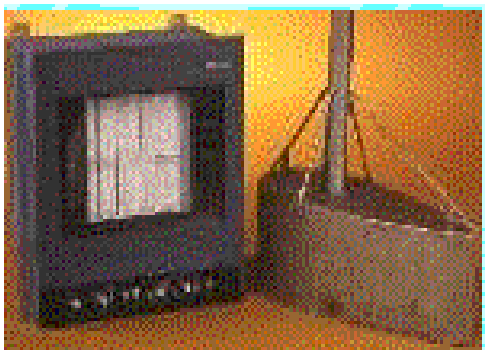
WinFrog Device Group:	**Sounder**
Device Name/Model:	**Atlas DESO 20**
Device Manufacturer: Krupp Atlas **Device Support: Seatronics Ltd.**	**SEATRONICS Ltd.** Unit 23 Denmore Industrial Estate Aberdeen AB23 8JW United Kingdom Tel: (44)1224 704844 Fax: (44)1224 822614 Email: 101233.3177@compuserve.com
Device Data String(s) Output to WinFrog:	For Low Frequency: rawDepth1, status. For High Frequency: rawDepth1, status. (Sounder Time = GPS Time)
WinFrog Data String(s) Output to Device:	WinFrog can send any character to the EPS BS118 BCD/Serial interface to generate a fix mark.
WinFrog .raw Data Record Type(s):	Depth: Type 411 and/or 911 For 411: depth, status & dtime are repeated 15 times

DEVICE DESCRIPTION:
The Atlas DESO 20 dual frequency echosounder operates at 33khz and 210khz. Digital output of data is via the BCD port. The ESP BS118 BCD/Serial interface converter is required for communication with WinFrog. Transducer Draft and Speed of Sound can be entered for internal compensation. The DESO 20 can be modified to accept heave compensation from a TSS serial string such as TSS 320B. The unit may also be capable of interfacing to the TSS312 Annotator.



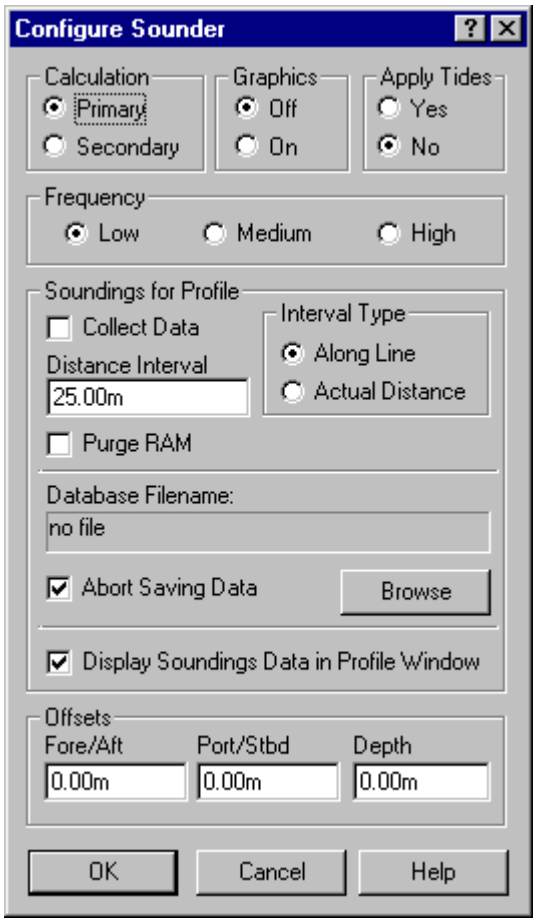
Atlas DESO 20

DEVICE CONFIGURATION INSTRUCTIONS (Suggested):
Baud Rate: 9600
Stop Bits: 1
Data Bits: 8
Parity: No parity

WINFROG I/O DEVICES > CONFIG OPTIONS:
The DESO 20 is added to WinFrog from the SOUNDER device category. There is no configuration required or available in the I/O Devices window.

After interrogating the sounder, the interface converter looks to optimize the data output rate. The I/O Device window displays the high and low frequency depth data, and the latest (GPS) time.

WINFROG VEHICLE TEXT WINDOW > CONFIGURE VEHICLE DEVICES > DEVICE > EDIT OPTIONS:
Adding a DESO20 sounder to WinFrog creates a MULTIBOTTOMDEPTH data item that must be added to the appropriate vehicle's device list. Once the MULTIBOTTOMDEPTH data item has been added to a vehicle's device list, it must be edited to suit the application. In the vehicle's device list, highlight the SOUNDER, ATLAS DESO20, MULTIBOTTOMDEPTH data item and click the Edit button. The **Configure Sounder** dialog window appears as seen below.



Calculation:
Select the appropriate radio button to set the type of calculation to Primary or Secondary. Only Primary sounder device data will be used by the vehicle and recorded data in the vehicles' raw data files (i.e. raw data type 300, 350, 351). Note that if more than one Primary depth device is added to a vehicle's device list, WinFrog will not mean the data displayed and recorded depths will jump between data from both devices. Data from Secondary sounders is simply monitored and is not used in any calculations.

Apply Tides:
If the On radio button is selected, WinFrog will apply tidal corrections to the observed depth data to enable the display and recording of chart datum referenced depths. Tide data can be received from an interfaced real time depth sensor or from tide prediction files containing time and tide height data. Note that the tide device or file must also be added to the vehicle's device list. Refer to documentation on the Tide device for more information.

Frequency:
The DESO 20 is a dual frequency sounder, utilizing low (33khz) and high frequency (210khz) transmissions (if so equipped): This option controls which DESO 20 data output (i.e. Low or High frequency) will be used by this vehicle.

To utilize (i.e. record and display) both frequencies, the DESO 20 BOTTOMDEPTH data item must be added to a vehicle's device list twice. The two BottomDepth data items must then be edited to reflect the different frequency choices, with one configured for low frequency and the other for high frequency. WinFrog reads the DESO 20's data string to identify low and high frequency data outputs.
Note: The Medium frequency radio button has no application as this sounder employs only two frequencies.

Soundings for Profile:
This portion of the Configure Sounder dialog box permits the collection of data to an .mdb database file, separate from automatic event data and raw data files. This database can then be selected for display within the Profile window.

Collect Data
Check this option to initiate the collection of sounding/position data. (To save data to the computer's hard drive, you must also de-select the **Abort Saving Data** checkbox as described below). Data collection will not commence until the OK button is clicked to exit this window.

Interval Type
Sounding database data is collected based on a user-defined distance interval. This interval can be based on Alongline distance or Actual distance. Alongline distance refers to only distances measured in the direction of the currently tracked segment of

a selected survey line. Actual distance refers to distance traveled by the vessel, regardless of direction.

Distance Interval
Specify the interval at which data will be written to the .MDB database file.

Purge RAM
When **Collect Data** (detailed above) is checked, data is stored in the computer's RAM memory only. Any data collected which will not be required at a later time can be deleted by selecting the Purge RAM checkbox. The purge will occur when the OK button is clicked to exit this window.

Database Filename
The collected sounding data can (and should) be saved to a database on the system computer. To specify the name and location of this file, select the **Browse** button and navigate to the appropriate location, then type in the desired filename.

Abort Saving Data
Select this checkbox to stop saving sounding data to a database file.

Display Soundings Data in Profile Window
This option must be selected before the sounding data will be visible in real time in the Profile window.

Offsets:
Enter measured offsets for the DESO 20 transducer, as measured from the vehicle's Common Reference Point (CRP). Ensure that the correct Fore/Aft, Port/Starboard offset signage is used. As a transducer is not a positioning device, horizontal offsets entered are used for graphical purposes only. If it is required that the transducer position be tracked and recorded, you must configure and enable a tracking Offset with the appropriate offsets entered.

Note that the depth value is positive in the downward direction. Ensure that the Depth value entered relates correctly to the data being received from the echo sounder. Sounders such as the DESO 20 are capable of outputting depths related to the surface (as opposed to simply the transducer face), in which case WinFrog's depth Offset should be nil. Check the sounder configuration to ensure that the correct depth value is being output.

CONFIGURATION DETAILS:
When connecting to the interface converter from WinFrog, use the Tx, Rx and Signal ground pins. Set the interface converter to **CONTINUOUS TX** mode and the DESO 20 to **Computer** mode. Connect the **Fix** connector on the interface to the DESO 20 by wiring into the fix button accordingly. This connection will enable the generation of fixes based on the Event interval setting in the WinFrog Event configuration dialog box. Refer to the associated manuals for the interface converter unit and the DESO 20 sounder for additional configuration and wiring information.

SPECIFICATIONS:

Measuring Range	0-5m up to 00-5000m
Frequencies	33Khz & 210Khz
Computer Interface	BCD Parallel/ Serial interface converter
Recording Paper	Electrostatic
Power Requirements	24VDC @ 10 Amps

INTERFACE BOX:
As stated previously, the ESP BS118 BCD/Serial interface c/w BS118B DESO 20 interface cable is required for operation within WinFrog. These units are available from Seatronics limited.

The BS118 is an interface specifically designed for serial interrogation of parallel data outputs. Four DIL switches allow the user to select communication parameters and Synchronous/Asynchronous data conversion and Hexadecimal/Complementary word formats.

The BS118 can handle Baud Rates of 300, 1200, 2400, or 9600 bps. The following serial port character format is used for data transmissions from the BS118:

Protocol:	Asynchronous (Simplex)
Character Bits:	8
Stop Bits:	1
Parity:	Not Used
Baud Rate:	Optional
Delimiter:	cr/lf
Voltages:	+12 to –12V (RS232C)
Format:	000000000000 cr/lf