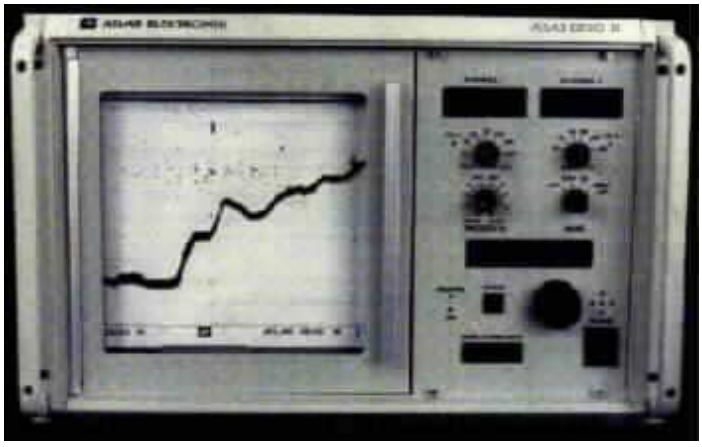
WinFrog Device Group:	**Sounder**
Device Name/Model:	**Atlas Deso 15 Echosounder**
Device Manufacturer: Krupp Atlas **Device Support: Seatronics Ltd.**	**NAVITRONIC Systems AS** Jegstupvej 54 DK-8361 Hasselager Denmark Tel: (45)8628 8244 Fax: (45)8628 8266 Email: navitronic@navitronic.dk
Device Data String(s) Output to WinFrog:	For Low Frequency: rawDepth1, status, signal strength For High Frequency: rawDepth1, status, signal strength (Sounder Time = GPS Time)
WinFrog Data String(s) Output to Device:	Fix Number, Northing, Easting, InputUnits(ft/m), LogInterval ("%d,%d,%d,%d,%d,")
WinFrog .raw Data Record Type(s):	Depth: Type 411 For 411: depth, status & dtime are repeated 15 times

DEVICE DESCRIPTION:

The Atlas DESO15 is a dual frequency echosounder designed to survey inland waters, rivers, harbors and coastal areas in water depths from 20 cm. to a maximum of 650 meters (depending on frequency and transducer chosen). The DESO 15 can operate as single or dual channel echosounder, at 33khz and 210khz. Digital output of both channels is via a RS232 serial port. Annotation from a navigation computer can be transmitted to the echosounder via the same RS232 port. Transducer draft and speed of sound can be entered for internal compensation. Heave compensation can be applied using digital TSS serial string such as TSS 320B or TSS 300 series strings.



Atlas DESO 15

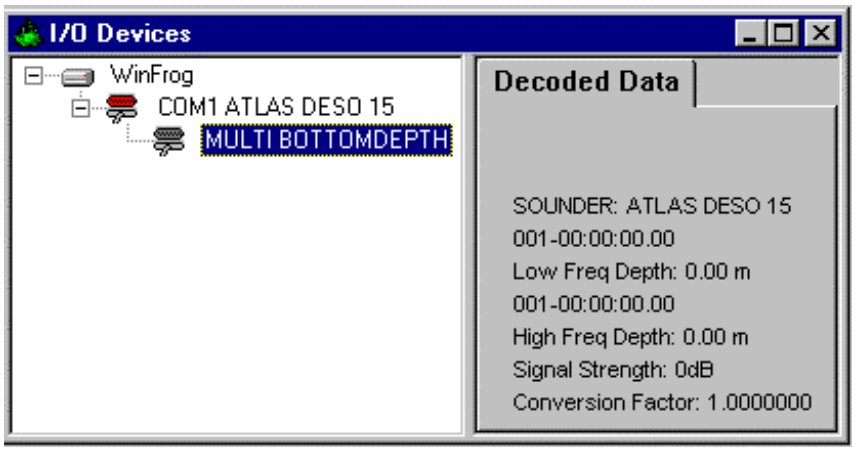
For system integration, the ATLAS DESO 15 provides several different interfacing options, allowing the unit to be connected to virtually any kind of processing equipment. The complete survey can be controlled from a computer without ever touching the echosounder.

Sounding depths in meters (or feet) are shown simultaneously on the paper of the thermal recorder as well as in digital form in separate displays on the front panel.

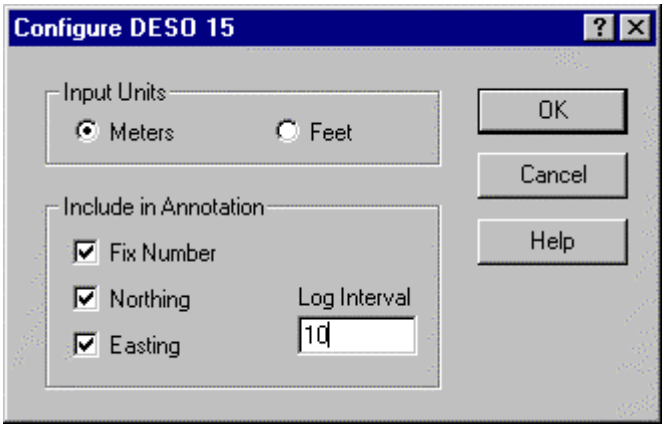
DEVICE CONFIGURATION INSTRUCTIONS:
Baud Rate: Configurable (300 to 19200)
Data Bits: Configurable (5 to 8)
Stop Bits: Configurable (1 or 2)
Parity: Configurable

Note: The DESO 15 outputs data via a serial port, while the DESO 20 outputs via a parallel port. The DESO20 requires a Serial Interface for WinFrog operations.

WINFROG I/O DEVICES > CONFIG OPTIONS:
The DESO 15 is added to WinFrog from the SOUNDER device category. Adding the DESO 15 to WinFrog creates a MultiBottomDepth data item, as seen below.



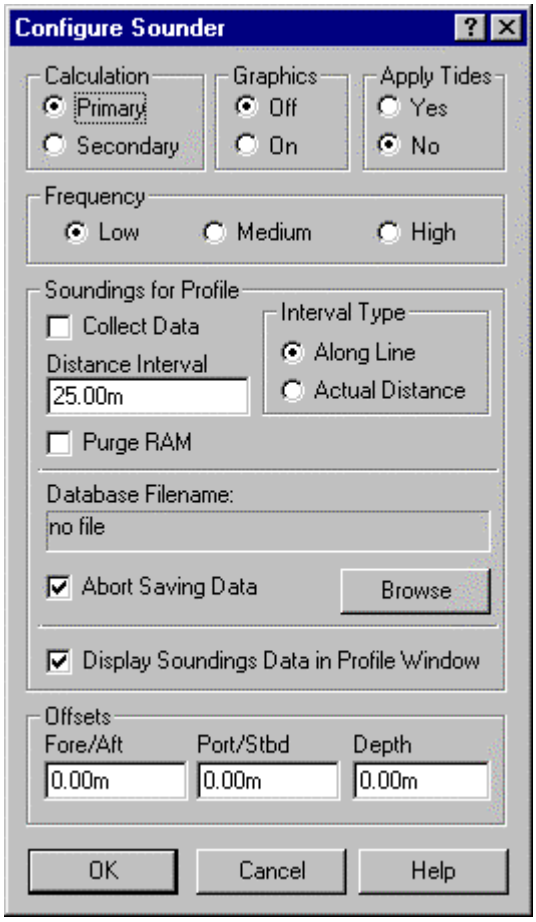
The DESO 15 must be configured at the generic I/O device window level. In the I/O Devices window, highlight the DESO15 device, then right-click and select **Configure Device**. The **Configure DESO 15** dialog box appears as seen below.



Input Units:
The DESO 15 can be configured to output depth data in feet or meters. Select the appropriate radio button option to match the DESO 15's output format. WinFrog will record the depth and the signal strength in the raw files.

Include in Annotation:
The DESO15 can annotate its thermal paper chart with various text data as received from WinFrog. WinFrog allows you to enable the output of Fix Number (fix number and time in hh:mm:ss.s), Northing, and Easting data. The logging interval (based on events) can also be user-configured. Enter a numerical value to set the Log Interval. An entry of 10, for example, configures WinFrog to output the selected annotations only every 10th event.

WINFROG VEHICLE TEXT WINDOW > CONFIGURE VEHICLE DEVICES > DEVICE > EDIT OPTIONS:
Adding a DESO15 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 DESO15, MULTIBOTTOMDEPTH data item and click the Edit button. The **Configure Sounder** dialog box 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.

Graphics:
If On is selected, a labeled square will be drawn in the Graphics and/or Bird's Eye windows to indicate the sounder's location.

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 15 is a dual frequency sounder, utilizing low (33khz) and high frequency (210khz) transmissions (if so equipped): This option controls which DESO 15 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 15 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 high frequency. WinFrog reads the DESO15'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
Select this checkbox 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 dialog box.

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 selected, data is stored in the computer's RAM memory only. Any data collected which will not be required at later time can be deleted by selecting the Purge RAM checkbox. The purge will occur when the OK button is clicked to exit this dialog box.

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, click the **Browse** button and navigate to the appropriate location, then type 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 15 transducer, as measured from the vehicle's CRP (Common Reference Point). 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 15 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:
The DESO 15 utilizes the standard RS-232 pin convention. The DESO 15 to PC cable connection pins are 7 to 7, 2 to 3, and 3 to 2 (as shown below). Refer to the DESO 15 manual for additional configuration and wiring information.

DESO 15 SPECIFICATIONS (Manufacturers):

Measuring Ranges:	0.2 – 650 metres
Operating Frequency:	33 (28-35) – 210 (190-225) kHz
Transmission Power:	300W, 600W and 1000W
Computer Interface:	RS232
Power Requirements:	240VAC @100VA or 24VDC @ 100VA
Sound Velocity Setting:	1400-1600 m/s, resolution 1 m/s
Pulse repetition Frequency:	1-20 pulses/s
Accuracy:	10 cm at 33 KHz
	1 cm at 210 KHz (excluding external influences)
Resolution:	1 cm
Power Consumption:	Max 100VA
Operating Temperature:	0^o - 50^o C
Dimensions:	Height: 312 mm width: 485 mm depth: 335 mm
Installation:	19" rack, depth 400 mm
Weight:	Approx. 18 kg
Additional features:	Barcheck, external marker
Annotation:	RS-232C, RS-422 & GPIB (IEEE 488) - Alphanumeric
Repeater output:	RS-232C and RS-422
Computer interfacing:	RS-232C, RS-422 and GPIB (IEEE 488)