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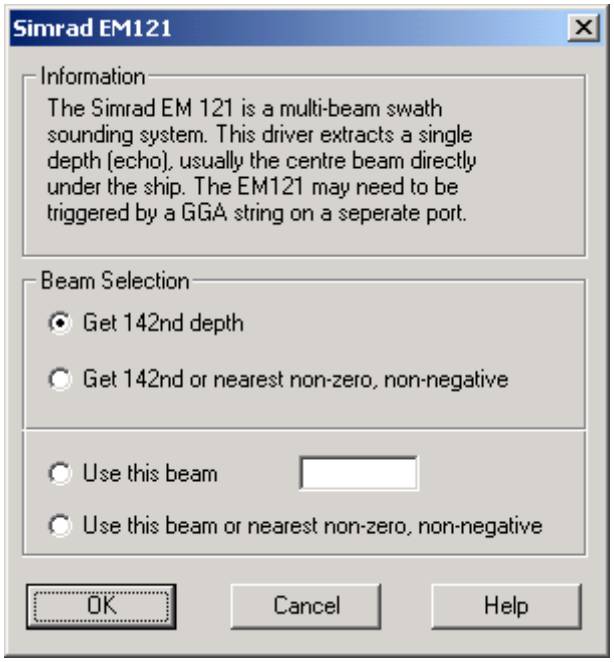
| **WinFrog Device Group:** | **SOUNDER** |
| **Device Name/Model:** | **SIMRAD EM121** |
| **Device Manufacturer:** | Kongsberg Simrad, Inc.<br>7225 Langtry Street<br>Houston, TX 77040-6625<br><br>Tel: 1 713-934-8885<br>Fax: 1 713-934-8886<br>Email: chris.hancock@kongsberg-simrad.com |
| **Device Data String(s) Output to WinFrog:** | |
| **WinFrog Data String(s) Output to Device:** | |
| **WinFrog Data Item(s) and their RAW record:** | PLOWDATA 490<br>HEADING 410 or 409 |

**DEVICE DESCRIPTION:**
The Simrad EM121 is a 12 kHz 1 x 1 degree multi-beam echo sounder. This driver extracts a single beam for depth readings, therefore this device acts like a single frequency echo sounder in WinFrog.

## *DEVICE CONFIGURATION INSTRUCTIONS*

**WINFROG I/O DEVICES > EDIT I/O:**
Serial
Configurable Parameters

**WINFROG I/O DEVICES > CONFIGURE DEVICE:**
This device must be configured at the I/O Device window level. In the I/O Devices window, click the device name to select it, then right-click and select Configure Device. The Simrad EM121 dialog box appears, as seen below.



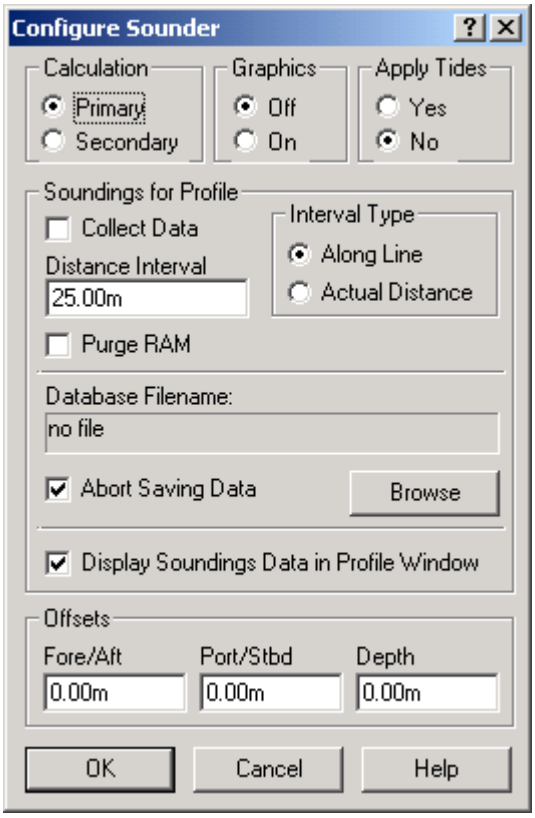

In the Beam Selection sections you can instruct WinFrog to accept the depth reading from either the 142nd beam (which is typically directly beneath the ship) or to accept the depth from either the 142nd beam or the nearest beam that does not return a zero or negative number. You can also specify a particular beam (by entering the number) for WinFrog to take the depth from or the beam nearest to the specified beam that does not return a zero or negative number.

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

Adding the Simrad EM121 device creates the BOTTOMDEPTH data item. Once the data item has been added to the vehicle, it must be edited to suit the application.

**Data item: SOUNDER, Simrad EM121, BOTTOMDEPTH**

Adding the Single frequency sounder to WinFrog creates a BOTTOMDEPTH data item that must be added to the appropriate vehicle's device list. Once the BOTTOMDEPTH 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, Device, BOTTOMDEPTH data item and click the Edit button. The standard **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 of the Configure Sounder window 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 dialog.

**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 checked.

**Display Soundings Data in Profile Window**
Select this checkbox to enable the display of this data in WinFrog's Profile window.

**Offsets**
This section of the dialog 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.

**TELGRAM SPECIFICATION:**
Simrad proprietary message